STATE OF CALIFORNIA
STANDARD AGREEMENT AMENDMENT
STD. 213 A (Rev 2/12)

X	CHECK HERE IF ADDITIONAL PAGES ARE ATTACHED	444 Pages	AGREEMENT NUMBER: 5-06-58-20 (DTS 06E1390)	AMENDMENT NUMBER: 12
			REGISTRATION NUMBER:	

1. This Agreement is entered into between the State Agency and Contractor named below:
STATE AGENCY'S NAME
California Technology Agency (Formerly Office of the State Chief Information Officer (OCIO)
CONTRACTOR'S NAME
SBC Global Services, Inc. dba AT&T Global Services

2. The term of this Agreement is 1/30/2007 through 1/29/2014

3. The maximum amount of this agreement after this amendment is: N/A

4. The parties mutually agree to this amendment as follows. All actions noted below are by this reference made a part of the Agreement and incorporated herein:

A. Signature authority for the Office of the State Chief Information Officer (OCIO) has changed to the California Technology Agency per Chapter 404, Statutes of 2010, AB 2408 effective January 1, 2011. Under Public Contract Code Section 12120, this administrative amendment hereby replaces the State Agency's Name on the STD 213A as follows:

From: Department of General Services
To: California Technology Agency

All references to Department of General Services (DGS) are hereby deleted within this contract and superseded by the California Technology Agency, Office of Telecommunications Procurement, 3101 Gold Camp Dr., Rancho Cordova, CA 95670

Continued on the next page.

This Agreement is effective March 1, 2012 or upon California Technology Agency approval, whichever is later.
All other terms and condition of the original agreement shall remain the same.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

a. CONTRACTOR

CONTRACTOR'S NAME (If other than an individual, state whether a corporation, partnership, etc.)
SBC Global Services, Inc. dba AT&T Global Services

BY (Authorized Signature) ✍ Sara Preece — DATE SIGNED (Do not type): 4-20-2012

PRINTED NAME AND TITLE OF PERSON SIGNING
Sara Preece – Area Manager

ADDRESS
2700 Watt Rm 1213
Sacramento, CA 95821

AGENCY NAME
California Technology Agency

BY (Authorized Signature) ✍ — DATE SIGNED (Do not type): 4/24/12

PRINTED NAME AND TITLE OF PERSON SIGNING
Steve Rushing, Deputy Director, Office of Technology Services (OTech) - STND

ADDRESS
P.O. Box 1810, MS Y-13, Rancho Cordova, CA 95741-1810

CALIFORNIA TECHNOLOGY AGENCY Use Only

Approved
Russ Shuman 5/2/12

☑ Exempt per:
PCC 12120

Continuation
STD 213A Standard Agreement Amendment 5-06-58-20 (DTS 06E1390) 12

B. Signature Authority for AT&T has changed effective April 16, 2012 on all future CALENT 2 - MSA 1, and MSA 2 amendments. Mr. Ed Mosbaugh Jr., Executive Sales Director (AT&T) has delegated signature authority to the following individuals;

1. **Joe Foster, Program Manager (AT&T)**
2. **Sara Preece, Area Manager (AT&T)**
3. **Julie Kibler, Sr. Project Manager (AT&T)**

C. This Amendment provides service enhancement, corrections and price reductions to 3 sections of the CALNET 2, MSA 1 contract. They are: Section 6.1.3.2.5 - Metropolitan Area Network (MAN) and Wide Area Network (WAN) Services, Section 6.1.3.2.6 - Multi Protocol Label Switching (MPLS) Services, and Section 6.1.3.9 – DSL Virtual Private Network

Pursuant to **Section 28** Contract Modifications under RFP DGS-2053, the following Amendments and changes are made to the following Sections and attachments:

D. This amendment includes the following changes, Subject to CALNET 2, MSA 1 (AT&T):

1. **Section 6.1.3.2.5 - Metropolitan Area Network (MAN) Services, Attachment 3 (Service Description) has been modified to include the following:**

- Change the Service Identifier name to "Metropolitan Area Network (MAN) and Wide Area Network (WAN) Services", page 1;
- Update Description of Service to include the following bulleted items:
- AT&T Switched Ethernet Service (ASE), page 1; and
- Optical Ethernet WAN (OPT-E-WAN), page 1.
- Add new sub header called "OPT-E-MAN Basic and Basic Plus Options" under Optical Ethernet Transparent LAN (OPT-E-MAN), page 19;
- Add new description for Opt-E-MAN Basic, page 19;
- Add new description for Opt-E-MAN Basic Plus, page 19;
- Add new description for Ethernet Wire Service (EWS), page 19; and
- Add new description for Ethernet Relay Service (ERS), page 19.
- Add a new header called AT&T Switched Ethernet (ASE) Service with service and feature descriptions, pages 25-32;
- Add a new feature table for AT&T Switch Ethernet (ASE) Service, pages 32-55;
- Add a new header called OPT-E-MAN Managed Service Bundles with service and feature descriptions, pages 55-60;
- Add a new feature table for OPT-E-MAN (OEM) Managed Service Bundles w/ Standard Features, pages 60-73;
- Add a new sub header called OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services with service and feature descriptions, pages 73-74;
- Add a new feature table for OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services, pages 74-77;
- Add a new sub header called OPT-E-MAN Managed Service Bundles Optional Up Lift Features and Services with service and feature descriptions table, pages 77-85;
- Add a new sub header called OPT-E-MAN Managed Service Bundles Router Description and Table, page 86-91;
- Add a new feature table for OPT-E-MAN Managed Services Data Center Stand Alone Routers, page 91;
- Add language for Residual Value of Lost CPE, pages 91-92;
- Add a new header called OPT-E-WAN with service and feature descriptions, pages 92-93;
- Add a new feature table for OPT-E-WAN (OEW) service, pages 93-95;
- Add a new header called OPT-E-WAN (OEW) Managed Service Bundles with service and feature descriptions, pages 95-100;
- Add a new feature table for OPT-E-WAN (OEW) Managed Service Bundles w/ Standard Features, pages 100-116;

- Add a new sub header called OPT-E-WAN Managed Service Bundles Life Cycle Management Features and Services with service and feature descriptions, pages 116-117;
- Add a new feature table for OPT-E-WAN Managed Service Bundles Life Cycle Management Features; pages 117-121;
- Add a new sub header called OPT-E-WAN Managed Service Bundles Optional Up Lift Features and Services with service and feature descriptions table, pages 121-129;
- Add a new sub header called OPT-E-WAN Managed Service Bundles Router Description and Table, pages 129-135;
- Add a new feature table for OPT-E-WAN Managed Services Data Center Stand Alone Routers, page 135; and
- Add language for Residual Value of Lost CPE, page 135;

Replace Attachment 3 Section 6.1.3.2.5 (1-28) with amended section (1-139).

2. **Section 6.1.3.2.6 - Multi Protocol Label Switching (MPLS) Services, Attachment 3 (Service Description) has been modified to include the following:**

- Update AVPN Gigabit Ethernet Port Only Feature Description from "Speeds from 1 Mbps to 1000 Mbps" to "Speeds from 1 Mbps to 10 Gbps", page 2;
- Add the following note to USOC AVVL* AVPN VLAN feature – "Note: This Product is no longer available. Existing customers will continue to be supported.", page 2;
- Update Port Speeds Availability by Protocol table as follows:
    - Speed 128 Kbps - update Identifier to 17974, page 3;
    - Speed 640 Kbps, page 3;
        - Delete "X" under IP (PPP) and Frame protocol; and
        - Add the following "Note: This Port speed is no longer available. Existing customers will continue to be supported.".
    - Add new port speeds available;
        - 10.808 Mbps, page 3;
        - 250 Mbps, 450 Mbps, 2 Gbps – 10 Gbps, page 4;
    - Update speed "1000 Mbps" to "1 Gbps", page 4;
- Update AVPN Service Diversity Identifiers and Feature Description, page 5;
- Update AVPN Pop Diversity Identifiers and Feature Description, page 5;
- Delete blank row from table below AVPN Pop Diversity, page 5;
- Add the following note to sub header AVPN Layer 2 PVCs and feature table – "Note: This Product is no longer available. Existing customers will continue to be supported.", page 6;
- Update AVPN CoS Package Multi-Media High Identifiers and Feature Description, page 7;
- Update AVPN CoS Package Multi-Media Standard Identifiers and Feature Description, page 7;
- Update AVPN CoS Package Critical Data Identifiers and Feature Description, page 7;
- Update AVPN CoS Package Business Data Identifiers and Feature Description, page 7;
- Delete blank row from table below AVPN CoS Package Business Data, page 7;
- Update AVPN Unilink Identifiers and Feature Description, page 7;
- Update AVPN Managed Router Features product description as follows:
    - Remove "CoS1", page 8;
    - Add "and CoS6", page 8;
    - Add "IPv4/IPv6 Dual Stack, page 8;
    - Add "SNMP Read-only Router Access", page 8; and
    - Add "Netflow v5 Enablement", page 8.
- Modify language for AT&T-owned CPE to provide clarity, page 10;
- Update AVPN Managed Router (AT&T Owned) features table;
    - Update feature descriptions of existing features, pages 10-11; and
    - Add AVPN Managed Router (AT&T Owned) – XX Large, page 11.
- Update AVPN Managed Router (Customer Owned) features table;
    - Update feature descriptions of existing features, pages 13; and
    - Add AVPN Managed Router (Customer Owned) – XX Large, page 13.
- Update AVPN Managed Internal CSU (AT&T Owned) features table;
    - Update feature names of existing features, page 14;
    - Add AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – Low End, page 14;

- Add AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – High End, page 14;
- Add AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet Combo, page 14;
- Add AVPN Managed Internal CSU (AT&T Owned) – OC3/STM1 ATM, pages 14-15;
- Add AVPN Managed Internal CSU (AT&T Owned) – OC3/ STM1 PPP, page 15; and
- Add AVPN Managed Internal CSU (AT&T Owned) – OC3/STM4 PPP, page 15.

- Update AVPN Managed Internal CSU (Customer Owned) features table as follows:
  - Update feature names and identifiers of existing features, page 15;
  - Add AVPN Managed Internal CSU (Customer Owned) – MLPPP, page 15;
  - Add AVPN Managed Internal CSU (Customer Owned) – T3/DS3 ATM protocol, page 15;
  - Add AVPN Managed Internal CSU (Customer Owned) – Internal T3/DS3 PPP protocol, page 15;
  - Add AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – Low End, pages 15-16;
  - Add AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – High End, page 16;
  - Add AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet Combo, page 16;
  - Add AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 ATM, pages 16;
  - Add AVPN Managed Internal CSU (Customer Owned) – OC3/ STM1 PPP, page 16; and
  - Add AVPN Managed Internal CSU (Customer Owned) – OC3/STM4 PPP, page 16.
- Update AVPN Owned and Managed External CSU features table;
  - Update feature names and descriptions of existing features, pages 16-17;
  - Add AVPN Managed External Probe OC3 ATM/PPP, page 17;
  - Add AVPN Managed External Probe 10/100 Mbps Ethernet, page 17;
  - Add AVPN Managed External Probe 1 Gbps Ethernet, page 17;
- Update AVPN Managed (AT&T Owned) Additional Router Features table;
  - Add AVPN Managed (AT&T Owned) Router – Additional Memory XL+, page 18;
  - Add AVPN Managed (AT&T Owned) Router – Dual Power XL+, page 18;
  - Add AVPN Managed (AT&T Owned) Router – Dual Power XXL, page 18; and
  - Add AVPN Managed (AT&T Owned) Router – Multicast, page 18.
- Update AVPN Managed (Customer Owned) Additional Router Features table;
  - Add AVPN Managed (Customer Owned) Router – Additional Memory XL+, page 19;
  - Add AVPN Managed (Customer Owned) Router – Dual Power XL+, page 19;
  - Add AVPN Managed (Customer Owned) Router – Dual Power XXL, page 19; and
  - Add AVPN Managed (Customer Owned) Router – Multicast, page 19.
- Update formatting Managed Router Feature Resiliency Options descriptions as follows:
  - Fourth bullet: remove space before "re-routed", page 20; and
  - Fifth bullet: remove space before "re-routed", page 20.
- Add a new header called AVPN Managed Service Bundles with service and feature descriptions, pages 21-26;
- Add a new feature table for AVPN Managed Service Bundle w/ Standard Features, pages 26-38;
- Add a new sub header called AVPN Managed Service Bundle Life Cycle Management Features and Services with service and feature descriptions, pages 38-39;
- Add a new feature table for AVPN Managed Service Bundle Life Cycle Management Feature and Services, pages 39-42;
- Add a new sub header called AVPN Managed Service Bundle Optional Up Lift Features and Services with service and feature descriptions table, pages 42-50;
- Add a new sub header called AVPN Managed Service Bundle Router Description and Table, pages 50-56;
- Add a new feature table for AVPN Managed Services Data Center Stand Alone Routers, page 56; and
- Add language for Residual Value of Lost CPE, pages 56-57.

Replace Attachment 3 Section 6.1.3.2.6 (1-32) with amended section (1-72).

3. **Section 6.1.3.9 - DSL Virtual Private Network,**
Attachment 3 (Service Description) has been modified to replace the Features Table and Descriptions for Network Based Firewall (NBFW) Service. This product was changed with Amendment 10 under Multi Protocol Label Switching Service (MPLS). This is a clean-up of the same service.

- Delete Network Based Firewall (NBFW) service descriptions and feature tables, pages 3-6 and pages 9-10;
- Add revised Managed Security Service (MSS) - Network Based Firewall (NBFW) service descriptions and feature tables, pages 5-18;

Replace Attachment 3 Section 6.1.3.9 (1-4) with amended section (1-18).

4. **Section 6.1.3.2.5 - Metropolitan Area Network (MAN) Services, Attachment 4 (Pricing) has been modified to include the following:**

- Change the Service Identifier name to "Metropolitan Area Network (MAN) and Wide Area Network (WAN) Services", page 1
- Delete blank row from table under GigaMAN, page 1;
- Update Identifier 67QXX feature name under MON Ring to include " – Per Location C-Band", page 4;
- Correction to include Identifier "67QSX", Feature Name "MON Ring Central Office Optical Amplifier – Per Location L-Band" and pricing, page 4;
- Add a new header called AT&T Switched Ethernet (ASE) Service and Features with feature names, identifiers and pricing, pages 11-30;
- Add a new header called OPT-E-MAN (OEM) Managed Service Bundles w/ Standard Features with feature names, identifiers and pricing, pages 30-42;
- Add a new header called OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services with feature names, identifiers and pricing, pages 42-44;
- Add a new header called OPT-E-MAN Managed Service Bundles Optional Up Lift Features and Services with feature names, identifiers and pricing, pages 44-51;
- Add a new header called OPT-E-MAN Managed Services Data Center Stand Alone Routers, pages 51-52;
- Add a new table with a header called OPT-E-WAN with feature names, identifiers and pricing, pages 52-73;
- Add a new header called OPT-E-WAN (OEW) Managed Service Bundles w/ Standard Features with feature names, identifiers and pricing, pages 73-80;
- Add a new header called OPT-E-WAN Managed Service Bundles Life Cycle Management Features and Services with feature names, identifiers and pricing, pages 80-82;
- Add a new header called OPT-E-WAN Managed Service Bundles Optional Up Lift Features and Services with feature names, identifiers and pricing, pages 82-89; and
- Add a new header called OPT-E-WAN Managed Services Data Center Stand Alone Routers, page 89.

Replace Attachment 4 Section 6.1.3.2.5 (1-13) with amended section (1-92).

5. **Section 6.1.3.2.6 - Multi Protocol Label Switching (MPLS) Services, Attachment 4 (Pricing) has been modified as follows:**

- Reduce Recurring Charge for AVPN Port and Access Service Bundles, pages 1-2;
- Add the following note to AVPN DS1 Port/Access - 640 Kbps – "Note: This Product is no longer available. Existing customers will continue to be supported.", page 1;
- Reduce Recurring Charges for AVPN Port Only, pages 2-7;
- Add the following note to AVPN DS1 Port – 640 Kbps – "Note: This Product is no longer available. Existing customers will continue to be supported.", page 3;
- Add new AVPN Port Only speed and pricing options:
- AVPN DS3 Port – 10.808 Mbps, page 4;
- AVPN Gigabit Ethernet Port 250 Mbps and 450 Mbps, page 6; and
- AVPN Gigabit Ethernet Port 2 Gbps – 10 Gbps, pages 7-8.
- Add the following note to AVPN VLAN features – "Note: The AVPN VLAN Product features below are no longer available. Existing customers will continue to be supported.", page 8;
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Service Diversity, pages 9-13;
- Add the following note to various AVPN Service Diversity features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 9-11;
- MPLS Port SDO – 64 Kbps, 192 Kbps, 320 Kbps, 448 Kbps, 576 Kbps, 640 Kbps and 704 Kbps.
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN POP Diversity, pages 13-18;
- Add the following note to various AVPN POP Diversity features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 13-14;
- MPLS Port Pop Diversity - 64 Kbps, 192 Kbps, 320 Kbps, 448 Kbps, 576 Kbps, 640 Kbps and 704 Kbps.
- Add the following note to AVPN Layer 2 PVCs features – "Note: The AVPN Product features below are no longer available. Existing customers will continue to be supported.", page 18;
- Under AVPN Class of Service, insert a sub header called Multimedia High Svc, page 21;
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Class of Service - CoS Package – Multimedia High Svc, pages 21-27;
- Add the following note to various CoS Package Multimedia High Svc features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 21-22;
- Under AVPN Class of Service, insert a sub header called Multimedia Standard Svc, page 27;

- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Class of Service - CoS Package – Multimedia Standard Svc, pages 27-33;
- Add the following note to various CoS Package Multimedia Standard Svc features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 27-29;
- Under AVPN Class of Service, insert a sub header called Critical Data Svc, page 33;
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Class of Service - CoS Package – Critical Data Svc, pages 33-40;
- Add the following note to various CoS Package Critical Data Svc features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 34-35;
- Under AVPN Class of Service, insert a sub header called Business Data Svc, page 40;
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Class of Service - CoS Package – Business Data Svc, pages 40-46;
- Add the following note to various CoS Package Business Data Svc features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 40-41;
- Update port speeds, add pricing for new speeds, reduce Non-Recurring and Recurring Charges for AVPN Unilink Charge, pages 46-52;
- Add the following note to various AVPN Unilink features – "Note: This Product is no longer available. Existing customers will continue to be supported.", pages 46-48;
- Update AVPN Managed Router (AT&T Owned) pricing table, page 53;
- Reduce Non-Recurring, Recurring and Change Charges of existing features, page 53; and
- Add pricing for AVPN Managed Router (AT&T Owned) – XX Large, page 53.
- Update AVPN Managed Router (Customer Owned) pricing table, pages 53-54;
- Reduce Non-Recurring, Recurring and Change Charges of existing features, pages 53-54; and
- Add pricing for AVPN Managed Router (Customer Owned) – XX Large, page 54.
- Update AVPN Managed Internal CSU (AT&T Owned) pricing table, page 54-55;
- Update feature names, reduce Non-Recurring, Recurring and Change Charges of existing features, pages 54-55;
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – Low End, page 55;
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – High End, page 55;
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet Combo, page 55;
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – OC3/STM1 ATM, page 55;
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – OC3/ STM1 PPP, page 55; and
- Add pricing for AVPN Managed Internal CSU (AT&T Owned) – OC3/STM4 PPP, page 55.
- Update AVPN Managed Internal CSU (Customer Owned) pricing table, pages 55-56;
- Update feature names and identifiers, reduce Non-Recurring, Recurring and Change Charges of existing features, pages 55-56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – MLPPP, page 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – T3/DS3 ATM protocol, page 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – Internal T3/DS3 PPP protocol, page 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – Low End, pages 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – High End, page 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet Combo, page 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 ATM, pages 56;
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – OC3/ STM1 PPP, page 56; and
- Add pricing for AVPN Managed Internal CSU (Customer Owned) – OC3/STM4 PPP, page 56.
- Update AVPN Owned and Managed External CSU pricing table, pages 56-57;
- Update feature names, reduce Non-Recurring, Recurring and Change Charges of existing features, pages 56-57;
- Add the following note to AVPN Managed External CSU – 56 Kbps – "Note: This Product is no longer available. Existing customers will continue to be supported.", page 56;
- Add pricing for AVPN Managed External Probe OC3 ATM/PPP, page 57;
- Add pricing for AVPN Managed External Probe 10/100 Mbps Ethernet, page 57;
- Add pricing for AVPN Managed External Probe 1 Gbps Ethernet, page 57;
- Update Unit of Measure, Reduce Non-Recurring, Recurring and Change Charges for AVPN Managed Enhanced Reports, page 57;
- Update AVPN Managed (AT&T Owned) Additional Router pricing table, pages 57-58;
- Reduce Non-Recurring, Recurring and Change Charges of existing features, pages 57-58;
- Add pricing for AVPN Managed (AT&T Owned) Router – Additional Memory XL+, page 58;
- Add pricing for AVPN Managed (AT&T Owned) Router – Dual Power XL+, page 58;
- Add pricing for AVPN Managed (AT&T Owned) Router – Dual Power XXL, page 58; and
- Add pricing for AVPN Managed (AT&T Owned) Router – Multicast, page 58.
- Update AVPN Managed (Customer Owned) Additional Router Features table, page 58-59;
- Reduce Non-Recurring, Recurring and Change Charges of existing features, pages 58-59;

- Add pricing for AVPN Managed (Customer Owned) Router – Additional Memory XL+, page 59;
- Add pricing for AVPN Managed (Customer Owned) Router – Dual Power XL+, page 59;
- Add pricing for AVPN Managed (Customer Owned) Router – Dual Power XXL, page 59; and
- Add pricing for AVPN Managed (Customer Owned) Router – Multicast, page 59.
- Add a new pricing table header called AVPN Managed Service Bundles, pages 60;
- Add a new sub header with pricing for AVPN Managed Service Bundles w/ Standard Features, pages 60-68;
- Add a new sub header with pricing for AVPN Managed Service Bundles Life Cycle Management Features and Services, pages 68-70;
- Add a new sub header with pricing for AVPN Managed Service Bundles Optional Up Lift Features and Services, pages 70-79; and
- Add a new sub header with pricing for AVPN Managed Services Data Center Stand Alone Routers, page 79;

Replace Attachment 4 Section 6.1.3.2.6 (1-44) with amended section (1-92).

6. **Section 6.1.3.9 - DSL Virtual Private Network, Attachment 4 (Pricing), has been modified to replace the pricing table associated with Network Based Firewall (NBFW) Service.** This product was changed with Amendment 10 under Multi Protocol Label Switching Service (MPLS). This is a clean-up of the same service.

- **Delete Network Based Firewall (NBFW) pricing tables, pages 6-13; and**
- **Add revised Managed Security Service (MSS) - Network Based Firewall (NBFW) pricing tables, pages 6-11.**

Replace Attachment 4 Section 6.1.3.9 (1-13) with amended section (1-13).

7. **Section 6.1.11 - Service Level Agreement (SLA) – MSA 1 has been modified to include the following changes:**

- Update Service Availability to add AVPN Managed Service Bundles, AT&T Switched Ethernet (ASE), OPT-E-MAN Managed Service Bundles, OPT-E-WAN and OPT-E-WAN Managed Service Bundles and Objectives section to include ASE - (replace Page 6-766 and Page 6-766A);
- Update Catastrophic 1 Outage table (replace Page 6-772);
- Update Catastrophic 2 Outage table (replace Page 6-776);
- Update Catastrophic 3 Outage table (replace Page 6-779);
- Update Transmission Delay table (replace Page 6-783);
- Update Transmission Delay table (replace Page 6-784);
- Update Excessive Outage table (replace Page 6-791);
- Update Provisioning table (replace Page 6-801);
- Update Time to Repair (TTR) – Major (replace Page 6-803);
- Update Time to Repair (TTR) – Minor (replace Page 6-807);
- Add Packet Loss table (insert Page 6-823E);
- Add Proactive Notification SLA – Managed Router table (insert Page 6-823F); and
- Add AT&T Switched Ethernet Service (ASE) – Class of Service (CoS) SLA (insert Page 6-823G and Page 6-823H).

Replace the appropriate pages in the Service Level Agreement (SLA), Section 6.1.1.1, (Volume 1, pages 6-766 through 6-823H utilizing the pagination information on the previous page of this attachment).

E. Amendment Summary:

- **What is this amendment about?**

  Contract enhancements and price reductions as a result of Section 28, A Letter of Concurrence was signed on April 26, 2011 to allow for the provisioning of CGEN project (for Managed Network Services)

- **Why is the contract being amended?**

  Contract enhancements and price reductions to support the OTech CGEN Project

- **What is the reason/purpose for the amendment?**

  Contract enhancements and price reductions

6.1.3.2.5 Service Identifier: Metropolitan Area Network (MAN) and Wide Area Network (WAN) Services

Description of Service

The following services can support the transmission of digital signals at 1 Gbps in Ethernet format:

- GigaMAN
- SONET
- Multi-Service Optical Network Ring (MON)
- Optical Ethernet Transparent LAN (OPT-E-MAN)
- AT&T Switched Ethernet (ASE)
- Optical Ethernet Wan (OPT-E-WAN)
- Customized Switched Metro Ethernet Service (CSME)

AT&T Fibre Channel Metropolitan Area Network (FibreMAN) is capable of high-speed transmissions but uses the fibre channel protocol.

We provide details about our SONET offering in the SONET attachment.

Availability

AT&T provides a variety of high-capacity transport media within our Local Service areas in California.

Service is only available where facilities and operating conditions permit. Where facilities and/or operating conditions do not permit, special construction will apply.

GigaMAN® / DecaMAN® / FibreMAN®

GigaMAN and DecaMAN are fiber based, intra-lata, point-to-point, Ethernet services that transport data at rates of 1 Gigabit Per Second (Gbps) and 10 Gbps, respectively. This allows customers to transport data signals between local area networks (LANs). GigaMAN transports data signals at the rate of 1 Gbps. DecaMAN transports data signals at the rate of 10 Gbps.

DecaMAN is available with two different customer interfaces:

- 10 Gigabit Ethernet (LAN-PHY) - A version of Ethernet that allows data transmission rates of 10.3125 Gbps with a LAN-PHY only interface (10GBase-LR 1310nm single mode fiber).

- 10 Gigabit Ethernet (WAN-PHY) - A version of Ethernet that allows data

transmission rates of 9.953 Gbps with a WAN-PHY only interface (10GBase-LW 1310nm, single mode fiber)

GigaMAN provides the following customer interface:

- 1 Gigabit Ethernet (1000Base-SX & 1000Base-LX)

FibreMAN is an intra-lata, point-to-point service based on the same optical platform as GigaMAN and DecaMAN above, but provides a Fibre Channel interface to the customer.

FibreMAN is based on the Fibre Channel protocol, which is a unique and highly reliable interconnection protocol that supports rapid transfer of data between workstations, mainframes, servers, and data storage systems. The FibreMAN product offering is a dedicated fiber based point-to-point transport service. This service is used to connect customer provided Fibre Channel switches or routers from one customer location to another at a 1 Gbps or 2 Gbps line rate.

FibreMAN supports two optical interface versions:

- the 1000Base-SX interface—short wavelength design and
- the 1000Base-LX interface—long wavelength design.

The SX interface uses multi-mode (MM) fiber. AT&T only uses 50 micron multimode fiber for the connection between the Nortel equipment and the demarcation point. Customers can use either one of two types of multi-mode fiber between their CPE and the demarcation point:

--- 62.5 micron multimode fiber for interconnections up to 275 meters (902 feet) for unprotected services only between the CPE and demarcation point.

--- 50 micron multimode fiber for interconnections up to 550 meters (1804 feet) between the CPE and demarcation point.

As FibreMAN is provided by the same network equipment as GigaMAN/DecaMAN, the general network descriptions and diversity options described below also apply to FibreMAN. Protection Options apply only to GigaMAN and DecaMAN.

General Network Descriptions:

AT&T provisions GigaMAN/DecaMAN service on the Nortel Networks OPTera 5100/5200 platform using Wavelength Division Multiplexing (WDM) technology, a highly efficient way to keep your data moving fast. CPE can be a router with a gigabit Ethernet blade or an Ethernet switch equipped to support gigabit Ethernet. The Nortel equipment adheres to the Telcordia Network Equipment Building System (NEBS) requirements, which lay out the specifications for carrier-class equipment. The equipment is tested by a third-party laboratory to ensure that it meet such parameters as Zone 4 earthquake, relative humidity and

temperature ranges, voltage range, resistance to electromagnetic interference (EMI) and appropriate levels of radio frequency interference (RFI).

GigaMAN/DecaMAN service provides an easy and straightforward migration path for upgrading backbone networks to higher performance levels without major disruptions. Because GigaMAN/DecaMAN/DecaMAN service carries your LAN traffic in its native Ethernet format, it won't affect your existing LAN management systems or support software. GigaMAN/DecaMAN service also interconnects with standard LAN devices. GigaMAN is a single-protocol Ethernet service, so it minimizes the need for additional equipment, protocol conversion, and extensive training.

GigaMAN/DecaMAN service saves on installation costs because it simply connects to your existing gigabit Ethernet LAN or Ethernet-ready switch router. And, there's no need to worry about additional network security issues, since GigaMAN/DecaMAN service securely contains your organization's data on your own private, dedicated facilities.
With GigaMAN/DecaMAN service, you can expect high-speed performance and nearly error-free transmission of those bandwidth-intensive applications at the core of your business. Users can transmit large files typical of document imaging, medical imaging, CAD/CAM systems, video conferencing, and graphics applications in real time, without compromising network performance. GigaMAN/DecaMAN service is not limited to one application—multiple applications can share the same link. Where technology and facilities permit, GigaMAN/DecaMAN service can extend across the geographic reach of most LATAs.
Using optical transport and end-to-end network monitoring, GigaMAN/DecaMAN service is extremely reliable. These features enable streamlined network maintenance, faster service, and early detection of potential problems to keep your business operating smoothly.

GigaMAN/DecaMAN are "designed services". This means that equipment used will depend on the type and quantity of service ordered, existing fiber and equipment, and customer reliability requirements.

AT&T engineers will design each circuit to meet current and forecasted network needs:

- May use WDM to deliver multiple circuits over same fiber pair, conserving customer entrance facilities
- May use on-site intelligent network equipment to support edge-monitoring and to extend signal and/or provide specified interface
- May use on-site passive network equipment to support edge-monitoring
- Requirements for customer provided space, power, conduit, etc. will be provided by your AT&T representative

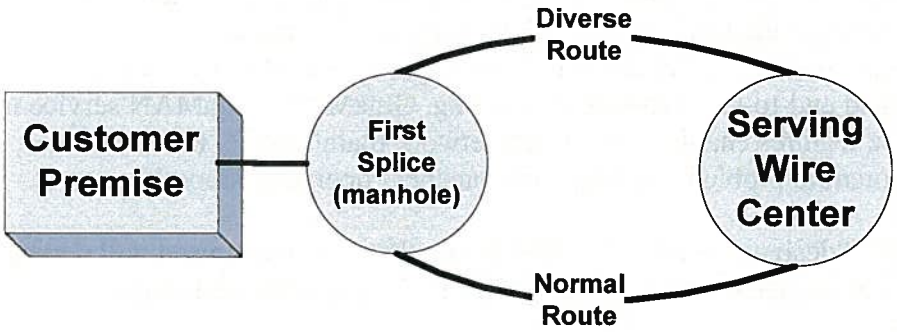
GigaMAN and DecaMAN are deployed over the same WDM infrastructure, and both offer the same optional features to meet service reliability greater than the standard point-to-point service. Upon review of specific reliability requirements, the following service options can be incorporated into the service design:

- Basic service is unprotected

- Optional design features include Diversity and Protection
- Diversity assures 2 unprotected circuits will be separated
- Protection uses 2 pairs (4 fibers) for a single circuit, to provide separate paths thru the network with automatic fail-over
- Each design option provides elements of redundancy
- Best option varies by customer need

Diversity Options:

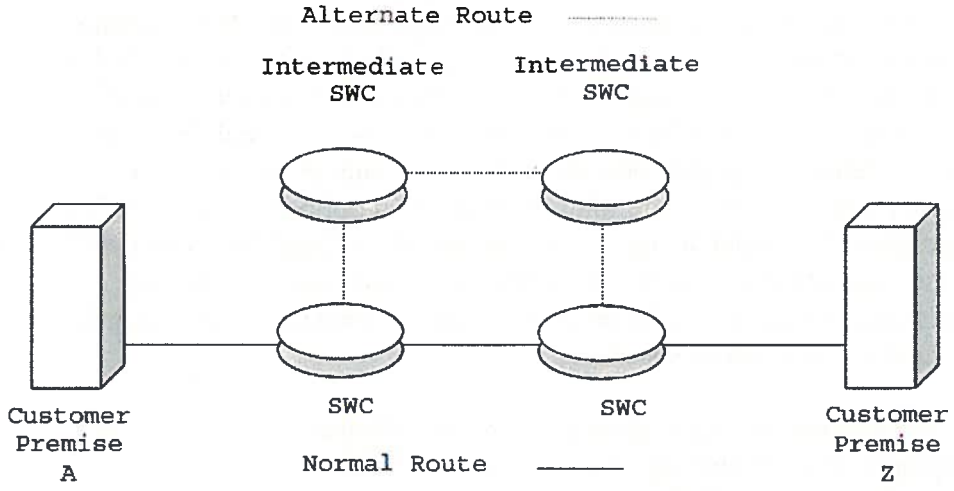
1) Local Channel Diversity provides for a transmission path between a designated customer premises and the standard service wire center (SWC) that is diverse from the normal/standard transmission path. Local Channel Diversity requires two GigaMAN/DecaMAN services purchased by the same customer of record. With this arrangement, one or more local distribution channels will be provisioned over the standard route, and one or more local distribution channels will be provisioned over the diverse route. Local Channel Diversity does not provide for all diversity, it only allows for diversity from the splice point closest to the customer's property line to the SWC. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premises, at the customer's expense.



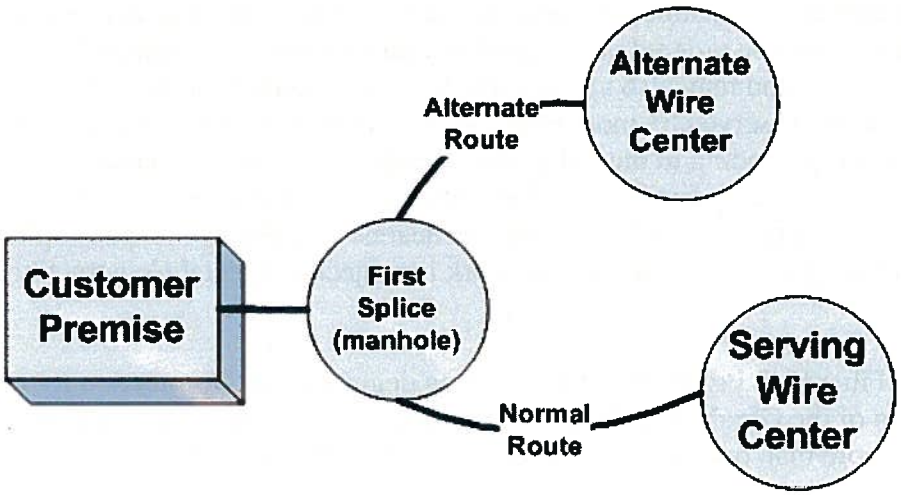
2) Inter-Wire Center (IWC) Diversity arrangements presume that each end of a GigaMAN/DecaMAN local distribution channel is serviced out of a different serving wire center (SWC). Inter-Wire Center Diversity requires two GigaMAN/DecaMAN services purchased by the same customer of record. This arrangement provides a transmission path for GigaMAN/DecaMAN local distribution channels between the customer's designated SWC and the SWC at the distant end of the circuit over a transmission path that is separate from the standard transmission path between the two wire centers. IWC diversity does not provide for full diversity. It only offers interoffice diversity. If a customer desires full diversity, Alternate Wire Center Diversity must be implemented along with IWC Diversity. Additionally, arrangements must be made for constructing dual entrance facilities at the customer's premises, at the customer's expense.

Inter-Wire Center Diversity (IWC) Mileage Measurement:
Mileage measurements for Access Services, provisioned via an Inter-Wire Center Diversity, will be based on the diverse routing; i.e.

mileage measurements will be calculated between the Intermediate Serving Wire Centers along the circuit path of the diversely routed GigaMAN/DecaMAN service.



3) Alternate Wire Center Diversity is for the local loop only. It provides a local channel transmission path for GigaMAN/DecaMAN service between the customer's designated premises and a wire center that is not the normal (or standard) service wire center. The Telephone Company will choose the alternate wire center closest to the customer's designated premises that is capable of providing GigaMAN/DecaMAN service over the alternate route. If a customer desires full diversity, arrangements must be made for constructing dual entrance facilities into the customer's premises, at the customer's expense. If the circuit routed to the alternative wire center has Interoffice Mileage, measurements will be based on the alternate routing; i.e. mileage measurements will be made to the alternate wire center rather than the serving wire center from which the customer designed premises would normally obtain dial tone.



Protection Options:

Protection options are provisioned on the customer's GigaMAN/DecaMAN service, and the customer is not required to purchase a second GigaMAN/DecaMAN circuit for protection options. Protection options are applied on a per GigaMAN/DecaMAN circuit basis only. Protection options are available where facilities and/or operating conditions permit. Where facilities and/or operating conditions do not permit, Special Construction charges may apply. Protection options provide additional levels of reliability to GigaMAN/DecaMAN service. There are multiple protection options offered. The options do not need to be the same, but both Channel Terminations of the GigaMAN/DecaMAN service must include some form of protection for the service to be considered protected.
The Telephone Company will design the protection option based upon the configuration of the customer's GigaMAN/DecaMAN service.

GigaMAN/DecaMAN Protection Options are offered as follows:

(A) Equipment Only Protection – per Termination Point
(B) Equipment Plus Fiber Path Protection
    (1) Equipment Plus Alternate Wire Center Path Protection – per Terminating Point
    (2) Equipment Plus Channel Termination Path Protection – per Terminating Point
(C) Inter Wire Center Path Protection – per Interoffice Segment
(D) Power Protection

A) Equipment Only Protection offers one GigaMAN/DecaMAN signal routed on two different fiber pairs that co-exist in the same cable and conduit structure that terminates in two distinct and separate network terminating equipment devices at the customer's premises. All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, the GigaMAN/DecaMAN equipment will switch the customer's transmission to a dedicated standby path within 50 milliseconds of detection. In the event of a failure to both fiber transmission paths, an out of service condition will result. This form of protection can only be ordered per channel termination for each protected GigaMAN/DecaMAN service, and may also apply to the Inter-Wire center segment if the GigaMAN/DecaMAN service is served by more than one serving wire center. If a customer requests complete protection extending to the Telephone Company serving wire center from their premises location when utilizing Equipment Protection, they must request diverse entrance facilities into their premises at each end from the nearest Telephone Company splice point closest to the customer premises location. This work is subject to Special Construction charges.

B) Equipment Plus Fiber Path Protection offers varying degrees of path protection for each channel termination of the GigaMAN/DecaMAN service, plus the inter-wire segment if the service is served by more than one serving wire center, and is offered as follows:

(B.1) Equipment Plus Alternate Wire Center Path Protection offers one GigaMAN/DecaMAN signal routed over one fiber pair of the protected GigaMAN/DecaMAN service from the customer's premises to the customer's normal serving wire center, and a duplicate GigaMAN/DecaMAN signal routed over a diversely routed fiber pair to the Alternate Wire center selected by the Telephone Company. If any location between the two fiber paths is closer than ten feet, the location will be disclosed to the customer. The customer will determine whether to accept the engineered path or agree to pay Special Construction charges to provide a completely diverse route. Where facilities are not available, the customer may select Equipment Only Protection for an inter-office segment. This option can be selected for one or both channel terminations of the GigaMAN/DecaMAN service. All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, the GigaMAN/DecaMAN service will switch to a dedicated standby path within 50 milliseconds of detection. In the event of failure to both fiber transmission paths, an out of service condition will result. This form of protection can only be ordered per channel termination for each protected GigaMAN/DecaMAN service. If a customer requests complete protection extending to the Telephone Company serving wire center from their premise location when utilizing Equipment Protection Plus Alternate Wire Center Path Protection, they must request diverse entrance facilities into their premises at each end, from the nearest Telephone Company splice point closest to the customer premise location. This work is subject to Special Construction charges.

(B.2) Equipment Plus Channel Termination Path Protection offers a duplicate GigaMAN/DecaMAN signal routed over two diversely routed fiber paths to the customer's normal serving wire center. If any location(s) between two fiber paths is closer than ten feet, the location(s) will be disclosed to the customer. The customer will determine whether to accept the engineered path or agree to pay Special Construction charges, to provide a completely diverse route. All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, GigaMAN/DecaMAN technology will switch the customer's transmission to a dedicated standby path within 50 milliseconds of detection. In the event of failure to both fiber transmissions to a dedicated standby path and/or failure to both fiber transmission paths, an out of service condition will result. This form of protection can only be ordered per Channel Termination for each protected GigaMAN/DecaMAN service from the customer's premises location, or from the manhole/splice point nearest the customer premises to the Telephone Company serving wire center. If a customer requests complete protection extending to the Telephone Company serving wire center from their premises location when utilizing Equipment Protection Plus Channel Termination Path Protection, they must request diverse entrance facilities into their premises at each end from the nearest Telephone Company splice point closest to the customer premises location. This work is subject to Special Construction charges.

(C) Inter-Wire Center Path Protection offers a duplicate GigaMAN/DecaMAN signal routed over two diversely routed fiber paths between the two serving wire centers or alternate wire centers. Path protection starts at the nearest manhole outside the Telephone Company serving wire center. Inter Wire Center Path Protection must be ordered with either Equipment Only, Channel Termination Path Protection or Alternate Wire Center Path Protection. If any location(s) between the two fiber paths is closer than ten feet, the location(s) will be disclosed to the customer. The customer will determine whether to accept the engineered path or agree to pay Special Construction charges, to provide a completely diverse route. All protected configurations have one working and one standby path. In the event of a failure of the customer's transmission path, GigaMAN/DecaMAN technology will switch the customer's transmission to a dedicated standby path within 50 milliseconds of detection. In the event of failure to both fiber transmission paths, an out of service condition will result.

(D) Power Protection provides GigaMAN/DecaMAN customers with battery backup for up to eight (8) hours to maintain GigaMAN/DecaMAN equipment in the event of a commercial AC power failure. Power Protection is offered on a per equipment bay capacity basis, per customer premises, and is dependent upon the number of GigaMAN/DecaMAN services for the GigaMAN/DecaMAN customer of record. The Telephone Company will apply the power protection rate elements based upon the circuit capacity. More than one rate element may be applicable. The Telephone Company will determine the design and engineering requirements for Power Protection for GigaMAN/DecaMAN customers. Customers in multi-tenant buildings will require separate equipment and bays dedicated to each customer. The addition of Power Protection to existing GigaMAN/DecaMAN service may result in temporary service interruption. Power Protection is not available for installations using a wall mounted cabinet. Customers are responsible for providing floor space for power equipment.

SLA Enhancement:

GigaMAN/DecaMAN with protection:

A service interruption will result in a credit equal to 100% of the monthly recurring charge for the entire circuit. Only one such credit in a billing period will apply.

This outage must be reported by the customer and the circuit made available to AT&T for testing. The outage must be determined by AT&T to be in its network and the failure occurred in the part of the service with path protection.

GigaMAN® Service and Features

Feature Name	Identifier	Feature Description
GigaMAN Local Distribution Channel	LNVX5	Local Distribution Channel (Same as Channel Termination) is the termination of GigaMAN at a customer designated premise (node), consisting of the following two elements:

Feature Name	Identifier	Feature Description
		(a) the termination for the fiber optic facilities at each node and its serving wire center. (b) the fiber optic facility between each node and its serving wire center.
GigaMAN Repeater	VU4X5	Repeaters (Circuit Regenerators) provide essential detection and retransmission of GigaMAN® signals. Repeaters are provided as required by the Telephone Company when actual fiber facility loss between customer designated premises and/or central office locations exceed design limits. Repeaters will be located exclusively in Telephone Company central offices and are required for each successive transport segment of approximately 21.4 db.
GigaMAN Interoffice Mileage	1L5X3	Interoffice Transport facilities, which provide the transmission path between Serving Wire Centers associated with two customer designated premises, are comprised of Fixed and Per Mile rate elements.
GigaMAN Channel Termination Diversity (Local Channel Diversity)	CPAL5	Channel termination diversity (i.e., local channel diversity) provides for a transmission path between a designated customer premises and the standard serving wire center that is diverse from the standard transmission path of the GigaMAN service.
GigaMAN Alternate Wire Center Diversity	CPAA5	Alternate Wire Center Diversity provides for a Local Distribution Channel from the customer premises to a serving wire center that is not the customer's standard serving wire center.
GigaMAN Inter-Wire Center Diversity	CPAT5	Inter-Wire Center Diversity provides for a transmission path that is not the standard transmission path between the serving wire centers of a GigaMAN service.
GigaMAN Equipment Only Protection	CPAE3	Equipment Only Protection offers one GigaMAN signal routed on two different fiber pairs that co-exist in the same cable and conduit structure that terminates in two distinct and separate network terminating equipment devices at the customer's premises.
GigaMAN Equipment	CPAF3	Equipment Plus Alternate Wire Center Path

Feature Name	Identifier	Feature Description
plus Alternate Wire Center Path Protection		Protection offers one GigaMAN signal routed over one fiber pair of the protected GigaMAN service from the customer's premises to the customer's normal serving wire center, and a duplicate GigaMAN signal routed over a diversely routed fiber pair to the Alternate Wire center.
GigaMAN Equipment plus Channel Termination Path Protection	CPAG3	Equipment Plus Channel Termination Path Protection offers a duplicate GigaMAN® signal routed over two diversely routed fiber paths to the customer's normal serving wire center.
GigaMAN Inter-Wire Center Path Protection	CPAH3	Inter-Wire Center Path Protection offers a duplicate GigaMAN® signal routed over two diversely routed fiber paths between the two serving wire centers or alternate wire centers.
GigaMAN Power Protection	VBBG3	Provides up to 8 hours of battery back-up power protection for equipment. Per end, as required.
GigaMAN Administration Charge	NRBAO	Administration charge, one per order.

DecaMAN® Service and Features

Feature Name	Identifier	Feature Description
DecaMAN Local Distribution Channel WAN-PHY	1RSTX	Local Distribution Channel (Same as Channel Termination) is the termination of DecaMAN at a customer designated premise (node), consisting of the following two elements: (a) the termination for the fiber optic facilities at each node and its serving wire center. (b) the fiber optic facility between each node and its serving wire center.
DecaMAN Local Distribution Channel LAN-PHY	1RSTX	Local Distribution Channel (Same as Channel Termination) is the termination of DecaMAN at a customer designated premise (node), consisting of the following two elements: (a) the termination for the fiber optic facilities at each node and its serving wire center.

Feature Name	Identifier	Feature Description
		(b) the fiber optic facility between each node and its serving wire center.
DecaMAN Interoffice Mileage	JZ68S	Interoffice Transport facilities, which provide the transmission path between Serving Wire Centers associated with two customer designated premises, are comprised of Fixed and Per Mile rate elements.
DecaMAN Repeater	VU4	Repeaters (Circuit Regenerators) provide essential detection and retransmission of DecaMAN signals. Repeaters are provided as required by the Telephone Company when actual fiber facility loss between customer designated premises and/or central office locations exceed design limits. Repeaters will be located exclusively in Telephone Company central offices and are required for each successive transport segment of approximately 21.4 db.
DecaMAN Channel Termination Diversity (Local Channel Diversity)	CPALX	Channel termination diversity (i.e., local channel diversity) provides for a transmission path between a designated customer premises and the standard serving wire center that is diverse from the standard transmission path of the DecaMAN service.
DecaMAN Alternate Wire Center Diversity	CPAAX	Alternate Wire Center Diversity provides for a Local Distribution Channel from the customer premises to a serving wire center that is not the customer's standard serving wire center.
DecaMAN Inter-Wire Center Diversity	CPATX	Inter-Wire Center Diversity provides for a transmission path that is not the standard transmission path between the serving wire centers of a DecaMAN service.
DecaMAN Equipment Only Protection	CPAEX	Equipment Only Protection offers one DecaMAN signal routed on two different fiber pairs that co-exist in the same cable and conduit structure that terminates in two distinct and separate network terminating equipment devices at the customer's premises
DecaMAN Equipment plus Alternate Wire Center Path Protection	CPAFX	Equipment Plus Alternate Wire Center Path Protection offers one DecaMAN signal routed over one fiber pair of the protected DecaMAN service from the customer's premises to the customer's normal serving wire center, and a duplicate DecaMAN signal routed over a diversely routed fiber pair to the Alternate Wire center.
DecaMAN Equipment plus Channel Termination Path Protection	CPAGX	Equipment Plus Channel Termination Path Protection offers a duplicate DecaMAN signal routed over two diversely routed fiber paths to the customer's normal serving wire center.

Feature Name	Identifier	Feature Description
DecaMAN Inter-Wire Center Path Protection	CPAHX	Inter-Wire Center Path Protection offers a duplicate DecaMAN signal routed over two diversely routed fiber paths between the two serving wire centers or alternate wire centers.
DecaMAN Power Protection	VBBGX	Provides up to 8 hours of battery back-up power protection for equipment. Per end, as required.
DecaMAN Administration Charge	NRBAO	Administration charge, one per order.

FibreMAN® Service and Features

Feature Name	Identifier	Feature Description
FibreMAN Local Distribution Channel 1 Gbps	25P8X	Local Distribution Channel (Same as Channel Termination) is the termination of FibreMAN at a customer designated premise (node), consisting of the following two elements: (a) the termination for the fiber optic facilities at each node and its serving wire center. (b) the fiber optic facility between each node and its serving wire center.
FibreMAN Local Distribution Channel 2 Gbps	25P9X	Local Distribution Channel (Same as Channel Termination) is the termination of DecaMAN at a customer designated premise (node), consisting of the following two elements: (a) the termination for the fiber optic facilities at each node and its serving wire center. (b) the fiber optic facility between each node and its serving wire center.
FibreMAN Repeater	VU4	Repeaters (Circuit Regenerators) provide essential detection and retransmission of FibreMAN signals. Repeaters are provided as required by the Telephone Company when actual fiber facility loss between customer designated premises and/or central office locations exceed design limits. Repeaters will be located exclusively in Telephone Company central offices and are required for each successive transport segment of approximately 21.4 db.

Feature Name	Identifier	Feature Description
FibreMAN Alternate Wire Center Diversity	AVOYX	Alternate Wire Center Diversity provides for a Local Distribution Channel from the customer premises to a serving wire center that is not the customer's standard serving wire center.
FibreMAN Channel Termination Diversity(Local Channel Diversity)	DJVYX	Channel termination diversity (i.e., local channel diversity) provides for a transmission path between a designated customer premises and the standard serving wire center that is diverse from the standard transmission path of the FibreMAN service.
FibreMAN Inter-Wire Center Diversity	DEQYX	Inter-Wire Center Diversity provides for a transmission path that is not the standard transmission path between the serving wire centers of a FibreMAN service.
FibreMAN Interoffice Mileage	JZ4XS	Interoffice Transport facilities, which provide the transmission path between Serving Wire Centers associated with two customer designated premises, are comprised of Fixed and Per Mile rate elements.

Multi-Service Optical Network Ring (MON Ring)

AT&T Multi-Service Optical Network Ring (MON Ring) Service provides high-volume optical transport using DWDM technology in a dedicated-ring configuration. Multiple data signals transmit over fiber-optic cable using different wavelengths of light. Each of these wavelengths represents a transmission channel in the MON Ring system and is protocol-independent of every other channel in the system.

AT&T Multi-Service Optical Network (MON) Service can extend customer networks to off-site locations. These include, but are not limited to, disaster recovery, storage area networking (SAN) connections, data center mirroring, and mainframe-to-mainframe communications. AT&T MON Ring Service allows customers to combine their multiple data signals so that they can be amplified and transported over one network. MON Ring Service provides dedicated capacity over a single pair of fiber in two directions, increasing capacity without limiting customer-required data interfaces.

MON Ring Service is available in either a 16-wavelength or a 32-wavelength configuration. A 16-wavelength MON Ring Service can handle a maximum of 16 wavelengths or 80 Gbps of protected channels or 160 Gbps of unprotected channels. Our 32-wavelength MON Ring Service can handle a maximum of 32 wavelengths or 160 Gbps of protected channels or 320 Gbps of unprotected channels.

You can combine protected and unprotected circuits on a single MON. The increase in "unprotected"capacity is simply because the extra channels go unused for protection and can be used for data. This effectively doubles the capacity available for each circuit left unprotected. This assumes that the customer has either opted not to require protection on a channel because of the nature of the traffic, or that the customer performs the protection themselves using CPE. Each channel can handle 2.5 Gbps of traffic.

MON Ring Service and Features

Feature Name	Identifier	Feature Description
MON Ring Customer Prem Node	F2ND1	Includes 1st shelf; Provides termination of the service on a per-shelf basis, and presents the various selected ports to the customer's equipment. Minimum two nodes required
MON Ring Customer Prem Node	F2NDS	Per Subsequent shelf; Provides termination of the service on a per-shelf basis, and presents the various selected ports to the customer's equipment. Minimum two nodes required
MON Ring Central Office Node	F2NC1	Includes 1st shelf; Provides for the termination of service in an AT&T serving wire center for various port bandwidth to the customer's ring.
MON Ring Central Office Node	F2NCS	Per subsequent shelf; Provides for the termination of service in an AT&T serving wire center for various port bandwidth to the customer's ring.
MON Ring Interoffice Mileage	1L5X5	Per Mile; Interoffice mileage is calculated using the V&H coordinate method. There is always a two-mile minimum (one mile in each direction—node-to-node connection).
MON Bulk Power - Shelves 1-4	CBVDX	Provides power for customer premises node which may be required, at the request of the customer, when nodes are added to or dropped from a ring.
MON Bulk Power - Subsequent shelves 5-8	CVBDS	Provides power for customer premises node which may be required, at the request of the customer, when nodes are added to or dropped from a ring.
MON Ring Central Office Optical Amplifier - Per location	67QXX	Provides for an optical signal boost if the distance between nodes exceeds the transmission loss parameters (link loss specific).

Feature Name	Identifier	Feature Description
C-Band		
MON Ring Central Office Optical Amplifier - Per location L-Band	67QSX	Provides for an optical signal boost if the distance between nodes exceeds the transmission loss parameters (link loss specific).
MON Ring Central Office Regenerator - Up to 2.5 Gbps, Per shelf	V8RXX	Provides for re-timing, re-shaping, and regeneration of the signal if degradation exceeds the dispersion limits.
MON Ring Central Office Regenerator - Up to 10 Gbps, per Circuit	V8R2C	Provides for re-timing, re-shaping, and regeneration of the signal if degradation exceeds the dispersion limits.
MON Ring Port ETR - 8 Mbps ETR unprotected	POYKW	8 Mbps—Manchester Encoded—External Timing References. This protocol is used for IBM GEOPLEX architecture for multiple-location host processors. ETR limited to a maximum distance of 40 km.
MON Ring Port Fibre Channel - 1.0625 Gbps Unprotected	POYNW	1.0625 Gbps—an industry-standard protocol used to interconnect storage area networks (SANs).
MON Ring Port Fibre Channel Protected - 1.0625 Gbps Protected	POYNP	1.0625 Gbps—an industry-standard protocol used to interconnect storage area networks (SANs).
MON Ring Port Fibre Channel 2G - 2.125 Gbps Unprotected	POYYW	2.125 Gbps—an industry-standard protocol used to interconnect storage area networks (SANs).
MON Ring Port Fibre Channel 2G Protected - 2.125 Gbps Protected	POYYP	2.125 Gbps—an industry-standard protocol used to interconnect storage area networks (SANs).
MON Ring Port FICON - 1.0625 Gbps Unprotected	POYMW	1.0625 Gbps—a higher-speed evolution of ETRTM, enabling 1 Gbps connectivity among mainframes, storage devices, and peripherals.
MON Ring Port FICON Protected - 1.0625 Gbps Protected	POYMP	1.0625 Gbps—a higher-speed evolution of ETRTM, enabling 1 Gbps connectivity among mainframes, storage devices, and peripherals. Protected.
MON Ring Port FICON 2G - 2.125 Gbps Unprotected	POYWW	2.125 Gbps—a higher-speed evolution of ETRTM, enabling 1 Gbps connectivity among mainframes, storage devices, and peripherals.
MON Ring Channel Port FICON 2G - 2.125	POYWP	2.125 Gbps—a higher-speed evolution of ETRTM, enabling 1 Gbps connectivity among mainframes, storage devices, and peripherals.

Feature Name	Identifier	Feature Description
Gbps Protected		Protected.
MON Ring Port Gigabit Ethernet - 1 Gbps Ethernet Unprotected	POYLW	A version of Ethernet that allows data transmission rates of 1 Gbps.
MON Ring Port Gigabit Ethernet Protected - 1 Gbps Ethernet Protected	POYLP	A version of Ethernet that allows data transmission rates of 1 Gbps. Protected.
MON Ring Port 10W Gigabit Ethernet - 10 Gbps Ethernet Unprotected (WAN PHY)	POYTW	A version of Ethernet that allows data transmission rates of 10 Gbps, compatible with OC-192 transport (WAN PHY).
MON Ring Port 10W Gigabit Ethernet Protected - 10 Gbps Ethernet Protected (WAN PHY)	POYTP	A version of Ethernet that allows data transmission rates of 10 Gbps, compatible with OC-192 transport (WAN PHY). Protected.
MON Ring Port 10L Gigabit Ethernet - 10 Gbps Ethernet Unprotected (LAN PHY)	POYUW	A version of Ethernet that allows data transmission rates of 10 Gbps (LAN PHY).
MON Ring Port 10L Gigabit Ethernet Protected - 10 Gbps Ethernet Protected (WAN PHY)	POYUP	A version of Ethernet that allows data transmission rates of 10 Gbps (LAN PHY). Protected.
MON Ring Port SONET OC-12/OC-12c Unprotected	POYFW	OC-12/OC-12c Port Unprotected
MON Ring Port SONET OC-12/OC-12c Protected	POYFP	OC-12/OC-12c Port Protected
MON Ring Port SONET OC-48/OC-48c	POYGW	SONET OC-48/OC-48c Port
MON Ring Port SONET OC-48/OC-48c Protected	POYGP	SONET OC-48/OC-48c Port. Protected

Feature Name	Identifier	Feature Description
MON Ring Port SONET OC-192/OC-192c	POYOW	SONET OC-192/OC-192c Port
MON Ring Port SONET OC-192/OC-192c Protected	POYOP	SONET OC-192/OC-192c Port. Protected.
MON Ring Fibre Channel SRM Port	POY6W	Fibre Channel riding sub-rate multiplexer (SRM). Unprotected.
MON Ring FibreChannel SRM Port Protected	POY6P	Fibre Channel riding sub-rate multiplexer (SRM). Protected.
MON Ring SRM Port	POY7W	FICON riding sub-rate multiplexer (SRM). Unprotected.
MON Ring FICON SRM Port Protected	POY7P	FICON riding sub-rate multiplexer (SRM). Protected.
MON Gigabit Ethernet SRM Port	POY4W	Gigabit Ethernet riding sub-rate multiplexer (SRM). Unprotected.
MON Gigabit Ethernet SRM Port Protected	POY4P	Gigabit Ethernet riding sub-rate multiplexer (SRM). Protected.
MON SONET OC-12/OC-12c SRM Port	POY5W	SONET OC-12/OC-12c riding sub-rate multiplexer (SRM). Unprotected.
MON SONET OC-12/OC-12c SRM Port Protected	POY5P	SONET OC-12/OC-12c riding sub-rate multiplexer (SRM). Protected.
MON SONET OC-3/OC-3c SRM Port	POYEW	SONET OC-12/OC-12c riding sub-rate multiplexer (SRM). Unprotected.
MON SONET OC-3/OC-3c SRM Port Protected.	POYEP	SONET OC-12/OC-12c riding sub-rate multiplexer (SRM).
MON ESCON SRM Port	POYHW	ESCON riding sub-rate multiplexer (SRM). Unprotected.
MON ESCON SRM Port Protected	POYHP	ESCON riding sub-rate multiplexer (SRM). Protected.

Optical Ethernet Transparent LAN (OPT-E-MAN®)

Service Note:

OPT-E-MAN® is a shared, switched Ethernet service and not the appropriate solution for customers who require high bandwidth, two node, point to point Ethernet connectivity. GigaMAN® is a private line (dedicated) Ethernet service, and it is better suited for point to point, high bandwidth applications. For this reason the following restrictions apply:

- Customers may connect any two or more locations together when utilizing a point-to-point or point-to-multipoint configuration, and a minimum of three or more locations when utilizing a multipoint-to-multipoint configuration as long as they are in the same MAN and the service is available.

- The aggregate assigned Committed Information Rate (CIR) across all Ethernet Virtual Connections (EVCs) between any two customer connections cannot exceed 600Mbps per Basic or Basic Plus connection.

AT&T Optical Ethernet Transparent LAN Service (OPT-E-MAN) is an advanced switched Ethernet product that provides point-to-point and point-to-multipoint transparent LAN service (TLS) for a metro area. Fiber facilities are required, as is AT&T-owned network terminating equipment (NTE) located at the customer premises. The current OPT-E-MAN product supports both 10/100 Mbps and 1 Gbps customer handoffs with bandwidth CIR options ranging from 10 Mbps to 1 Gbps. OPT-E-MAN can be used for interconnecting multiple customer LANs within the same LATA (i.e., IntraLATA) appearing as segments on the same LAN. OPT-E-MAN is also available as a high-speed connection to AT&T Ethernet Dedicated Internet Access (EDIA) service.

The AT&T local phone company uses Cisco 7609 switches to form the core Ethernet over MPLS (EoMPLS) network. We use Cisco 3550 switches, placed at your premises, as Layer 2 switch devices to provide both routing and switching. The Cisco 3550 also serves as NTE. The Cisco 3550 allows AT&T to extend the EoMPLS network to the customer premises. A Cisco 3550 repeater may be placed in the network between the Cisco 7609-equipped wire center to the customer premises on distance and condition of fiber.

ELinks are built using Ethernet virtual connections (EVCs). EVCs are logical connections between two or more customer locations across the OPT-E-MAN network. We can provide an Ethernet virtual private LAN (EVPL) service using EVCs. From the Cisco 3550 perspective, the EVCs are constructed using either Ethernet Wire Service (EWS) or Ethernet Relay Service (ERS). We can configure these port-based services as single or multiple EVCs.

OPT-E-MAN Basic and Basic Plus Options:

OPT-E-MAN Basic service provides a logical Point-to-Point (P2P) connection between two customer locations (within the same OPT-E-MAN domain) or a customer location and an Internet Service Provider Point of Presence (POP), Interexchange Carrier POP, or another 3rd party location. AT&T's Managed Internet Service, Virtual Private Network Service and OPT-E-WANSM are all well suited for dedicated or virtual access from OPT-E-MAN Networks. Ethernet Virtual Connections (EVCs) are used to transport multiple connections over a single physical circuit. Basic OPT-E-MAN service is similar to traditional Frame Relay service in that a Frame Relay PVCs (EVCs in OPT-E-MAN) only have two endpoints and multiple PVCs (OPT-E-MAN EVCs) can ride over a common circuit.

OPT-E-MAN Basic Plus is a multipoint Ethernet service. OPT-E-MAN Basic Plus will transport Ethernet frames among three or more customer sites using transparent bridging (via an E-LAN). Basic Plus service supports either tagged (ERS) or untagged (EWS) traffic. The Basic Plus element in OPT-E-MAN only relates to the multipoint nature of the network. If EVCs are used, multiple Basic Plus domains (separate broadcast domains) in the OPT-E-MAN cloud may be established for a single customer and/or network.

Ethernet Wire Service (EWS)

Ethernet Wire Service (EWS) is a *port-based* OPT-E-MAN service facilitating the transport of all Ethernet packets (802.1Q tagged or not) through the OPT-E-MAN cloud. OPT-E-MAN will only use the destination MAC address for forwarding decisions (ignoring any and all 802.1Q tags) for all forwarding decisions. EWS services does not require customer and OPT-E-MAN coordination (other than a single VLAN that cannot be used on the customer's CPE) and allows the customer to change the VLANs transported through OPT-E-MAN without any coordination or scheduling requirements. EWS is used in both Basic and Basic Plus based networks. By definition and practice, an EWS circuit does not support OPT-E-MAN EVCs.

Ethernet Relay Service (ERS)

Ethernet Relay Service uses 802.1Q tags to differentiate multiple paths or EVCs (Ethernet Virtual Circuits) through the OPT-E-MAN network. ERS provides the mechanism for a single OPT-E-MAN circuit to transport multiple logical connections carrying communications to different endpoints or sites. The 802.1Q tag in an ERS environment is equivalent to the DLCI (Data Link Connection Identifier) on a Frame Relay connection. Like Frame Relay, the 802.1Q EVC tag is locally significant and needs not be set to the same value at both ends of the virtual circuit. On any given Ethernet circuit, each EVC must use a different VLAN number.

OPT-E-MAN service includes the transport from the customer premises to the Ethernet network, a port on the Ethernet network, and an assigned bandwidth usage, which includes the

CIR and one EVC. We include the 1 Gbps connection and 1 Gbps usage in the network overhead.

You must order OPT-E-MAN via an OPT-E-MAN standard interface, described as follows (and in the figure below):

- 100BASE-T bandwidth limitation of 100 Mbps
- 1 Gbps Ethernet (1000BASE-SX, 1000BASE-LX/LH or 1000BASE-ZX) is a fiber handoff with a bandwidth limitation of 1 Gbps

Provisioning of this service is subject to the availability and operational limitations of AT&T equipment and associated facilities.

Grades of service, which are similar to quality of service, will be available with the OPT-E-MAN product. Three grades of service are available—Best Effort, Bronze and Silver. The grades of service are associated with the bandwidth usage rate (committed information rate [CIR]) ordered by the customer for each connection at the customer locations. If the customer requests multiple EVCs per location, then a grade of service will be associated with each EVC. Service levels are available as listed below.

Best Effort: This Grade of Service supports non-critical data applications with more tolerance for delay and/or those that are lower in priority (i.e. LAN traffic). There are no service performance parameters associated with this Grade of Service.

Bronze: The applications best suited for this grade of service are data applications with more tolerance for delay and/or those that are lower in priority. This grade of service is the appropriate selection for LAN traffic since it tolerates bursty and time-varying traffic. The service parameters associated with this grade of service are packet delivery rate (PDR) and latency.

- PDR guarantee for Bronze grade of service is 99.5% of total traffic
- Latency guarantee for Bronze grade of service is less than 27 ms one way, end-to-end (54 ms roundtrip)

Silver: Supports applications that require minimal loss and low latency variation (i.e., jitter). The network will provision data in this grade of service in a priority queue indicating that it is delay sensitive. The service parameters associated with this grade of service are PDR, latency and jitter.

- PDR guarantee for Silver grade of service is 99.9% of total traffic
- Latency guarantee for Silver grade of service is less than 18 ms one way, end-to-end (36 ms roundtrip)
- Jitter guarantee for Silver grade of service is 12 ms one way, end-to-end

OPT-E-MAN Service and Features

Feature Name	Identifier	Feature Description
OPT-E-MAN Basic Connection 10/100 Mbps	P9FEX	10/100 Mbps Ethernet port per location; Assessed per interface at bandwidths of 10/100 Mbps (10/100BASE-T). The OPT-E-MAN connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
OPT-E-MAN Basic Connection Gigabit Ethernet	P9FGX	1000 Mbps Ethernet port per location; Assessed per interface at bandwidths of 1Gbps Ethernet. The OPT-E-MAN connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
OPT-E-MAN Basic Plus Connection 10/100 Mbps	P9FFX	Assessed per interface at bandwidths of 10/100 Mbps (10/100BASE-T). The OPT-E-MAN connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
OPT-E-MAN Basic Connection Gigabit Ethernet	P9FHX	Assessed per interface at bandwidths of 1Gbps Ethernet. The OPT-E-MAN connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
OPT-E-MAN Additional MAC Addresses (51-100)	M2CAX	MAC Address rate element is a data link layer protocol used for Layer 2 connectivity. Standard service allows up to 50 MAC addresses to be present per Basic/Basic Plus connection. This optional feature increases that limit to up to 100 MAC addresses per Basic/Basic Plus connection. A technical review via will be necessary to determine if service can be provided and for approval to exceed the limit.
OPT-E-MAN Repeater Service	VU4	Repeater technology may be used for customers: requesting OPT-E-MANSM service from a service wire center not equipped to provide OPT-E-MANSM service; or customers outside the technical limits of an Ethernet equipped Central Office.
OPT-E-MAN Service	NHCEO	Service order change charge for pending service

Feature Name	Identifier	Feature Description
Order Change Charge		orders and is assessed per location:
OPT-E-MAN Miscellaneous Change Charge	NHCEN	Assessed per location when customer requests changes to existing OPT-E-MAN Service
OPT-E-MAN Service Order Cancellation Charge	OGCEO	If the customer cancels service prior to installation being completed, a Cancellation charge (per port, per location) will apply.
OPT-E-MAN Expedite Charge	EODEO	Expedite change is assessed per location when customer requests service to be installed sooner than AT&T agreed upon due date.
OPT-E-MAN Ethernet Virtual Connection (EVC)	OMEVC	EVC rate element assessed in ranges of 5-1000 Mbps and provided at no charge. EVCs can be assigned in 1 Mbps increments within each range. Customer may order additional EVCs to establish additional virtual connections over the same physical connections. When additional EVCs are ordered, the customer must designate the portion of the CIR bandwidth assigned to each EVC.
Best Effort Grade of Service		
OPT-E-MAN Committed Information Rate – 2 Mbps Best Effort	R6E2E	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Best Effort grade of service (GoS).
OPT-E-MAN Committed Information Rate – 4 Mbps Best Effort	R6E4E	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Best Effort grade of service (GoS).
OPT-E-MAN Committed Information Rate – 8 Mbps Best Effort	R6E8E	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Best Effort grade of service (GoS).
Bronze Grade of Service		
OPT-E-MAN Committed Information Rate – 2 Mbps Bronze	R6E2B	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN	R6E4B	A statistically guaranteed level of transmission or

Feature Name	Identifier	Feature Description
Committed Information Rate – 4 Mbps Bronze		guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 5 Mbps Bronze	R6EAB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 8 Mbps Bronze	R6E8B	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 10 Mbps Bronze	R6EBB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 20 Mbps Bronze	R6EDB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 50 Mbps Bronze	R6EHB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 100 Mbps Bronze	R6ELB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 150 Mbps Bronze	R6ENB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 250 Mbps Bronze	R6EQB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).

Feature Name	Identifier	Feature Description
OPT-E-MAN Committed Information Rate – 500 Mbps Bronze	R6ETB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 600 Mbps Bronze	R6EUB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
OPT-E-MAN Committed Information Rate – 1000 Mbps Bronze	R6EZB	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Bronze grade of service (GoS).
Silver Grade of Service		
OPT-E-MAN Committed Information Rate – 2 Mbps Silver	R6E2C	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 4 Mbps Silver	R6E4C	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 5 Mbps Silver	R6EAC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 8 Mbps Silver	R6E8C	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 10 Mbps Silver	R6EBC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information	R6EDC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will

Feature Name	Identifier	Feature Description
Rate – 20 Mbps Silver		provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 50 Mbps Silver	R6EHC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 100 Mbps Silver	R6ELC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 150 Mbps Silver	R6ENC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 250 Mbps Silver	R6EQC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 500 Mbps Silver	R6ETC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 600 Mbps Silver	R6EUC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).
OPT-E-MAN Committed Information Rate – 1000 Mbps Silver	R6EZC	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR Silver grade of service (GoS).

AT&T Switched Ethernet (ASE) Service:

AT&T Switched Ethernet Service is a switched Ethernet transport service providing advanced Ethernet functionality using fiber and copper access technology and a switched Ethernet core

network. It provides full duplex transport of data signals between a Customer's premises and an Ethernet switch in a Telephone Company central office. Each connection is referred to as a "port" throughout this document. These ports can be interconnected in a variety of ways in the core network.

AT&T Switched Ethernet Service supports point-to-point, point-to-multipoint or multipoint-to-multipoint configurations. Point-to-point service provides a connection between two ports. Point-to- multipoint service provides multiple point-to-point connections between several different ports, most typically as a "hub and spoke" design, where a single hub site has multiple virtual connections to remote (spoke) sites. Multipoint-to-multipoint service provides a multipoint connection between three or more designated ports and is often referred to as "any to any" type of connectivity.

AT&T Switched Ethernet Service is available in two serving arrangements and two types of Customer Port Connections - the Basic Service Arrangement and Basic Ports, and the Per Packet Class of Service Arrangement and PPCOS Ports.

Customer connections (ports) are offered at 100 Mbps, 1,000 Mbps (1 Gig) and 10,000 Mbps (10 Gig) and customers may subscribe to a variety of Committed Information Rates (CIRs) within those maximum port speeds, according to the bandwidth needs of the specific port's application. The customer interface to the service includes choice of several industry standard interfaces described later in this document. The associated site readiness requirements for access, space, power and environmental will be discussed and provided by the customer's AT&T Account Team.

AT&T Switched Ethernet Service is offered where facilities are available in selected metropolitan areas within the AT&T Telco franchise territory. Where facilities are not available, facilities may be constructed, subject to certain conditions as determined by AT&T and Special Construction charges may apply.

AT&T Switched Ethernet Service is a Layer-2 transport service and is fully compliant with IEEE 802.3 Ethernet standards using standard Ethernet frame formats. It complies with the following IEEE standards:

Full-duplex	802.3x
Gigabit Ethernet	802.3z
Virtual LAN	802.1Q
Transparent Bridging	802.1d
Packet Priority	802.1p

Under ASE, AT&T provides the following:

Basic Service Arrangement

This type of service provides transport of data using a fixed class of service for each Ethernet virtual connection.

AT&T Switched Ethernet Service will be provisioned using the service components described below.

Customer Port Connection (port): This component provides the physical transport facilities from the customer's premises to an Ethernet switch at the AT&T central office. The customer Port Connection is available at transmission speeds of 100 Mbps, 1 Gbps and 10 Gbps. The customer must select one CoS and CIR for each port. The CIR selected cannot exceed the Customer Port Connection bandwidth.

Committed Information Rate (CIR): This component provides the subscribed maximum bandwidth available for assignment on a Customer Port Connection. It is sometimes referred to as the "Logical Channel". It is available per Customer Port Connection in increments ranging from 2 Mbps to 10,000 Mbps.

Customer Port Connection	CIR Bandwidth Supported
100 Mbps	2 Mbps – 100 Mbps
1 Gbps	2 Mbps – 1000 Mbps
10 Gbps	1000 Mbps – 10,000 Mbps

Class of Service (CoS): Each CIR is offered with multiple choices for CoS. CoS establishes the performance characteristics of the network that are suitable for certain applications. Each AT&T Switched Ethernet Service Port will have a single CIR and COS associated with it. CoS options have a hierarchy and are listed from "highest" to "lowest" based on network prioritization and performance which are described as follows:

1. Real-Time: Supports applications that require minimal loss, are latency-sensitive and require low latency variation (jitter), including voice and video.

2. Interactive: Supports high-priority business data applications or jitter-sensitive applications such as voice or video. This CoS is comparable to OPT-E-MAN Silver GoS.

3. Business Critical-High: Supports most business data applications with moderate tolerance for delay and which are more sensitive to jitter, and have a higher priority than Business Critical-Medium.

4. Business Critical-Medium: Supports most business data applications with moderate tolerance for delay and which are less sensitive to jitter. This CoS is comparable to OPT-E-MAN Bronze GoS.

5. Non-Critical High: Supports low priority business applications with more tolerance for delay and availability.

Ethernet Virtual Circuit (aka connection) (EVC): An EVC provides a logical connection to enable the flow of Ethernet traffic between designated ports in a point-to-point or multi-point configurations. Standard EVCs are not billed to the Customer as a separate rate element. Each EVC is assigned a CIR. For a PPCoS port, the customer specifies a profile for each EVC which proportions the capacity to different Classes of Service as allowed in the PPCoS Package subscribed on the port.

Per Packet Class of Service Arrangement

This service arrangement provides transport of data with variable Classes of Service within an Ethernet virtual connection, using a feature called "Per Packet Class of Service" or "PPCoS." With this serving arrangement, the Customer applies a priority identifier to each Ethernet frame (packet) within an EVC, and the packet is given the associated CoS priority level within the AT&T network.

PPCoS Service Arrangement is offered where suitable PPCoS facilities exist, and may not be available at all locations for which the Basic Service Arrangement is available.

PPCoS Customer Port Connection (PPCoS port)
This component provides the physical transport facilities from the Customer's premises to an Ethernet switch at the Telephone Company central office. The Customer Port Connection is available at transmission speeds of 100 Mbps, 1 Gbps and 10 Gbps.

Committed Information Rate (CIR) and Class of Service (CoS) Packages
CIR, sometimes referred to as the "Logical Channel" of the port, provides the bandwidth available on a Customer Port Connection. CIR is available per Customer Port Connection in increments ranging from 2 Mbps to 10,000 Mbps. Under the PPCoS Service Arrangement, CIR is offered in "packages" that specify the maximum percentage of traffic that may be assigned a given Class of Service in a variety of combinations. Each PPCoS port will be ordered with one PPCoS CIR package. Customers may select a PPCoS CIR package that best matches the characteristics of their data and its associated priority levels.

PPCoS Packages (listed in hierarchical order from highest priority to lowest priority):

1. Multimedia High: Allows Customer to designate up to 100% of port CIR as "Real Time" and remaining percentage (if any)can be divided among any/all CoS (below Real Time) as ordered.

2. Multimedia Standard: Allows Customer to designate up to 50% of port CIR as "Real Time" and the remaining percentage can be divided among any/all CoS (below Real Time) as ordered.

3. Critical Data: Allows Customer to designate up to 80% of port CIR as "Business Critical - High" and the remaining percentage can be divided among any/all CoS (below Business Critical - High) as ordered.

4. Business Data: Allows Customer to designate up to 90% of port CIR as "– Business Critical - Medium" and the remaining percentage can be divided among any/all CoS (below Business Critical - Medium) as ordered.

Per Packet Class of Service - Classes of Service
The PPCoS CIR packages are provisioned on PPCoS ports and allow the customer to apply a CoS priority indicator to each Ethernet frame (packet) and AT&T will route the packet with the assigned CoS priority. The customer-assigned priority will signify which of the following six Classes of Service AT&T will apply to that frame. PPCoS Ports support the same Classes of Service as are supported by the Basic Service Arrangement, plus an additional Class of Service (Non-Critical - Low) as described below. CoS options are listed as a hierarchy, from "highest" to "lowest" based on network prioritization and performance as follows:

- Real-Time
- Interactive
- Business Critical-High
- Business Critical-Medium
- Non-Critical High
- Non-Critical Low: Supports the lowest priority traffic.

PPCoS Scheduling Method
PPCoS ports can be ordered in one of two available configurations in order to support different "scheduling methods." The AT&T Switched Ethernet Service network components will create a separate queue for each CoS served according to its weight/priority to ensure that higher CoS packets are prioritized over lower, but that even the lowest CoS is not "starved".

Port-Level Scheduling: Under this method, AT&T will prioritize all traffic on the port using a single queue schedule, so that the specified percentages of each priority are allowed to transit the network. This is the only option applicable to "port-based" service. This method can also be used for VLAN-based ports if the Customer desires CoS priority to be applied as a single queue at the port level.

VLAN Level Scheduling: Under this method, there are individual scheduling queues for each VLAN on the port and the priority or volume of packets on one VLAN have no impact on another VLAN. This may be appropriate when the Customer needs each VLAN to have its own prioritization schedule without impacting other VLANs on the port. Requests to change the type of PPCoS Scheduling Method of an existing port may require a new port to be ordered.

Optional Features:

Additional MAC Addresses: Provides for a higher limit of MAC addresses on the associated AT&T Switched Ethernet Service port. This feature is offered on a per port basis. When a Customer subscribes to this feature, the EVC limit associated with multipoint EVCs shall be increased from 50 to 100 for each multipoint EVC present on that port. See Section 2.3 Service Configuration.

Regenerator: Regenerating technology provides essential detection and retransmission of Ethernet signals. The type of transport medium and equipment needed for regeneration will be provided only as required by AT&T when actual fiber facility distance between central office locations exceeds design limits (typically more than 20 – 30 IOF miles, depending on conditions) and will require a repeater rate element to be charged. One such repeater charge will be applicable on ports with distance of 20 – 60 miles. Another repeater charge is applicable if the distance is 60 to 90 miles, and a 3rd will apply if the port is 90 miles or more, up to the maximum of 100 miles. The Regenerator rate element is applicable on a on a per port basis for 100 Mbps, 1 Gbps and 10 Gbps ports. Since the charge already accounts for the potential for multiple ports to use the same technology, the charge is still applicable per port when multiple ports traverse the same path.

Customer Network Management: The Customer Network Management feature is offered to all customers subscribing to AT&T Switched Ethernet Service at no additional charge. Customer Network Management capabilities are available using AT&T BusinessDirect® and provide alarm surveillance, SLA reporting, performance reporting, maintenance trouble reporting, and SLA credit requests. Customers must have a web interface to access and monitor their network using the AT&T BusinessDirect web portal.

Service Configurations:

Port and EVC Settings and Limitations:

Port Settings: The customer subscribes to a Port, which has both a physical limit of the interface and the subscribed Committed Information Rate (CIR) available to be used by the customer when assigning EVCs. This is referred to as the Port CIR and is often referred to as the "logical channel capacity" in the communications industry. Thus a Port CIR can never be HIGHER than the physical port capacity, e.g. you cannot have a 500M CIR on a 100M port. But a Port CIR is frequently LOWER than the physical capacity, e.g. a 500M CIR on a 1000M port. This configuration allows customers to size the "logical" capacity to meet their current requirements and can easily be upgraded (with no physical changes) to support higher capacity Port CIR. Similarly, the Port has a Class of Service subscription that designates the highest level CoS that will be needed on that Port.

EVC Settings: Customers have many options for creating virtual connections between ports using EVCs in a point-to-point or multi-point configuration. The CIR of the EVC can be set in 1 Mbps increments from 1 Mbps to 1000 Mbps, up to the subscribed and unassigned Port CIR capacity. A customer may have a 100M Port Connection and a 50M Port CIR and may use the entire capacity for a single 50M EVC to another AT&T Switched Ethernet Service port. Alternatively, the customer may have five separate 10M EVCs to five other AT&T

Switched Ethernet Service ports. But they can never assign a total (aggregate) of EVC CIRs that is higher than the Port CIR. AT&T Switched Ethernet Service does not offer over-subscription. The EVC also is designated with a CoS for that EVC. The CoS cannot be higher than that subscribed, e.g. a port with Interactive CoS cannot have an EVC with a Real Time CoS. However an EVC can have a lower level CoS if desired, e.g. a port with Interactive CoS can have an EVC with a Non Critical High setting, which might be appropriate when the distant port only supports that (NC-H) CoS.

Important Note: The aggregate assigned Committed Information Rate (CIR) for all EVCs between any two Customer ports cannot exceed 1000 Mbps.

There is a limit to the quantity of EVCs that may be provisioned on a single port:

Port Type	Maximum EVCs
100 Mbps	Up to 8 EVCs
1 Gbps	Up to 64 EVCs
10 Gbps	Up to 256 EVCs

MAC Address Limitations: Customers may configure EVCs as point-to-point (connecting two locations) or as multipoint (connecting three or more locations), as defined above. Point-to-point EVCs (i.e. EVCs between two ports) can be associated with an unlimited number of MAC addresses. Multipoint EVCs (i.e., EVCs between three or more ports) will be limited to 50 MAC addresses per multipoint EVC that is present on each port, unless the customer subscribes to the "Additional MAC Addresses" feature for that port. MAC addresses associated with point-to-point EVCs do no count against this limit. For example, a port that is provisioned with 3 separate multipoint EVCs may have up to 50 MAC addresses associated with each of those EVCs, for a total of 150 MAC addresses in use on that port, but each EVC is still limited to a maximum of 50 MAC addresses.

Frame Size Limits: AT&T Switched Ethernet Service will be configured to support Ethernet frame sizes up to 1526 bytes on a 100 Mbps port. For service provisioned on 1 Gbps and 10 Gbps ports the maximum frame size will be 9126 bytes. Extended frame sizes on 1 Gbps ports may be restricted to less than 9126 bytes when the port is provisioned at CIR speeds of 10 Mbps or less but at minimum will allow 1526 bytes. There are plans to increase the 1526 limit to 1720 in the future. Contact Product Manager if you have a current need for up to 1720 on a port currently limited to 1526.

Network Policing Policy:

EVC Policing: At the ingress port of AT&T Switched Ethernet Service, customer's bandwidth is **policed** to the CIR values of the EVC. *Any traffic in excess of the CIR value will be discarded at the ingress port.*

Symmetric Point to Point EVCs: All point to point EVCs must be symmetrical, e.g. 10Mbps at each end, cannot be 10M at one end and 20M at the other.

Asymmetric Multipoint EVCs: Multipoint EVCs can have different EVC CIR assigned to each port, based on the needs of traffic at that port. For example a 5 port multipoint network may have a 1G Port / 500M CIR at the primary hub location and may have 100M / 100M CIR at each of 4 remotes. If the majority of traffic is to and from the hub, it can easily accommodate simultaneous 100M to each site for a combined 400M. Customer may also decide that due to bursty nature of traffic and statistical multiplexing, the aggregate traffic from the hub will normally not exceed 250M. Customer may choose the lower priced 250M CIR but if the hub tries to transmit at rate greater than 250M the packets above the CIR value may be discarded. Rate shaping and other techniques may limit this risk.

General Service Limitations:

- There is no option to temporarily suspend service
- Service may not be available where facilities do not exist, even if previously available in the same area or location.
- Service is limited to be physically intraLATA although it may be used in conjunction with an interLATA network provided by customer or other network providers
- The service is only offered within AT&T Telco territory (22 states), either in-franchise or via designated out-of-franchise exchanges and/or via meetpoint with other ILECs.
- Regular rules and policies pertaining to service demarcation shall apply

AT&T Switched Ethernet (ASE) Service and Features

Feature Name	Identifier	Feature Description
Basic Service Arrangement (Basic or BSA) Ports		
ASE (BSA) Connection 10/100 Mbps	EYQEX	10/100 Mbps Ethernet port per location; Assessed per interface at bandwidths of 10/100 Mbps (10/100BASE-T). The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
ASE (BSA) Connection 1 Gigabit Ethernet	EYQFX	1000 Mbps Ethernet port per location; Assessed per interface at bandwidths of 1Gbps Ethernet. The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet

Feature Name	Identifier	Feature Description
		network, and a port on the NTE.
ASE (BSA) Connection 10 Gigabit Ethernet	EYQGX	Assessed per interface at bandwidths of 10Gbps Ethernet. The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
Basic Service Arrangement Class of Service (CoS) and Committed Information Rate (CIR)		
Real Time		
ASE (BSA) Committed Information Rate – 2 Mbps Real Time	R6E2XRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4 Mbps Real Time	R6E4XRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5 Mbps Real Time	R6EAXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 8 Mbps Real Time	R6E8XRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10 Mbps Real Time	R6EBXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 20 Mbps Real Time	R6EDXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed	R6EHXRT	A statistically guaranteed level of transmission or

Feature Name	Identifier	Feature Description
Information Rate – 50 Mbps Real Time		guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 100 Mbps Real Time	R6ELXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 150 Mbps Real Time	R6ENXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 250 Mbps Real Time	R6EQXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 500 Mbps Real Time	R6ETXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 600 Mbps Real Time	R6EUXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 1000 Mbps Real Time	R6EZXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2000 Mbps Real Time	R61BXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2500 Mbps Real Time	R61CXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).

Feature Name	Identifier	Feature Description
ASE (BSA) Committed Information Rate – 4000 Mbps Real Time	R61FXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5000 Mbps Real Time	R61HXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 7500 Mbps Real Time	R61NXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 9500 Mbps Real Time	R61RXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10000 Mbps Real Time	R61SXRT	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Real time Class of Service (CoS).
Interactive		
ASE (BSA) Committed Information Rate – 2 Mbps Interactive	R6E2XIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4 Mbps Interactive	R6E4XIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5 Mbps Interactive	R6EAXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 8 Mbps Interactive	R6E8XIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs

Feature Name	Identifier	Feature Description
		should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10 Mbps Interactive	R6EBXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 20 Mbps Interactive	R6EDXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 50 Mbps Interactive	R6EHXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 100 Mbps Interactive	R6ELXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 150 Mbps Interactive	R6ENXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 250 Mbps Interactive	R6EQXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 500 Mbps Interactive	R6ETXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 600 Mbps Interactive	R6EUXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate –	R6EZXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will

Feature Name	Identifier	Feature Description
1000 Mbps Interactive		provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2000 Mbps Interactive	R61BXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2500 Mbps Interactive	R61CXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4000 Mbps Interactive	R61FXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5000 Mbps Interactive	R61HXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 7500 Mbps Interactive	R61NXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 9500 Mbps Interactive	R61RXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10000 Mbps Interactive	R61SXIA	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Interactive Class of Service (CoS).
Business Critical-High		
ASE (BSA) Committed Information Rate – 2 Mbps Business Critical High	R6E2XBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).

Feature Name	Identifier	Feature Description
ASE (BSA) Committed Information Rate – 4 Mbps Business Critical High	R6E4XBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5 Mbps Business Critical High	R6EAXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 8 Mbps Business Critical High	R6E8XBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10 Mbps Business Critical High	R6EBXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 20 Mbps Business Critical High	R6EDXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 50 Mbps Business Critical High	R6EHXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 100 Mbps Business Critical High	R6ELXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 150 Mbps Business Critical High	R6ENXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 250 Mbps Business Critical High	R6EQXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical

Feature Name	Identifier	Feature Description
		High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 500 Mbps Business Critical High	R6ETXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 600 Mbps Business Critical High	R6EUXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 1000 Mbps Business Critical High	R6EZXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2000 Mbps Business Critical High	R61BXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2500 Mbps Business Critical High	R61CXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4000 Mbps Business Critical High	R61FXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5000 Mbps Business Critical High	R61HXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 7500 Mbps Business Critical High	R61NXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 9500 Mbps Business	R61RXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs

Feature Name	Identifier	Feature Description
Critical High		should not exceed the CIR. Business Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10000 Mbps Business Critical High	R61SXBH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical High Class of Service (CoS).
Business Critical-Medium		
ASE (BSA) Committed Information Rate – 2 Mbps Business Critical Medium	R6E2XBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4 Mbps Business Critical Medium	R6E4XBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5 Mbps Business Critical Medium	R6EAXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 8 Mbps Business Critical Medium	R6E8XBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10 Mbps Business Critical Medium	R6EBXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 20 Mbps Business Critical Medium	R6EDXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 50 Mbps Business Critical Medium	R6EHXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).

Feature Name	Identifier	Feature Description
ASE (BSA) Committed Information Rate – 100 Mbps Business Critical Medium	R6ELXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 150 Mbps Business Critical Medium	R6ENXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 250 Mbps Business Critical Medium	R6EQXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 500 Mbps Business Critical Medium	R6ETXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 600 Mbps Business Critical Medium	R6EUXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 1000 Mbps Business Critical Medium	R6EZXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2000 Mbps Business Critical Medium	R61BXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2500 Mbps Business Critical Medium	R61CXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4000 Mbps Business Critical Medium	R61FXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical

Feature Name	Identifier	Feature Description
		Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5000 Mbps Business Critical Medium	R61HXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 7500 Mbps Business Critical Medium	R61NXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 9500 Mbps Business Critical Medium	R61RXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10000 Mbps Business Critical Medium	R61SXBM	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Critical Medium Class of Service (CoS).
Non-Critical High		
ASE (BSA) Committed Information Rate – 2 Mbps Non-Critical High	R6E2XNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4 Mbps Non-Critical High	R6E4XNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5 Mbps Non-Critical High	R6EAXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 8 Mbps Non-Critical High	R6E8XNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10	R6EBXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will

Feature Name	Identifier	Feature Description
Mbps Non-Critical High		provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 20 Mbps Non-Critical High	R6EDXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 50 Mbps Non-Critical High	R6EHXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 100 Mbps Non-Critical High	R6ELXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 150 Mbps Non-Critical High	R6ENXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 250 Mbps Non-Critical High	R6EQXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 500 Mbps Non-Critical High	R6ETXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 600 Mbps Non-Critical High	R6EUXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 1000 Mbps Non-Critical High	R6EZXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed	R61BXNH	A statistically guaranteed level of transmission or

Feature Name	Identifier	Feature Description
Information Rate – 2000 Mbps Non-Critical High		guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 2500 Mbps Non-Critical High	R61CXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 4000 Mbps Non-Critical High	R61FXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 5000 Mbps Non-Critical High	R61HXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 7500 Mbps Non-Critical High	R61NXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 9500 Mbps Non-Critical High	R61RXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
ASE (BSA) Committed Information Rate – 10000 Mbps Non-Critical High	R61SXNH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Non-Critical High Class of Service (CoS).
Per Packet Class of Service (PPCoS) Arrangement Ports		
ASE (PPCoS) Connection 10/100 Mbps	EYQLX	10/100 Mbps Ethernet port per location; Assessed per interface at bandwidths of 10/100 Mbps (10/100BASE-T). The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
ASE (PPCoS)	EYQMX	1000 Mbps Ethernet port per location;

Feature Name	Identifier	Feature Description
Connection 1 Gigabit Ethernet		Assessed per interface at bandwidths of 1Gbps Ethernet. The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
ASE (PPCoS) Connection 10 Gigabit Ethernet	EYQNX	10Gbps Ethernet port per location; Assessed per interface at bandwidths of 10Gbps Ethernet. The ASE connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
Per Packet Class of Service Arrangement Class of Service (CoS) Packages and Committed Information Rate (CIR)		
Multimedia High		
ASE (PPCoS) Committed Information Rate – 2 Mbps Multimedia High	R6E2XMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4 Mbps Multimedia High	R6E4XMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5 Mbps Multimedia High	R6EAXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 8 Mbps Multimedia High	R6E8XMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10 Mbps Multimedia High	R6EBXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).

Feature Name	Identifier	Feature Description
ASE (PPCoS) Committed Information Rate – 20 Mbps Multimedia High	R6EDXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 50 Mbps Multimedia High	R6EHXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 100 Mbps Multimedia High	R6ELXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 150 Mbps Multimedia High	R6ENXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 250 Mbps Multimedia High	R6EQXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 500 Mbps Multimedia High	R6ETXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 600 Mbps Multimedia High	R6EUXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 1000 Mbps Multimedia High	R6EZXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2000 Mbps Multimedia High	R61BXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High

Feature Name	Identifier	Feature Description
		Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2500 Mbps Multimedia High	R61CXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4000 Mbps Multimedia High	R61FXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5000 Mbps Multimedia High	R61HXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 7500 Mbps Multimedia High	R61NXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 9500 Mbps Multimedia High	R61RXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10000 Mbps Multimedia High	R61SXMH	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia High Class of Service (CoS).
Multimedia Standard		
ASE (PPCoS) Committed Information Rate – 2 Mbps Multimedia Standard	R6E2XMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4 Mbps Multimedia Standard	R6E4XMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information	R6EAXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will

Feature Name	Identifier	Feature Description
Rate – 5 Mbps Multimedia Standard		provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 8 Mbps Multimedia Standard	R6E8XMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10 Mbps Multimedia Standard	R6EBXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 20 Mbps Multimedia Standard	R6EDXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 50 Mbps Multimedia Standard	R6EHXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 100 Mbps Multimedia Standard	R6ELXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 150 Mbps Multimedia Standard	R6ENXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 250 Mbps Multimedia Standard	R6EQXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 500 Mbps Multimedia Standard	R6ETXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS)	R6EUXMS	A statistically guaranteed level of transmission or

Feature Name	Identifier	Feature Description
Committed Information Rate – 600 Mbps Multimedia Standard		guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 1000 Mbps Multimedia Standard	R6EZXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2000 Mbps Multimedia Standard	R61BXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2500 Mbps Multimedia Standard	R61CXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4000 Mbps Multimedia Standard	R61FXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5000 Mbps Multimedia Standard	R61HXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 7500 Mbps Multimedia Standard	R61NXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 9500 Mbps Multimedia Standard	R61RXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10000 Mbps Multimedia Standard	R61SXMS	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Multimedia Standard Class of Service (CoS).

Feature Name	Identifier	Feature Description
Critical Data		
ASE (PPCoS) Committed Information Rate – 2 Mbps Critical Data	R6E2XCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4 Mbps Critical Data	R6E4XCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5 Mbps Critical Data	R6EAXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 8 Mbps Critical Data	R6E8XCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10 Mbps Critical Data	R6EBXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 20 Mbps Critical Data	R6EDXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 50 Mbps Critical Data	R6EHXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 100 Mbps Critical Data	R6ELXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 150 Mbps	R6ENXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs

Feature Name	Identifier	Feature Description
Critical Data		should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 250 Mbps Critical Data	R6EQXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 500 Mbps Critical Data	R6ETXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 600 Mbps Critical Data	R6EUXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 1000 Mbps Critical Data	R6EZXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2000 Mbps Critical Data	R61BXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2500 Mbps Critical Data	R61CXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4000 Mbps Critical Data	R61FXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5000 Mbps Critical Data	R61HXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information	R61NXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will

Feature Name	Identifier	Feature Description
Rate – 7500 Mbps Critical Data		provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 9500 Mbps Critical Data	R61RXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10000 Mbps Critical Data	R61SXCD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Critical Data Class of Service (CoS).
Business Data		
ASE (PPCoS) Committed Information Rate – 2 Mbps Business Data	R6E2XBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4 Mbps Business Data	R6E4XBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5 Mbps Business Data	R6EAXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 8 Mbps Business Data	R6E8XBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10 Mbps Business Data	R6EBXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 20 Mbps Business Data	R6EDXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).

Feature Name	Identifier	Feature Description
ASE (PPCoS) Committed Information Rate – 50 Mbps Business Data	R6EHXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 100 Mbps Business Data	R6ELXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 150 Mbps Business Data	R6ENXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 250 Mbps Business Data	R6EQXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 500 Mbps Business Data	R6ETXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 600 Mbps Business Data	R6EUXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 1000 Mbps Business Data	R6EZXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2000 Mbps Business Data	R61BXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 2500 Mbps Business Data	R61CXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class

Feature Name	Identifier	Feature Description
		of Service (CoS).
ASE (PPCoS) Committed Information Rate – 4000 Mbps Business Data	R61FXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 5000 Mbps Business Data	R61HXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 7500 Mbps Business Data	R61NXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 9500 Mbps Business Data	R61RXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
ASE (PPCoS) Committed Information Rate – 10000 Mbps Business Data	R61SXBD	A statistically guaranteed level of transmission or guaranteed bandwidth that the network will provide to the EVC. The sum total of the EVCs should not exceed the CIR. Business Data Class of Service (CoS).
Optional Features		
ASE Additional MAC Addresses (51-100) Per Port	M2CBX	MAC Address rate element is a data link layer protocol used for Layer 2 connectivity and is assessed per MAC address group 51-100. A limit of 100 MAC addresses total per Basic Connection. A technical review via will be necessary to determine if service can be provided.
ASE Regenerator 10/100 Mbps port	EYQHX	Regenerating technology provides essential detection and retransmission of Ethernet signals. The type of transport medium and equipment needed for regeneration will be provided only as required by AT&T when actual fiber facility distance between central office locations exceeds design limits.
ASE Regenerator 1 Gbps port	EYQJX	Regenerating technology provides essential detection and retransmission of Ethernet signals. The type of transport medium and equipment needed for regeneration will be provided only as

Feature Name	Identifier	Feature Description
		required by AT&T when actual fiber facility distance between central office locations exceeds design limits.
ASE Regenerator 10 Gbps port	EYQKX	Regenerating technology provides essential detection and retransmission of Ethernet signals. The type of transport medium and equipment needed for regeneration will be provided only as required by AT&T when actual fiber facility distance between central office locations exceeds design limits.
ASE Administrative Change Charge	ORCMX	Service order change charge, per order, for customer initiated inside moves or reconfiguration of existing ASE ports and CIR.

OPT-E-MAN Managed Service Bundles

AT&T **OPT-E-MAN** Managed Service Bundle is a fully managed Customer Edge to Customer Edge service providing a managed solution for AT&T **OPT-E-MAN** Transport ("AT&T **OPT-E-MAN**").

AT&T Optical Ethernet Transparent LAN Service (OPT-E-MAN) is an advanced switched Ethernet product that provides point-to-point and point-to-multipoint transparent LAN service (TLS) for a metro area. Fiber facilities are required, as is AT&T-owned network terminating equipment (NTE) located at the customer premises. The current OPT-E-MAN product supports both 10/100 Mbps and 1 Gbps customer handoffs with bandwidth CIR options ranging from 2 Mbps to 1 Gbps. OPT-E-MAN can be used for interconnecting multiple customer LANs within the same LATA (i.e., IntraLATA) appearing as segments on the same LAN. OPT-E-MAN is also available as a high-speed connection to AT&T Ethernet Dedicated Internet Access (EDIA) service.

Under the AT&T OPT-E-MAN Managed Service Bundle, AT&T provides the following:

Standard:

- OPT-E-MAN 10/100Mbps or 1Gbps Ethernet Connection / Port
- Bronze or Silver Grade of Service
- Basic or Basic Plus configuration
- Ethernet Wire Service or Ethernet Relay Service
- AT&T owned Managed Router (7X24X365)
- Router Maintenance (7X24X4 Hr Response)
- Inside Wiring and or Demarc extension (up to 300 feet in customer provided conduit)
- Business line and modem for Out-of Band (OOB) emergency access to the Managed Router

- Network Operations Management Reports;
- Managed SLAs
    - Network Performance SLAs (Packet Loss and Latency))
    - Standard Provisioning, Availability/TTR, and Proactive Notification SLAs
    - CAT 1, 2, & 3 Outages

Standard Features and Functions

Design and Engineering

AT&T will design and/or document the Customer's Network topology, applications, connectivity, projected traffic flows, and performance based upon Customer provided information and Customer-specified requirements.

- AT&T will validate hardware, software and network platforms provided as the result of the engineered router network design utilizing established AT&T testing and troubleshooting criteria.
- AT&T will also develop specifications for the type of router hardware and software necessary to support the mutually agreed goals, objectives and requirements of the engineered network solution. The specifications will include the manufacturer's router model, port capacity, software version, appropriate memory and protocol support, and addressing/routing tables.
- AT&T will review with Customer all pre-existing hardware configurations for compatibility with the Customer's requested network design.
- AT&T will document the network addressing plans, logical network device assignments and logical parameters for network management connectivity to the Customer's Network.

Installation Functions

AT&T furnishes and installs all network components and AT&T Furnished Equipment at all Sites on the Customer Network. At AT&T's option, the AT&T Furnished Equipment may come from AT&T inventory or directly from the manufacturer. As part of the installation function, AT&T provides staging of AT&T Furnished Equipment in which the AT&T Furnished Equipment is configured, and shipped to the designated Site.

During test and turn-up, the Field Engineer installs AT&T Furnished Equipment on the installation date specified in the Project Schedule. AT&T verifies connectivity to the Site and transfers the Site to the Global Client Service Center (GCSC) for management center acceptance. This marks the end of the implementation process for that particular site. AT&T technicians test connectivity through the network equipment into the AT&T Network.

AT&T will perform physical installations of AT&T Furnished Equipment or Customer Provided Equipment during local Standard Business Hours, Monday through Friday, utilizing an AT&T provided on-site supplier.

Implementation Functions

AT&T provides project implementation, management and installation services for all network and equipment components.

Project Implementation Management ("PIM") includes the development of project schedules and identification of all Customer and AT&T activities necessary to implement the network solution. This includes:

- Development of project timeline
- Coordination of transport and provisioning of Equipment
- Tracking and managing to completion all activities in AT&T project plan
- Logical Management Configuration
- AT&T will load the logical management configurations and perform logical connectivity testing to determine that connected Sites can communicate with each other and with the appropriate AT&T network management center.
- AT&T will utilize network acceptance tests between the AT&T work centers and designated Customer interface(s) to verify connectivity between Customer LAN ports. These tests do not test host/LAN applications through the network.
- Logical configurations loaded on Equipment, whether AT&T or Customer Equipment, are the sole and exclusive intellectual property of AT&T. Logical Configurations are confidential and proprietary AT&T Information. Upon termination of Service, Customer shall have no right to use, or ownership interest in, the logical configurations loaded on Equipment. Upon Service termination, including individual Site deletions, Customer shall ensure that AT&T has all opportunities to erase logical configurations.

Network Management

Standard Management functions consist of the following

- Network Monitoring and Fault Identification,
- Fault Resolution, and
- Ongoing Configuration Management

Network Monitoring and Fault Identification

AT&T will proactively monitor the Customer Network, 7 days a week/ 24 hours per day, to identify faults within the Service Boundaries. AT&T WAN transport problems will be isolated, diagnosed and resolved by the AT&T network management center.

In providing the Network Monitoring and Fault Identification function, AT&T will:

- Monitor CPE interfaces within the Service Boundary utilizing SNMP techniques in-band and out-of-band.

- Perform diagnostic testing of CPE interfaces and isolate, sectionalize and identify faults as being physical or logical in nature.
- Maintain databases consisting of the logical configurations of Customer wide area network, WAN site and network connectivity, software specifications and Customer contact information.
- Provide trouble status to Customers at 1 hour intervals.

The AT&T GCSC Global Client Support Center serves as an SPOC for AT&T related faults. This activity includes the coordinated resolution with an AT&T network management center of Router Site faults caused by AT&T transport problems. . In addition, the California Major Account Center (CMAC) will receive and track trouble ticket status until the trouble ticket is closed out with the customer NOC or the customer. Either the AT&T GCSC or the CMAC can be contacted to initiate a trouble ticket, get status of an existing trouble ticket or request an escalation.

Logical Fault Resolution

AT&T manages the logical configuration design for the Customer Network. Fault resolution provides for the coordinated identification and resolution of logical connectivity network problems for AT&T Furnished Equipment or Customer Equipment within the Service Boundary. Logical fault resolution includes:

- Management of the logical trouble resolution process;
- Proactive problem management and engagement of additional tiered expertise, if necessary, to resolve the logical trouble;
- If the root cause of the logical failure is outside the Service Boundary, the problem will be referred to the Customer with the diagnosis. If the cause of the failure is beyond the Service Boundary, Customer may request AT&T to assist in resolving the failure in which case Customer shall be billed on an hourly basis in accordance with the OPT-E-MAN Managed Service Bundle Pricing Schedule entitled "Supplementary Professional, Engineering and Technical Services."

Ongoing Configuration Management (OCM)

AT&T will manage a database of specific information regarding the logical address configuration(s) of the AT&T Furnished Equipment and Customer Equipment and associated software specifications. AT&T will manage changes made to access lists, device passwords, and will use secured community strings for SNMP access. Configuration changes due to maintenance and moves, adds, changes or deletes ("MACDs") will be included in the database. Reloads of router configurations from the AT&T technical platform database will be performed by the AT&T work center(s) if required as a result of major outages or system failures. AT&T work center(s) may initiate software updates to Customer Equipment with prior notification to and approval from Customer.

Maintenance Functions

Except as limited herein, maintenance applies to the physical, software and firmware failure of Equipment maintained by AT&T. AT&T Furnished Equipment may be maintained only by AT&T. Customer may request AT&T to provide maintenance of Customer Equipment. Customer Equipment must be AT&T-certified. AT&T maintenance extends only to the following equipment:

- CSU/DSU
- Dial backup modem
- Out of band management access modems
- Routers

AT&T will proactively isolate and diagnose Equipment hardware faults and will interface with Equipment vendors and other vendors for engineering support, parts ordering and fault resolution of physical faults within the identified service boundaries, as well as respond to Customer-reported faults. If the physical failure's root cause is outside the contractually defined service boundaries, the problem will be referred back to the Customer with the diagnosis. Equipment maintenance will also cover software/firmware problems that cannot be resolved remotely.

Equipment Maintenance Support Levels

Four Hour, 24-Hour-a-Day Service (7X24)

Under Four Hour, 24-Hour-a-Day Service (7x24), repair coverage is offered 24 hours per day, seven days per week. If dispatch is required, a field engineer will arrive at the Customer premises within four hours of the completion of trouble resolution processes, regardless of the time of day or day of the week. Dispatch of technicians will only occur after remote trouble resolution processes have determined that the problem is in the Equipment.

Network Operations Management Reports

The standard OPT-E-MAN MANAGED SERVICE BUNDLE Network operations reports focus on basic router performance and include WAN and LAN utilization information. These reports are available, in color charts and graphs, via a web-based, HTML viewable format. Operations management reports are provided on a scheduled periodic basis as agreed to by AT&T and the customer, with each report displaying information gathered during the previous period's activity. Reports cover both AT&T Furnished Equipment and Customer Equipment. The standard reports are the following:

Router Information Report

The Router Detail Report provides basic inventory and logistical information about the router, such as router name, location, PVC terminations, DLCI and port speeds.

Router Performance Report

The Router Performance Report provides network and router utilization information, and network health information. The report may summarize network usage volumes and averages or report router performance on an exception basis.

Access Port Report

The Access Port Report provides the network and router performance from the volume of data that has been sent or received at the WAN port interface. This report gives a summary of WAN port activity and also lists areas for concern, based on pre-defined thresholds for WAN use.

LAN Port Report

The LAN Port Report provides the router performance based on the utilization of the LAN ports on the router. These reports, like WAN reports, provide information on utilization of LAN ports on the router and also indicate exceptions to pre-described thresholds.

OPT-E-MAN (OEM) Managed Service Bundles w/ Standard Features

Feature Name	Identifier	Feature Description
OPT-E-MAN (OEM) Managed Service Bundles w/ Standard Features		
10/100 Mbps Connection – Bronze CIR Grade of Service		
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB2A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB2B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB4A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.

Feature Name	Identifier	Feature Description
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB4B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB5A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB5B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB8A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB8B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB10A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic	OEMB10B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or

Feature Name	Identifier	Feature Description
or Basic Plus Connection 10/100 Mbps – 10 Mbps Bronze w Type 22A Router Cu Ethernet		Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB20A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB20B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB50A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Bronze w Type 10A Router Cu Ethernet	OEMB50B	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 100 Mbps Bronze w Type 10A Router Cu Ethernet	OEMB100A	10/100 Mbps Ethernet port per location; Includes: Bronze CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
10/100 Mbps Connection –Silver CIR Grade of Service		
OEM Managed	OEMS2A	10/100 Mbps Ethernet port per location;

Feature Name	Identifier	Feature Description
Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Silver w Type 7A Router Cu Ethernet		Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Silver w Type 22A Router Cu Ethernet	OEMS2B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Silver w Type 7A Router Cu Ethernet	OEMS4A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Silver w Type 22A Router Cu Ethernet	OEMS4B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Silver w Type 7A Router Cu Ethernet	OEMS5A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Silver w Type 22A Router Cu Ethernet	OEMS5B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus	OEMS8A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet),

Feature Name	Identifier	Feature Description
Connection 10/100 Mbps – 8 Mbps Silver w Type 7A Router Cu Ethernet		installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Silver w Type 22A Router Cu Ethernet	OEMS8B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Silver w Type 7A Router Cu Ethernet	OEMS10A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Silver w Type 22A Router Cu Ethernet	OEMS10B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Silver w Type 7A Router Cu Ethernet	OEMS20A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Silver w Type 22A Router Cu Ethernet	OEMS20B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps	OEMS50A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and

Feature Name	Identifier	Feature Description
Silver w Type 22A Router Cu Ethernet		diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Silver w Type 10A Router Cu Ethernet	OEMS50B	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 100 Mbps Silver w Type 10A Router Cu Ethernet	OEMS100A	10/100 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
1 Gbps Connection – Bronze CIR Grade of Service		
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG2A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG2B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG4A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4	OEMBG4B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including

Feature Name	Identifier	Feature Description
Mbps Bronze w Type 9A Router Fiber Ethernet		configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG5A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG5B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG8A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG8B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG10A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Bronze w Type 9A Router Fiber	OEMBG10B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.

Feature Name	Identifier	Feature Description
Ethernet		
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG20A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG20B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG50A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG50B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG50C	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG100A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed	OEMBG100B	1000 Mbps Ethernet port per location;

Feature Name	Identifier	Feature Description
Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Bronze w Type 26 Router Fiber Ethernet		Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG150A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG150B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG200A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG250B	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 500 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG500A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus	OEMBG600A	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet),

Feature Name	Identifier	Feature Description
Connection 1 Gbps – 600 Mbps Bronze w Type 27 Router Fiber Ethernet		installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 1000 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG1KA	1000 Mbps Ethernet port per location; Includes: Bronze CIR POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
1 Gbps Connection – Silver CIR Grade of Service		
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG2A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG2B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG4A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG4B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic	OEMSG5A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or

Feature Name	Identifier	Feature Description
or Basic Plus Connection 1 Gbps – 5 Mbps Silver w Type 21A Router Fiber Ethernet		Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG5B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG8A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG8B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG10A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG10B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps –	OEMSG20A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including

Feature Name	Identifier	Feature Description
20 Mbps Silver w Type 21A Router Fiber Ethernet		configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG20B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG50A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 11A Router Fiber Ethernet	OEMSG50B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG50C	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Silver w Type 11A Router Fiber Ethernet	OEMSG100A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Silver w Type 26 Router Fiber	OEMSG100B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.

Feature Name	Identifier	Feature Description
Ethernet		
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Silver w Type 11A Router Fiber Ethernet	OEMSG150A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG150B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG250A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG250B	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 500 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG500A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 600 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG600A	1000 Mbps Ethernet port per location; Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEM Managed	OEMSG1KA	1000 Mbps Ethernet port per location;

Feature Name	Identifier	Feature Description
Service Bundles Basic or Basic Plus Connection 1 Gbps – 1000 Mbps Silver w Type 27 Router Fiber Ethernet		Includes: Silver CIR, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.

OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services

Life Cycle Management is composed of the following functions:

- Moves, Adds, Changes and Deletes (MACDs) (via Business Direct)
- Supplementary Professional, Engineering and Technical Services
- Configuration Changes

Moves, Adds, Changes and Deletes

Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the section entitled "Life Cycle Management Changes." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order.

All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate for non-Standard Business Hours will apply in addition to the lifecycle charges.

Supplementary Professional, Engineering and Technical Services

AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the table entitled "Supplementary Professional, Engineering and Technical Services."

AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. If AT&T is required to perform Services outside of Standard Business Hours, then the Non-Standard Hours rates will apply in addition to the appropriate charge for the Service being performed.

Configuration Changes

Configuration changes will be performed as requested by Customer and will be billed at the rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features."

OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services

Feature Name	Identifier	Feature Description
Moves, Adds, Changes and Deletes		Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order. All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate will apply in addition to the lifecycle charges.
Move Router Site (Inside) – Low Complexity	13092L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Inside) – Medium Complexity	13092M	38xx, 39xx series routers
Move Router Site (Inside) – High Complexity	13092H	72xx, 73xx, 76xx, ASR1002 series routers
Move Router Site (Outside) - Low Complexity	13093L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Outside) - Medium Complexity	13093M	38xx, 39xx series routers
Move Router Site (Outside) - High Complexity	13093H	72xx, 73xx, 76xx, ASR1002 series routers

Feature Name	Identifier	Feature Description
Router Site Add - Low Complexity	13118L	18xx, 19xx, 28xx, 29xx series routers
Router Site Add - Medium Complexity	13118M	38xx, 39xx series routers
Router Site Add - High Complexity	13118H	72xx, 73xx, 76xx, ASR1002 series routers
Add/Delete Router Boards – Low Complexity	13127L	18xx, 19xx, 28xx, 29xx series routers
Add/Delete Router Boards – Medium Complexity	13127M	38xx, 39xx series routers
Add/Delete Router Boards – High Complexity	13127H	72xx, 73xx, 76xx, ASR1002 series routers
Site Delete for AT&T Provided Equipment	13119	Site Delete for AT&T Provided Equipment
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away
Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T	13109A	Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T
Supplementary Professional, Engineering and Technical Services		AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services." AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. If AT&T is required to perform Services outside of Standard Business Hours, then the Non-Standard Hours rates will apply in addition to

Feature Name	Identifier	Feature Description
		the appropriate charge for the Service being performed.
Standard Hours (8am – 5pm local time) First Hour	13109B	Standard Hours (8am – 5pm local time) First Hour. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Standard Hours (8am – 5pm local time) Subsequent Hour	13109C	Standard Hours (8am – 5pm local time) Subsequent Hour. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Non-Standard Hours First Hour	13109D	Non-Standard Hours First Hour. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Non-Standard Hours	13109E	Non-Standard Hours Subsequent Hours.

Feature Name	Identifier	Feature Description
Subsequent Hours		AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Lost Equipment Charge for AT&T Owned CPE	13054	Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.
Router Configuration Changes	14158	Configuration changes will be performed as requested by Customer and will be billed at the rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Changes."

OPT-E-MAN Managed Service Bundles Optional Up Lift Features and Services

- Router Protocol, Memory and Misc Feature Upgrades to AT&T Owned and Managed Routers
- Optional Architectural Validation Professional Services
- Dial back up (Analog and ISDN (BRI and PRI)
- TACACS Read Only Access

OPT-E-MAN Managed Service Bundles Optional Up Lift Features and Services

Feature Name	Identifier	Feature Description
Router Protocol, Memory and Misc		Router protocol, memory and misc. features upgrades to AT&T owned and managed service

Feature Name	Identifier	Feature Description
Managed Router Feature Upgrades		bundle routers.
Enterprise Services IOS w/o encryption for 18XX series managed router feature upgrade	MSB1000	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 1 and 17 (see router description table).
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 2, 3, 4 and 7 (see router description table).
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 1 and 17 (see router description table).
Advanced Enterprise Services IOS w encryption for 28XX series managed router feature upgrade	MSB1004	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 2, 3, 4 and 7 (see router description table).
Advanced Enterprise Services IOS w encryption for 38XX series managed router feature upgrade	MSB1005	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 26 (see router description table).
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	Extra Memory for Enterprise and Advanced Enterprise IOS for router types 1 and 17 (see router description table).
Extra Serial Port	MSB1008	Extra Serial Port Card for router types 1-9, 17,

Feature Name	Identifier	Feature Description
Card for 18XX, 28XX and 38XX series managed router feature upgrade		21 and 22 (see router description table).
Extra 4 Port Serial Port Adapter Card for 72XX and 73XX series managed router feature upgrade	MSB1009	Extra 4 Port Serial Port Adapter Card for router types 10, 11, 18 and 26 (see router description table).
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	2-Port Fast Ethernet 100Base TX Port Adapter for router types 10, 11, 18 & 26 (see router description table).
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	4-Port Ethernet 10BaseT Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	1-Port Gigabit Ethernet Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX and 73XX series managed router feature upgrade	MSB1013	1000BASE-SX Short Wavelength GBIC (Multimode only) for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	1000BASE-SX Short Wavelength GBIC (Copper) for router types 10, 11, 18 & 26 (see router description table).
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	Extra 4 port 10/100 Ethernet switch interface card for router types 1-9, 21 and 22 (see router description table).

Feature Name	Identifier	Feature Description
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	10/100 routed port HWIC Card for router types 1-9, 21 and 22 (see router description table).
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	GE SFP, LC connector LX/LH transceiver
1000BASE-SX SFP (DOM) for 38XX series managed router feature upgrade	MSB1018	1000BASE-SX SFP (DOM)
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	7304 Carrier Card for 7200 Series Port Adapters for router types 10, 11, 18 & 26 (see router description table).
Serial Cable managed router feature upgrade	MSB1020	Serial Cable
Console Port to CAS cable managed router feature upgrade	MSB1021	Console Port to CAS cable
Fiber Cable managed router feature upgrade	MSB1022	Fiber Cable
Rack Mount Kit managed router feature upgrade	MSB1023	Rack Mount Kit for 1841 for router types 1 & 17 (see router description table).
Extra Serial Port for ASR1000 series managed router feature upgrade	MSB1024	Extra Serial Port 1000BASE-SX SFP
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	Extra Serial Port 1000BASE-T SFP (NEBS 3 ESD)
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series	MSB1026	Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter

Feature Name	Identifier	Feature Description
managed router feature upgrade		
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1027	2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades		
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	GE SFP, LC connector LX/LH transceiver
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	GE SFP, LC connector SX transceiver
1000BASE-T SFP managed router feature upgrade	MSB1032	1000BASE-T SFP
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	1-port 10/100 Routed Port HWIC
GigE high speed WIC managed router feature upgrade	MSB1034	GigE high speed WIC with one SFP slot
1-Port Serial WAN	MSB1035	1-Port Serial WAN Interface Card

Feature Name	Identifier	Feature Description
Interface Card managed router feature upgrade		
4-Port 10/100 Ethernet switch interface card managed router feature upgrade	MSB1036	4-Port 10/100 Ethernet switch interface card
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	1000BASE-SX SFP (DOM)
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	Data IOS for Cisco 19XX Series
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	Security IOS for Cisco 19XX Series
Data IOS for Cisco 29XX Series managed router feature upgrade	MSB1042	Data IOS for Cisco 29XX Series
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	Security IOS for Cisco 29XX Series
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	Data IOS for Cisco 39XX Series

Feature Name	Identifier	Feature Description
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	Security IOS for Cisco 39XX Series
COS device 4 port COS switch managed router feature upgrade	MSB1046	COS device 4 port COS switch
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	Cable from: OOB modem to: COS/4
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature upgrade	MSB1048	Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.)
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	AIM Module 1800/2800/3800 DES/3DES/AES/SSL VPN Encryption/Compression
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules
12 port COS Switch managed router feature upgrade	MSB1051	12 port COS Switch
Optional Architectural Validation Professional Services	13096	AT&T's experts analyze an existing router network based upon the customer's network goals and provide specific recommendations for improvements. Additional charges will apply, as specified in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Dial Backup		
Analog (POTS) Dial Backup Management	13060A	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires

Feature Name	Identifier	Feature Description
		Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. Analog dial backup provides for individual telephone lines at remote sites to access a dial line at speeds up to 56k in case of primary transport failure. HUB sites may be configured with multiple, bonded analog lines to backup the primary transport in increments of 56k.
ISDN Basic Rate Interface (BRI) Dial Backup Management	13060B	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. BRI ports for ISDN may be added to a site router. Up to 4 BRI ports per site router are allowed, subject to capability constraints of the site router.
ISDN Primary Rate Interface (PRI) Dial Backup Management	13060C	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. PRI port for ISDN may be added to a site router, subject to capability constraints of the site router.
TACACS (Terminal Access Controller Access Control System) Read Only Access		
TACACS Read Only Access – Router Enablement	TACACSRE	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.

Feature Name	Identifier	Feature Description
TACACS Read Only Access – Support	TACACSRS	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.
TACACS Read Only Access – Enablement 1 to 6 Enabled Employees	TACACS1	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 7 to 12 Enabled Employees	TACACS2	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.

AT&T provides all network components and configures, monitors, manages and maintains the AT&T-provided Equipment located at the Customer Site.

The management demarcation point for AT&T OPT-E-MAN is the LAN interface card on the router at the Customer Site (Service Boundary).

Logical configurations or other router management commands employed by AT&T with Managed Router Equipment, whether AT&T or Customer-owned Equipment, are the sole and exclusive property of AT&T. Logical configurations and other router commands are confidential AT&T Information. Upon termination of Service or disconnection or termination of a Site, Customer shall have no right to use, or ownership interest in, the logical

configurations or other router management commands present or loaded on Equipment. Upon termination of Service or disconnection or termination of a Site, Customer shall ensure that Equipment is returned or made available to AT&T to allow removal of all AT&T confidential Information, including logical configurations and router management commands.

OPT-E-MAN Managed Service Bundles Router Description

Pricing for at least two routers options, where feasible, are given for each bandwidth. The base router will be sufficient for a basic IP networking. An upgrade router is available for each speed to provide extra performance if needed for adding additional services such as IPX, DLSW, IOS firewall support or anticipation of future growth. In addition, optional versions of software and associated memory are available in addition to address various network requirements. See router description table below.

Router Description Table

Router Type	Router Description	Suggested Max EVC Mbps
AVPN, OPTEMAN and OPTEWAN Managed Service Bundle Router Types	A managed router with internal CSU will be included in each Managed Service Bundle. Engineering rules drive default router selection, based on the port size and optional features selected by the customer; Router configuration will default to the smallest serviceable device for the site. In addition to port size, engineering rules factor in features such class of service. Optional Router models are included where appropriate. For example, a different router could be selected based on the real-time requirements. A base model router may be selected for lower utilization needs such as no or modest real-time traffic, whereas a higher level router may be selected for a more taxing requirement such as supporting an AVPN port with a Multimedia High COS package near the routes bandwidth capacity. The following are a descriptions of the default routers used for the Managed Service Bundles	
Type 1 Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	1.544Mbps
Type 1A Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: Cisco 1941 with 2	1.544Mbps

Router Type	Router Description	Suggested Max EVC Mbps
	onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	
Type 2 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 2-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	3.088Mbps
Type 2A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 2-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	3.088Mbps
Type 3 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X, IP BASE,64F/256D, Cisco 2821 or successor model	4.632Mbps
Type 3A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	4.632Mbps
Type 4 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Up to 25M DS3 Configuration: AC PWR, 2GE, 1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model. For Frame Relay or PPP access	6.176Mbps
Type 4A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	6.176Mbps
Type 5 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. UP to 25M DS3 Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model	Up to 10Mbps

Router Type	Router Description	Suggested Max EVC Mbps
Type 5A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base, Cisco 3925 or successor model	Up to 45Mbps
Type 6 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model. For Frame Relay or PPP access	45Mbps
Type 6A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base, Cisco 3925 or successor model	45Mbps
Type 7 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration: AC PWR,2GE,4HWICs,3PVDM,1NME-X,2AIM,IP BASE,64F/256D, Cisco 2821 or successor model	10Mbps
Type 7A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	20Mbps
Type 8 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps
Type 8A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps
Type 9 Router	Installation of Managed Router Bundle. Includes	50Mbps

Router Type	Router Description	Suggested Max EVC Mbps
Fiber Ethernet	configuration, life-cycle maintenance and diagnostic monitoring. AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model.	Fiber
Type 9A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3925 or successor model.	50Mbps Fiber
Type 10 Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	100Mbps Cu
Type 10A Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base., Cisco 3945 or successor model	100Mbps Cu
Type 11 Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	1Gig Fiber
Type 11A Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	200M Fiber
Type 17 Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Modular Router w/2xFE, 2 WAN slots, 32 FL/128 DR, Cisco 1841 or successor model	56Kbps
Type 17A Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Cisco 1941 with 2 onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF	56Kbps

Router Type	Router Description	Suggested Max EVC Mbps
	default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	
Type 18 Router DR #1	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 2 GE WAN Port, Cisco 7304 or successor model. (configured for dual router DR pair – must be ordered with complementary router).	Up to 1G fiber
Type 20 Router DLSW Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Ent. IP SW, Dual Power Supply, Cisco 7206VXR or successor model	DLSW
Type 21 Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps Fiber
Type 21A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps Fiber
Type 22 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 10/100 Copper Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 3845 or successor model	50Mbps
Type 22A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	100Mbps
Type 23 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. High Speed (10/100) Ethernet Configuration: AC PWR,2GE,1SFP,4NME,4HWIC, IP Base, 64F/256D,	IPSEC router

Router Type	Router Description	Suggested Max EVC Mbps
	Cisco 3845 or successor model	
Type 24 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and IP SW, Cisco 7200 Series IOS Advanced Enterprise Services, Cisco 7206VXR or successor model	IPSEC router
Type 25 Router Gig Fiber Ethernet	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 7606-S, Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3B, SUP720 IOS Advanced IP Services SSH, Cat6500 4-port 10 Gigabit Ethernet Module, Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45,2700W AC power supply,	10Gig-SR Fiber Handoff
Type 26 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Enterprise IP SW, Cisco 7206VXR or successor mode	Up to 250M
Type 27 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco ASR1002 Chassis, 4 built-in GE, Dual P/S, 4GB DRAM, Cisco ASR1002 or successor model	Up to 1G

OPT-E-MAN Managed Services Data Center Stand Alone Routers

Feature Name	Identifier	Feature Description
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20
IPSEC Standalone router Type 24	MSDCRT2	IPSEC Standalone router Type 24
Traffic Aggregation Standalone router Type 25	MSDCRT3	Traffic Aggregation Standalone router Type 25
Traffic Aggregation Standalone router Type 27	MSDCRT4	Traffic Aggregation Standalone router Type 27

Under the OPT-E-MAN Managed Service Bundles, the Router is owned by AT&T and made available to Customer solely for use as part of OPT-E-MAN Managed Service Bundles.

Upon termination of the Service or de-installation of any Site, Customer shall make the AT&T CPE at such Site available for removal by AT&T or third party designated by AT&T

and return it in the same condition as originally installed, ordinary wear or tear excepted, or Customer shall pay for restoration of the AT&T CPE to such condition.

Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.

OPT-E-WAN®

Description of Service:

OPT-E-WAN is a Layer 2 VPN service, providing Ethernet switching between customer endpoints. The reach of the service includes in-telco region domestic US, out of region domestic US and Global. The basis for the service implementation is VPLS, using the AT&T core MPLS network for transport. The service is a Layer 2 Ethernet VPN. The network ties together the service instances of the customer VPN into an Any to Any forwarding domain. The network makes forwarding decisions based on a combination of Ethernet MAC addresses, VLANs and port configuration depending on the service options selected for a given connection.

With VPLS, the provider's network creates the mesh of connections over MPLS. Each customers Edge (CE) device connects to a Provider Edge (PE) router that looks up the destination Ethernet address and adds a virtual channel label to the packet. Packets are directed through the MPLS Network via MPLS Label Switched Routers to the PE router at the other end. OPT-E-WAN provides two basic customer UNI definitions. These two UNI definitions are referred to as "Per Port" and "Per VLAN" service. These two UNI definitions define the service significance of VLANs on the customer UNI.

AT&T OPT-E-WAN is available in speeds of 1-20 Mbps, in 1 Mbps increments, 20-100 Mbps in 10 Mbps increments, 100 Mbps-1G in 50 Mbps increments and 1000 Mbps-10G in 500 Mbps increments.

Access Options:

Access provides connectivity between the customer location and the nearest AT&T POP.

- OPT-E-MAN: OPT-E-MAN is a switched Ethernet service that provides Metro area VPLS connectivity between multiple customer locations in a LATA.
- GigaMAN: GigaMAN is a 1 Gbps optical Ethernet over CWDM point-to-point service.

Grade of Service:

4 Class of Service options will be available for customers to choose from. They can decide which applications should have priority and apply the appropriate CoS package on a per port or per EVC basis.

- CoS 1: Real Time - Designed for jitter and latency sensitive application like voice and video.
- CoS 2V: Interactive - Designed to carry very high priority business applications or may carry jitter sensitive applications like video when CoS1 is already in use.
- CoS 3: Business Critical High - Designed to carry high priority business applications.
- CoS 4: Non Critical High - Designed to carry low priority business applications.

Availability:

OPT-E-WAN is currently available in the following metropolitan areas: Sacramento, San Francisco, San Diego and Los Angeles. Check with account team for availability outside of the listed major metropolitan areas.

Feature Name	Identifier	Feature Description
OPT-E-WAN (OEW) Switched Port Only		Port Only. Requires CALNET access, charged separately. Available in speeds of 1-20 Mbps (in 1 Mbps increments), 20-100 Mbps (in 10 Mbps increments), 100 Mbps – 1 Gbps (in 50 Mbps increments) and 1500 Mbps – 10 Gbps (in 500 Mbps increments)
OEW Switched Port – .5M – 500Mbps (IntraState)	84433, 84434 80326 – 80361	OEW Switched Port – Requires CALNET Opt-E-MAN access, charged separately. Ranging from .5M – 500Mbps (IntraState)
OEW Switched Port – .5M – 500Mbps (InterState)	84435, 84436 80390 – 80425	OEW Switched Port – Requires CALNET Opt-E-MAN access, charged separately. Ranging from .5M – 500Mbps (InterState)
OEW Dedicated Port – 550Mbps – 1Gbps (IntraState)	80362 – 80371	OEW Dedicated Port – Requires CALNET GigaMAN access, charged separately. Ranging from 550Mbps – 1Gbps (IntraState)
OEW Dedicated Port – 550Mbps – 1Gbps (InterState)	80426 – 80435	OEW Dedicated Port – Requires CALNET GigaMAN access, charged separately. Ranging from 550Mbps – 1Gbps (InterState)
OEW Dedicated Port – 1500Mbps – 10Gbps (IntraState)	96777, 96779, 96781, 96783, 96785, 96787, 96789, 96791, 96793, 96795, 96797, 96799, 96801, 96803, 96805, 96807, 96809, 96811	OEW Dedicated Port – Requires CALNET DecaMAN access, charged separately. Ranging from 1500Mbps – 10Gbps (IntraState)
OEW Dedicated Port – 1500Mbps – 10Gbps	96776, 96778, 96780, 96782,	OEW Dedicated Port – Requires CALNET DecaMAN access, charged separately. Ranging

Feature Name	Identifier	Feature Description
(InterState)	96784, 96786, 96788, 96790, 96792, 96794, 96796, 96798, 96800, 96802, 96804, 96806, 96808, 96810	from 1500Mbps – 10Gbps (IntraState)
OEW Class of Service Options:		
COS 1 – Real Time (IntraState)	92993	Real Time - Designed for jitter and latency sensitive application like voice and video.
COS 1 – Real Time (InterState)	92997	Real Time - Designed for jitter and latency sensitive application like voice and video.
COS 2V – Interactive (Video) (IntraState)	92994	Interactive - Designed to carry very high priority business applications or may carry jitter sensitive applications like video when CoS1 is already in use.
COS 2V – Interactive (Video) (InterState)	92998	Interactive - Designed to carry very high priority business applications or may carry jitter sensitive applications like video when CoS1 is already in use.
COS 3 – Business Critical Medium (IntraState)	92995	Business Critical High - Designed to carry high priority business applications.
COS 3 – Business Critical Medium (InterState)	92999	Business Critical High - Designed to carry high priority business applications.
COS 4 – Non Critical High (IntraState)	92996	Non Critical High - Designed to carry low priority business applications.
COS 4 – Non Critical High (InterState)	93000	Non Critical High - Designed to carry low priority business applications.
Other Non-Recurring Charges:		
OPT-E-WAN Bandwidth Set-Up (IntraState)	80372	OPTEWAN Port Bandwidth Set-UP
OPT-E-WAN Bandwidth Set-Up (InterState)	80436	OPTEWAN Port Bandwidth Set-UP
CoS Service Establishment (IntraState)	80376	Class of Service Establishment
CoS Service Establishment	80440	Class of Service Establishment

Feature Name	Identifier	Feature Description
(InterState)		
Additional MAC Addresses, EVCs, VLANs (IntraState)	80385	Moves Adds and Changes for IP Addresses, Ethernet Virtual Channels and Virtual Local Area Networks
Additional MAC Addresses, EVCs, VLANs (InterState)	80443	Moves Adds and Changes for IP Addresses, Ethernet Virtual Channels and Virtual Local Area Networks
Initial Service Order Change Charge (IntraState)	80386	Changes made to initial Service Orders
Initial Service Order Change Charge (InterState)	80444	Changes made to initial Service Orders
Service Order Cancellation (IntraState)	80387	Cancellation by customer of a Service Order before the ordered circuit has been installed.
Service Order Cancellation (InterState)	80445	Cancellation by customer of a Service Order before the ordered circuit has been installed.
Miscellaneous Change Charge (IntraState	80388	Changes to Port or service configuration
Miscellaneous Change Charge (Interstate)	80446	Changes to Port or service configuration
OPT-E-WAN Site Termination Charge (IntraState)	80389	OPT-E-WAN Site Termination Charge will be applied when an ordered circuit is cancelled after installation.
OPT-E-WAN Site Termination Charge (InterState)	80447	OPT-E-WAN Site Termination Charge will be applied when an ordered circuit is cancelled after installation.
Other Features:		
Diverse POP Service Set-Up Charge (IntraState)	80384	Diverse Point of Presence routing
Diverse POP Service Set-Up Charge (InterState)	80442	Diverse Point of Presence routing
Diverse Line Card (IntraState)	93013	Line Card Diversity
Diverse Line Card (InterState)	93014	Line Card Diversity
POP Diversity (IntraState)	93018	Diverse Point of Presence routing MRC
POP Diversity (InterState)	93019	Diverse Point of Presence routing MRC

OPT-E-WAN (OEW) Managed Service Bundles

AT&T OPT-E-WAN Managed Service Bundle is a fully managed Customer Edge to Customer Edge service providing a managed solution for AT&T OPT-E-WAN Transport ("AT&T OPT-E-WAN").

OPT-E-WAN is a Layer 2 VPN service, providing Ethernet switching between customer endpoints. The reach of the service includes in-telco region domestic US, out of region domestic US and Global. The basis for the service implementation is VPLS, using the AT&T core MPLS network for transport. The service is a Layer 2 Ethernet VPN. The network ties together the service instances of the customer VPN into an Any to Any forwarding domain. The network makes forwarding decisions based on a combination of Ethernet MAC addresses, VLANs and port configuration depending on the service options selected for a given connection.

Under the AT&T OPT-E-WAN Managed Service Bundle, AT&T provides the following:

Standard:

- OPT-E-WAN Port
- OPT-E-WAN Ethernet Access Circuit
- CoS4
- AT&T owned Managed Router (7X24X365)
- Router Maintenance (7X24X4 Hr Response)
- Inside Wiring and or Demarc extension (up to 300 feet in customer provided conduit)
- Business line and modem for Out-of-Band (OOB) emergency access to the Managed Router
- Network Operations Management Reports;
- Managed SLAs
    - Network Performance SLAs (Packet Loss and Latency))
    - Standard Provisioning, Availability/TTR, and Proactive Notification SLAs
    - Cat 1, 2 and 3 Outages

Standard Features and Functions

Design and Engineering

AT&T will design and/or document the Customer's Network topology, applications, connectivity, projected traffic flows, and performance based upon Customer provided information and Customer-specified requirements.

- AT&T will validate hardware, software and network platforms provided as the result of the engineered router network design utilizing established AT&T testing and troubleshooting criteria.
- AT&T will also develop specifications for the type of router hardware and software necessary to support the mutually agreed goals, objectives and

requirements of the engineered network solution. The specifications will include the manufacturer's router model, port capacity, software version, appropriate memory and protocol support, and addressing/routing tables.

- AT&T will review with Customer all pre-existing hardware configurations for compatibility with the Customer's requested network design.
- AT&T will document the network addressing plans, logical network device assignments and logical parameters for network management connectivity to the Customer's Network.

Installation Functions

AT&T furnishes and installs all network components and AT&T Furnished Equipment at all Sites on the Customer Network. At AT&T's option, the AT&T Furnished Equipment may come from AT&T inventory or directly from the manufacturer. As part of the installation function, AT&T provides staging of AT&T Furnished Equipment in which the AT&T Furnished Equipment is configured, and shipped to the designated Site.

During test and turn-up, the Field Engineer installs AT&T Furnished Equipment on the installation date specified in the Project Schedule. AT&T verifies connectivity to the Site and transfers the Site to the Global Client Service Center (GCSC) for management center acceptance. This marks the end of the implementation process for that particular site. AT&T technicians test connectivity through the network equipment into the AT&T Network.

AT&T will perform physical installations of AT&T Furnished Equipment or Customer Provided Equipment during local Standard Business Hours, Monday through Friday, utilizing an AT&T provided on-site supplier.

Implementation Functions

AT&T provides project implementation, management and installation services for all network and equipment components.

Project Implementation Management ("PIM") includes the development of project schedules and identification of all Customer and AT&T activities necessary to implement the network solution. This includes:

- Development of project timeline
- Coordination of transport and provisioning of Equipment
- Tracking and managing to completion all activities in AT&T project plan
- Logical Management Configuration
- AT&T will load the logical management configurations and perform logical connectivity testing to determine that connected Sites can communicate with each other and with the appropriate AT&T network management center.

- AT&T will utilize network acceptance tests between the AT&T work centers and designated Customer interface(s) to verify connectivity between Customer LAN ports. These tests do not test host/LAN applications through the network.
- Logical configurations loaded on Equipment, whether AT&T or Customer Equipment, are the sole and exclusive intellectual property of AT&T. Logical Configurations are confidential and proprietary AT&T Information. Upon termination of Service, Customer shall have no right to use, or ownership interest in, the logical configurations loaded on Equipment. Upon Service termination, including individual Site deletions, Customer shall ensure that AT&T has all opportunities to erase logical configurations.

Network Management

Standard Management functions consist of the following:

- Network Monitoring and Fault Identification,
- Fault Resolution, and
- Ongoing Configuration Management

Network Monitoring and Fault Identification

AT&T will proactively monitor the Customer Network, 7 days a week/ 24 hours per day, to identify faults within the Service Boundaries. AT&T WAN transport problems will be isolated, diagnosed and resolved by the AT&T network management center.

In providing the Network Monitoring and Fault Identification function, AT&T will:

- Monitor CPE interfaces within the Service Boundary utilizing SNMP techniques in-band and out-of-band.
- Perform diagnostic testing of CPE interfaces and isolate, sectionalize and identify faults as being physical or logical in nature.
- Maintain databases consisting of the logical configurations of Customer wide area network, WAN site and network connectivity, software specifications and Customer contact information.
- Provide trouble status to Customers at 1 hour intervals.

The AT&T GCSC Global Client Support Center serves as an SPOC for AT&T related faults. This activity includes the coordinated resolution with an AT&T network management center of Router Site faults caused by AT&T transport problems. In addition, the California Major Account Center (CMAC) will receive and track trouble ticket status until the trouble ticket is closed out with the customer NOC or the customer. Either the AT&T GCSC or the CMAC can be contacted to initiate a trouble ticket, get status of an existing trouble ticket or request an escalation.

Logical Fault Resolution

AT&T manages the logical configuration design for the Customer Network. Fault resolution provides for the coordinated identification and resolution of logical connectivity network problems for AT&T Furnished Equipment or Customer Equipment within the Service Boundary. Logical fault resolution includes:

- Management of the logical trouble resolution process;
- Proactive problem management and engagement of additional tiered expertise, if necessary, to resolve the logical trouble;
- If the root cause of the logical failure is outside the Service Boundary, the problem will be referred to the Customer with the diagnosis. If the cause of the failure is beyond the Service Boundary, Customer may request AT&T to assist in resolving the failure in which case Customer shall be billed on an hourly basis in accordance with the OPT-E-WAN Managed Service Bundle Pricing Schedule entitled "Supplementary Professional, Engineering and Technical Services."

Ongoing Configuration Management (OCM)

AT&T will manage a database of specific information regarding the logical address configuration(s) of the AT&T Furnished Equipment and Customer Equipment and associated software specifications. AT&T will manage changes made to access lists, device passwords, and will use secured community strings for SNMP access. Configuration changes due to maintenance and moves, ads, changes or deletes ("MACDs") will be included in the database. Reloads of router configurations from the AT&T technical platform database will be performed by the AT&T work center(s) if required as a result of major outages or system failures. AT&T work center(s) may initiate software updates to Customer Equipment with prior notification to and approval from Customer.

Maintenance Functions

Except as limited herein, maintenance applies to the physical, software and firmware failure of Equipment maintained by AT&T. AT&T Furnished Equipment may be maintained only by AT&T. Customer may request AT&T to provide maintenance of Customer Equipment. Customer Equipment must be AT&T-certified. AT&T maintenance extends only to the following equipment:

- CSU/DSU
- Dial backup modem
- Out of band management access modems
- Routers

AT&T will proactively isolate and diagnose Equipment hardware faults and will interface with Equipment vendors and other vendors for engineering support, parts ordering and fault resolution of physical faults within the identified service boundaries, as well as respond to Customer-reported faults. If the physical failure's root cause is outside the contractually defined service boundaries, the problem will be referred back to the Customer with the

diagnosis. Equipment maintenance will also cover software/firmware problems that cannot be resolved remotely.

Equipment Maintenance Support Levels

Four Hour, 24-Hour-a-Day Service (7X24)

> Under Four Hour, 24-Hour-a-Day Service (7x24), repair coverage is offered 24 hours per day, seven days per week. If dispatch is required, a field engineer will arrive at the Customer premises within four hours of the completion of trouble resolution processes, regardless of the time of day or day of the week. Dispatch of technicians will only occur after remote trouble resolution processes have determined that the problem is in the Equipment.

Network Operations Management

The standard OPT-E-WAN MANAGED SERVICE BUNDLE Network operations reports focus on basic router performance and include WAN and LAN utilization information. These reports are available, in color charts and graphs, via a web-based, HTML viewable format. Operations management reports are provided on a scheduled periodic basis as agreed to by AT&T and the customer, with each report displaying information gathered during the previous period's activity. Reports cover both AT&T Furnished Equipment and Customer Equipment. The standard reports are the following:

Router Information Report

The Router Detail Report provides basic inventory and logistical information about the router, such as router name, location, PVC terminations, DLCI and port speeds.

Router Performance Report

The Router Performance Report provides network and router utilization information, and network health information. The report may summarize network usage volumes and averages or report router performance on an exception basis.

Access Port Report

The Access Port Report provides the network and router performance from the volume of data that has been sent or received at the WAN port interface. This report gives a summary of WAN port activity and also lists areas for concern, based on pre-defined thresholds for WAN use.

LAN Port Report

The LAN Port Report provides the router performance based on the utilization of the LAN ports on the router. These reports, like WAN reports, provide information on utilization of LAN ports on the router and also indicate exceptions to pre-described thresholds.

OPT-E-WAN (OEW) Managed Service Bundles w/ Standard Features

Feature Name	Identifier	Feature Description
OPT-E-WAN (OEW) Managed Service Bundle w/ Standard Features		OPT-E-WAN port and Ethernet access transport, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet in customer provided conduit), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring , applicable CSU and Modem. OPT-E-WAN Port is rate limited to selected port bandwidth. See service elements below.
OEW Managed Service Bundle – .5M w / Type 7A Router Cu Ethernet	OEWMS05A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – .5M w / Type 22A Router Cu Ethernet	OEWMS05B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 1M w / Type 7A Router Cu Ethernet	OEWMS1A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 1M w / Type 22A Router Cu Ethernet	OEWMS1B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 1.5M w / Type 7A Router Cu Ethernet	OEWMS015A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 1.5M w / Type 22A Router Cu Ethernet	OEWMS015B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 2M w / Type 7A Router Cu Ethernet	OEWMS2A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle – 2M w / Type 22A Router Cu Ethernet	OEWMS2B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 3M w / Type 7A Router Cu Ethernet	OEWMS3A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 3M	OEWMS3B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
w / Type 22A Router Cu Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 4M w / Type 7A Router Cu Ethernet	OEWMS4A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 4M w / Type 22A Router Cu Ethernet	OEWMS4B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 5M w / Type 7A Router Cu Ethernet	OEWMS5A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 5M w / Type 22A Router Cu Ethernet	OEWMS5B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 6M w / Type 7A Router Cu Ethernet	OEWMS6A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 6M w / Type 22A Router Cu Ethernet	OEWMS6B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 7M w / Type 7A Router Cu Ethernet	OEWMS7A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 7M w / Type 22A Router Cu Ethernet	OEWMS7B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 8M w / Type 7A Router Cu Ethernet	OEWMS8A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 8M w / Type 22A Router Cu Ethernet	OEWMS8B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 9M	OEWMS9A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
w / Type 7A Router Cu Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 9M w / Type 22A Router Cu Ethernet	OEWMS9B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 10M w / Type 7A Router Cu Ethernet	OEWMS10A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 10M w / Type 22A Router Cu Ethernet	OEWMS10B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 11M w / Type 7A Router Cu Ethernet	OEWMS11A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 11M w / Type 22A Router Cu Ethernet	OEWMS11B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 12M w / Type 7A Router Cu Ethernet	OEWMS12A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 12M w / Type 22A Router Cu Ethernet	OEWMS12B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 13M w / Type 7A Router Cu Ethernet	OEWMS13A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 13M w / Type 22A Router Cu Ethernet	OEWMS13B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 14M w / Type 7A Router Cu Ethernet	OEWMS14A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 14M	OEWMS14B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
w / Type 22A Router Cu Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 15M w / Type 7A Router Cu Ethernet	OEWMS15A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 15M w / Type 22A Router Cu Ethernet	OEWMS15B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 16M w / Type 7A Router Cu Ethernet	OEWMS16A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 16M w / Type 22A Router Cu Ethernet	OEWMS16B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 17M w / Type 7A Router Cu Ethernet	OEWMS17A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 17M w / Type 22A Router Cu Ethernet	OEWMS17B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 18M w / Type 7A Router Cu Ethernet	OEWMS18A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 18M w / Type 22A Router Cu Ethernet	OEWMS18B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 19M w / Type 7A Router Cu Ethernet	OEWMS19A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 19M w / Type 22A Router Cu Ethernet	OEWMS19B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 20M	OEWMS20A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
w / Type 22A Router Cu Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 20M w / Type 10A Router Cu Ethernet	OEWMS20B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 30M w / Type 22A Router Cu Ethernet	OEWMS30A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 30M w / Type 10A Router Cu Ethernet	OEWMS30B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 40M w / Type 22A Router Cu Ethernet	OEWMS40A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 40M w / Type 10A Router Cu Ethernet	OEWMS40B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 50M w / Type 22A Router Cu Ethernet	OEWMS50A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 50M w / Type 10A Router Cu Ethernet	OEWMS50B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 60M w / Type 10A Router Cu Ethernet	OEWMS60A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 70M w / Type 10A Router Cu Ethernet	OEWMS70A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 80M w / Type 10A Router Cu Ethernet	OEWMS80A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 90M	OEWMS90A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
w / Type 10A Router Cu Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 100M w / Type 10A Router Cu Ethernet	OEWMS100A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 150M w / Type 11A Router Fiber Ethernet	OEWMS150A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 150M w / Type 26 Router Fiber Ethernet	OEWMS150B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 200M w / Type 11A Router Fiber Ethernet	OEWMS200A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 200M w / Type 26 Router Fiber Ethernet	OEWMS200B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 250M w / Type 26 Router Fiber Ethernet	OEWMS250A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 250M w / Type 27 Router Fiber Ethernet	OEWMS250B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 300M w / Type 26 Router Fiber Ethernet	OEWMS300A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 300M w / Type 27 Router Fiber Ethernet	OEWMS300B	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 350M w / Type 27 Router Fiber Ethernet	OEWMS350A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle -	OEWMS400A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
400M w / Type 27 Router Fiber Ethernet		Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 450M w / Type 27 Router Fiber Ethernet	OEWMS450A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 500M w / Type 27 Router Fiber Ethernet	OEWMS500A	OPT-E-WAN port using Switched Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Switched Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 550M w / Type 11 Router Fiber Ethernet	OEWMS550A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 550M w / Type 26 Router Fiber Ethernet	OEWMS550B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 600M w / Type 11 Router Fiber Ethernet	OEWMS600A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 600M w / Type 26 Router Fiber Ethernet	OEWMS600B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 650M w / Type 11 Router Fiber Ethernet	OEWMS650A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 650M w / Type 26 Router Fiber Ethernet	OEWMS650B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 700M w / Type 11 Router Fiber Ethernet	OEWMS700A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 700M w / Type 26 Router Fiber Ethernet	OEWMS700B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle -	OEWMS750A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
750M w / Type 11 Router Fiber Ethernet		Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 750M w / Type 26 Router Fiber Ethernet	OEWMS750B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 800M w / Type 11 Router Fiber Ethernet	OEWMS800A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 800M w / Type 26 Router Fiber Ethernet	OEWMS800B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 850M w / Type 11 Router Fiber Ethernet	OEWMS850A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 850M w / Type 26 Router Fiber Ethernet	OEWMS850B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 900M w / Type 11 Router Fiber Ethernet	OEWMS900A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 900M w / Type 26 Router Fiber Ethernet	OEWMS900B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 950M w / Type 11 Router Fiber Ethernet	OEWMS950A	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 950M w / Type 26 Router Fiber Ethernet	OEWMS950B	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle - 1G w / Type 11 Router Fiber Ethernet	OEWMS1KA	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000 Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.
OEW Managed Service Bundle -	OEWMS1KB	OPT-E-WAN port using Dedicated Gigabit Ethernet access; Speeds from .5 Mbps to 1000

Feature Name	Identifier	Feature Description
1000M w / Type 26 Router Fiber Ethernet		Mbps. Includes: Dedicated Gigabit Ethernet access circuit, CoS4, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, CSU and Modem.

OPT-E-WAN Managed Service Bundles Life Cycle Management Features and Services

Life Cycle Management is composed of the following functions:

- Moves, Adds, Changes and Deletes (MACDs) (via Business Direct)
- Supplementary Professional, Engineering and Technical Services
- Configuration Changes

Moves, Adds, Changes and Deletes

Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order.

All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate for non-Standard Business Hours will apply in addition to the lifecycle charges.

Supplementary Professional, Engineering and Technical Services

AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the table entitled "Supplementary Professional, Engineering and Technical Services."

AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. If AT&T is required to perform Services outside of Standard Business Hours, then the Non-Standard Hours rates will apply in addition to the appropriate charge for the Service being performed.

Configuration Changes

Configuration changes will be performed as requested by Customer and will be billed at the hourly rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Changes."

OPT-E-WAN Managed Service Bundles Life Cycle Management Features and Services

Feature Name	Identifier	Feature Description
Moves, Adds, Changes and Deletes		Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order. All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate will apply in addition to the lifecycle charges.
Move Router Site (Inside) – Low Complexity	13092L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Inside) – Medium Complexity	13092M	38xx, 39xx series routers
Move Router Site (Inside) – High Complexity	13092H	72xx, 73xx, 76xx, ASR1002 series routers
Move Router Site (Outside) - Low Complexity	13093L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Outside) - Medium Complexity	13093M	38xx, 39xx series routers
Move Router Site (Outside) - High Complexity	13093H	72xx, 73xx, 76xx, ASR1002 series routers

Feature Name	Identifier	Feature Description
Router Site Add - Low Complexity	13118L	18xx, 19xx, 28xx, 29xx series routers
Router Site Add - Medium Complexity	13118M	38xx, 39xx series routers
Router Site Add - High Complexity	13118H	72xx, 73xx, 76xx, ASR1002 series routers
Add/Delete Router Boards – Low Complexity	13127L	18xx, 19xx, 28xx, 29xx series routers
Add/Delete Router Boards – Medium Complexity	13127M	38xx, 39xx series routers
Add/Delete Router Boards – High Complexity	13127H	72xx, 73xx, 76xx, ASR1002 series routers
Site Delete for AT&T Provided Equipment	13119	Site Delete for AT&T Provided Equipment
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away
Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T	13109A	Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T
Supplementary Professional, Engineering and Technical Services		AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services." AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. Professional Services are billed with a minimum of four hours. If AT&T is required to perform Services outside of Standard Business Hours,

Feature Name	Identifier	Feature Description
		then the Non-Standard Hours rates will apply in addition to the appropriate charge for the Service being performed.
Standard Hours (8am – 5pm local time) First Hour	13109B	Standard Hours (8am – 5pm local time) First Hour. AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Standard Hours (8am – 5pm local time) Subsequent Hour	13109C	Standard Hours (8am – 5pm local time) Subsequent Hour. AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Non-Standard Hours First Hour	13109D	Non-Standard Hours First Hour. AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."

Feature Name	Identifier	Feature Description
Non-Standard Hours Subsequent Hours	13109E	Non-Standard Hours Subsequent Hours. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Lost Equipment Charge for AT&T Owned CPE	13054	Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.
Router Configuration Changes	14158	Configuration changes will be performed as requested by Customer and will be billed at the rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features."

OPT-E-WAN Managed Service Bundles Optional Up Lift Features and Services

- Router Protocol, Memory and Misc. Feature Upgrades to AT&T Owned and Managed Routers
- Optional Architectural Validation Professional Services
- Dial back up (Analog and ISDN (BRI and PRI)
- TACACS Read Only Access

OPT-E-WAN Managed Service Bundles Optional Up Lift Features and Services

Feature Name	Identifier	Feature Description
Router Protocol, Memory and Misc		Router protocol, memory and misc. features upgrades to AT&T owned and managed service

Feature Name	Identifier	Feature Description
Managed Router Feature Upgrades		bundle routers.
Enterprise Services IOS w/o encryption for 18XX series managed router feature upgrade	MSB1000	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 1 and 17 (see router description table).
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 2, 3, 4 and 7 (see router description table).
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 1 and 17 (see router description table).
Advanced Enterprise Services IOS w encryption for 28XX series managed router feature upgrade	MSB1004	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 2, 3, 4 and 7 (see router description table).
Advanced Enterprise Services IOS w encryption for 38XX series managed router feature upgrade	MSB1005	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 26 (see router description table).
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	Extra Memory for Enterprise and Advanced Enterprise IOS for router types 1 and 17 (see router description table).
Extra Serial Port	MSB1008	Extra Serial Port Card for router types 1-9, 17,

Feature Name	Identifier	Feature Description
Card for 18XX, 28XX and 38XX series managed router feature upgrade		21 and 22 (see router description table).
Extra 4 Port Serial Port Adapter Card for 72XX and 73XX series managed router feature upgrade	MSB1009	Extra 4 Port Serial Port Adapter Card for router types 10, 11, 18 and 26 (see router description table).
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	2-Port Fast Ethernet 100Base TX Port Adapter for router types 10, 11, 18 & 26 (see router description table).
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	4-Port Ethernet 10BaseT Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	1-Port Gigabit Ethernet Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX and 73XX series managed router feature upgrade	MSB1013	1000BASE-SX Short Wavelength GBIC (Multimode only) for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	1000BASE-SX Short Wavelength GBIC (Copper) for router types 10, 11, 18 & 26 (see router description table).
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	Extra 4 port 10/100 Ethernet switch interface card for router types 1-9, 21 and 22 (see router description table).

Feature Name	Identifier	Feature Description
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	10/100 routed port HWIC Card for router types 1-9, 21 and 22 (see router description table).
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	GE SFP, LC connector LX/LH transceiver
1000BASE-SX SFP (DOM) for 38XX series managed router feature upgrade	MSB1018	1000BASE-SX SFP (DOM)
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	7304 Carrier Card for 7200 Series Port Adapters for router types 10, 11, 18 & 26 (see router description table).
Serial Cable managed router feature upgrade	MSB1020	Serial Cable
Console Port to CAS cable managed router feature upgrade	MSB1021	Console Port to CAS cable
Fiber Cable managed router feature upgrade	MSB1022	Fiber Cable
Rack Mount Kit managed router feature upgrade	MSB1023	Rack Mount Kit for 1841 for router types 1 & 17 (see router description table).
Extra Serial Port for ASR1000 series managed router feature upgrade	MSB1024	Extra Serial Port 1000BASE-SX SFP
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	Extra Serial Port 1000BASE-T SFP (NEBS 3 ESD)
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series	MSB1026	Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter

Feature Name	Identifier	Feature Description
managed router feature upgrade		
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1027	2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades		
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	GE SFP, LC connector LX/LH transceiver
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	GE SFP, LC connector SX transceiver
1000BASE-T SFP managed router feature upgrade	MSB1032	1000BASE-T SFP
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	1-port 10/100 Routed Port HWIC
GigE high speed WIC managed router feature upgrade	MSB1034	GigE high speed WIC with one SFP slot
1-Port Serial WAN	MSB1035	1-Port Serial WAN Interface Card

Feature Name	Identifier	Feature Description
Interface Card managed router feature upgrade		
4-Port 10/100 Ethernet switch interface card managed router feature upgrade	MSB1036	4-Port 10/100 Ethernet switch interface card
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	1000BASE-SX SFP (DOM)
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	Data IOS for Cisco 19XX Series
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	Security IOS for Cisco 19XX Series
Data IOS for Cisco 29XX Series managed router feature upgrade	MSB1042	Data IOS for Cisco 29XX Series
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	Security IOS for Cisco 29XX Series
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	Data IOS for Cisco 39XX Series

Feature Name	Identifier	Feature Description
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	Security IOS for Cisco 39XX Series
COS device 4 port COS switch managed router feature upgrade	MSB1046	COS device 4 port COS switch
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	Cable from: OOB modem to: COS/4
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature upgrade	MSB1048	Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.)
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	AIM Module 1800/2800/3800 DES/3DES/AES/SSL VPN Encryption/Compression
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules
12 port COS Switch managed router feature upgrade	MSB1051	12 port COS Switch
Optional Architectural Validation Professional Services	13096	AT&T's experts analyze an existing router network based upon the customer's network goals and provide specific recommendations for improvements. Additional charges will apply, as specified in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Dial Backup		
Analog (POTS) Dial Backup Management	13060A	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features require

Feature Name	Identifier	Feature Description
		Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. Analog dial backup provides for individual telephone lines at remote sites to access a dial line at speeds up to 56k in case of primary transport failure. HUB sites may be configured with multiple, bonded analog lines to backup the primary transport in increments of 56k.
ISDN Basic Rate Interface (BRI) Backup Management	13060B	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features require Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. BRI ports for ISDN may be added to a site router. Up to 4 BRI ports per site router are allowed, subject to capability constraints of the site router.
ISDN Primary Rate Interface (PRI) Backup Management	13060C	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features require Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. PRI port for ISDN may be added to a site router, subject to capability constraints of the site router.
TACACS (Terminal Access Controller Access Control System) Read Only Access		
TACACS Read Only Access – Router Enablement	TACACSRE	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.

Feature Name	Identifier	Feature Description
TACACS Read Only Access - Support	TACACSRS	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.
TACACS Read Only Access – Enablement 1 to 6 Enabled Employees	TACACS1	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 7 to 12 Enabled Employees	TACACS2	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.

AT&T provides all network components and configures, monitors, manages and maintains the AT&T-provided Equipment located at the Customer Site.

The management demarcation point for AT&T OPT-E-WAN is the LAN interface card on the router at the Customer Site (Service Boundary).

Logical configurations or other router management commands employed by AT&T with Managed Router Equipment, whether AT&T or Customer-owned Equipment, are the sole and exclusive property of AT&T. Logical configurations and other router commands are confidential AT&T Information. Upon termination of Service or disconnection or termination of a Site, Customer shall have no right to use, or ownership interest in, the logical

configurations or other router management commands present or loaded on Equipment. Upon termination of Service or disconnection or termination of a Site, Customer shall ensure that Equipment is returned or made available to AT&T to allow removal of all AT&T confidential Information, including logical configurations and router management commands.

OPT-E-WAN Managed Service Bundles Router Description

Pricing for at least two routers options, where feasible, are given for each bandwidth. The base router will be sufficient for a basic IP networking. An upgrade router is available for each speed to provide extra performance if needed for adding additional services such as IPX, DLSW, IOS firewall support or anticipation of future growth. In addition, optional versions of software and associated memory are available in addition to address various network requirements. See router description table below.

Router Description Table

Router Type	Router Description	Suggested Max EVC Mbps
AVPN, OPTEMAN and OPTEWAN Managed Service Bundle Router Types	A managed router with internal CSU will be included in each Managed Service Bundle. Engineering rules drive default router selection, based on the port size and optional features selected by the customer; Router configuration will default to the smallest serviceable device for the site. In addition to port size, engineering rules factor in features such class of service. Optional Router models are included where appropriate. For example, a different router could be selected based on the real-time requirements. A base model router may be selected for lower utilization needs such as no or modest real-time traffic, whereas a higher level router may be selected for a more taxing requirement such as supporting an AVPN port with a Multimedia High COS package near the routes bandwidth capacity. The following are a descriptions of the default routers used for the Managed Service Bundles	
Type 1 Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	1.544Mbps
Type 1A Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: Cisco 1941 with 2	1.544Mbps

Router Type	Router Description	Suggested Max EVC Mbps
	onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	
Type 2 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 2-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	3.088Mbps
Type 2A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 2-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	3.088Mbps
Type 3 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X, IP BASE,64F/256D, Cisco 2821 or successor model	4.632Mbps
Type 3A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	4.632Mbps
Type 4 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Up to 25M DS3 Configuration: AC PWR, 2GE, 1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model. For Frame Relay or PPP access	6.176Mbps
Type 4A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	6.176Mbps
Type 5 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. UP to 25M DS3 Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model	Up to 10Mbps

Router Type	Router Description	Suggested Max EVC Mbps
Type 5A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base, Cisco 3925 or successor model	Up to 45Mbps
Type 6 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model. For Frame Relay or PPP access	45Mbps
Type 6A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base, Cisco 3925 or successor model	45Mbps
Type 7 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration: AC PWR,2GE,4HWICs,3PVDM,1NME-X,2AIM,IP BASE,64F/256D, Cisco 2821 or successor model	10Mbps
Type 7A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	20Mbps
Type 8 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps
Type 8A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps
Type 9 Router	Installation of Managed Router Bundle. Includes	50Mbps

Router Type	Router Description	Suggested Max EVC Mbps
Fiber Ethernet	configuration, life-cycle maintenance and diagnostic monitoring. AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model.	Fiber
Type 9A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3925 or successor model.	50Mbps Fiber
Type 10 Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	100Mbps Cu
Type 10A Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base., Cisco 3945 or successor model	100Mbps Cu
Type 11 Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	1Gig Fiber
Type 11A Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	200M Fiber
Type 17 Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Modular Router w/2xFE, 2 WAN slots, 32 FL/128 DR, Cisco 1841 or successor model	56Kbps
Type 17A Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Cisco 1941 with 2 onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF	56Kbps

Router Type	Router Description	Suggested Max EVC Mbps
	default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	
Type 18 Router DR #1	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 2 GE WAN Port, Cisco 7304 or successor model. (configured for dual router DR pair – must be ordered with complementary router).	Up to 1G fiber
Type 20 Router DLSW Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Ent. IP SW, Dual Power Supply, Cisco 7206VXR or successor model	DLSW
Type 21 Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps Fiber
Type 21A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps Fiber
Type 22 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 10/100 Copper Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 3845 or successor model	50Mbps
Type 22A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	100Mbps
Type 23 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. High Speed (10/100) Ethernet Configuration: AC PWR,2GE,1SFP,4NME,4HWIC, IP Base, 64F/256D,	IPSEC router

Router Type	Router Description	Suggested Max EVC Mbps
	Cisco 3845 or successor model	
Type 24 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and IP SW, Cisco 7200 Series IOS Advanced Enterprise Services, Cisco 7206VXR or successor model	IPSEC router
Type 25 Router Gig Fiber Ethernet	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 7606-S, Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3B, SUP720 IOS Advanced IP Services SSH, Cat6500 4-port 10 Gigabit Ethernet Module, Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45,2700W AC power supply,	10Gig-SR Fiber Handoff
Type 26 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Enterprise IP SW, Cisco 7206VXR or successor mode	Up to 250M
Type 27 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco ASR1002 Chassis, 4 built-in GE, Dual P/S, 4GB DRAM, Cisco ASR1002 or successor model	Up to 1G

OPT-E-WAN Managed Services Data Center Stand Alone Routers

Feature Name	Identifier	Feature Description
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20
IPSEC Standalone router Type 24	MSDCRT2	IPSEC Standalone router Type 24
Traffic Aggregation Standalone router Type 25	MSDCRT3	Traffic Aggregation Standalone router Type 25
Traffic Aggregation Standalone router Type 27	MSDCRT4	Traffic Aggregation Standalone router Type 27

Under the OPT-E-WAN Managed Service Bundles, the Router is owned by AT&T and made available to Customer solely for use as part of OPT-E-WAN Managed Service Bundles.

Upon termination of the Service or de-installation of any Site, Customer shall the AT&T CPE at such Site available for removal by AT&T or third party designated by AT&T and return it in the same condition as originally installed, ordinary wear or tear excepted, or Customer shall pay for restoration of the AT&T CPE to such condition.

Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.

Customized Switched Metro Ethernet (CSME)

Customized Switched Metro Ethernet Service (CSME) is a sub-set of the OPT-E-MAN service offerings (available in most locations where OPT-E-MAN is not available). CSME is a switched Ethernet service that connects your LANs within the same metropolitan area to create a metropolitan area network (MAN). CSME service is available in a wide range of metropolitan areas and provides scalable optical service at speeds of 10 Mbps, 100 Mbps, or 1 Gbps. Unlike OPT-E-MAN, CSME does not have MPLS in the core network.

CSME is a fiber-based, Layer 2 switched Ethernet service that provides a VPN that connects to multiple metropolitan area locations over a public network. The network will act as an Ethernet bridge to the connected LANs enabling any-to-any connectivity.

CSME supports many transport data configurations (point-to-point, point-to-multipoint, multipoint-to-multipoint with the network acting as a broadcast domain). You can assign VLANs to segregate your traffic as necessary. CSME uses physical and virtual connections to satisfy your specific business requirements.

CSME connects into the Ethernet cloud and establishes logical EVCs traversing the network to connect your locations transparently. It uses fiber optics and Ethernet to provide you with a VPN. You connect to the network using a router, bridge, or switch. You can connect to locations within a MAN as if they were segments on the same LAN. CSME features include:

- Customer Handoff—10/100BASE-T, 1000BASE-SX, 1000BASE-LX/LH, 1000BASE-ZX (RJ-45 patch panel for the 10/100 Mbps connection or fiber patch panel for 1 Gbps Ethernet connection)
- Network components include a Layer 2/Layer 3 switch in the Core (Cisco 7609) and the Cisco Catalyst 3550s as the Network Terminating Equipment
- Full-duplex operation (communications are bi-directional)

To establish the service, AT&T will place a Cisco 7609 in the central office core network and a Cisco 3550 at the customer premises. The Cisco 3550 is AT&T network terminating equipment, and it will enable AT&T to push a portion of the core functionality to the network edge for better service management. Customers will connect to our network using a router, bridge, or switch, and fiber transport AT&T provides to the customer premises.

CSME Service and Features

Feature Name	Identifier	Feature Description
CSME Basic Connection 10 Mbps	P9FYX	10 Base T Ethernet Port, First Per Location; Assessed per interface at bandwidths of 10 Mbps Base T. The CSME connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
CSME Basic Connection - subsequent 10 Mbps	P9FZX	10 Base T Ethernet Port, Subsequent Per Location; Assessed per interface at bandwidths of 10 Mbps Base T. The CSME connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
CSME Basic Connection 100 Mbps	P9FKX	100 Base T Ethernet Port, First Per Location; Assessed per interface at bandwidths of 100 Mbps Base T. The CSME connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
CSME Basic Connection Subsequent 100 Mbps	P9FPX	10 Base T Ethernet Port, Subsequent Per Location; Assessed per interface at bandwidths of 100 Mbps Base T. The CSME connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
CSME Basic Connection 1 Gigabit	P9FLX	Gigabit Ethernet Port Per Location; Assessed per interface at bandwidths of 1 Gbps. The CSME connection rate element includes the physical connection between the customer's demarcation and the core Ethernet network, and a port on the NTE.
CSME Ethernet Virtual Connection (EVC)	EVNDE	Virtual Connection between CSME ports - Per connection; A total of eight Ethernet Virtual Connections (EVCs) may be configured per 100 Base T port should the customer wish to segregate traffic. A total of 64 EVCs may be configured per 1 Gbps port. Should the customer request more than 64 EVCs on 1 Gbps port, a technical review will need to be conducted to determine whether the

Feature Name	Identifier	Feature Description
		network will support more than 64 EVCs.
CSME Media Access Control (MAC) Addresses	M2CAX	Additional (51-200); MAC addresses rate element is a data link layer protocol used for Layer 2 connectivity and is assessed per MAC address—up to 150 addresses per port at no additional charge. Should the customer require additional MAC addresses over the first 150, customers will be assessed an additional charge per block of 150-200 addresses with a limit of 200 MAC addresses per port.
CSME Repeater	VU4	A repeater may be required when a customer requests CSME service from a serving wire center not equipped to provide CSME service. If the technical review indicates that the service can be provided using a repeater from the customer's connection to the Ethernet network, a repeater charge will be applied.
CSME Service Order Change Charge	NHCEO	Service order change charge for pending service orders and is assessed per location.
CSME Miscellaneous Change Charge	NHCEN	Assessed per location when customer requests changes to existing CSME Service
CSME Service Order Cancellation Charge	OGCEO	If the customer cancels service prior to installation being completed, a Cancellation charge (per port, per location) will apply.
CSME Service Expedite Charge	EODEO	Expedite change is assessed per location when customer requests service to be installed sooner than AT&T agreed upon due date.

AT&T Ethernet Private Line Service (EPLS-WAN)

AT&T Private Line Service Ethernet Interoffice Channel (IOC) will provide inter-city, full-duplex, point-to-point transport of Ethernet packets over the AT&T Corp. long-haul transport infrastructure. We deploy the Ethernet IOC service using the multi-service platform (MSP), which will perform encapsulation of the customer's native Ethernet traffic into SONET frames for transport across the AT&T long-haul network. The Ethernet packet traffic is mapped to a SONET frame as payload and transported as an STS-N (N = 1, 3c, 12c) circuit across the AT&T long-haul network; provision of SONET-layer protection is on the high-speed facilities over which the Ethernet IOC circuit is routed. 50 Mbps, 150 Mbps, 600 Mbps, and 1000 Mbps Ethernet IOC circuits are mapped to STS-1, STS-3c, STS-12c, and STS-24c signals, respectively. EPLS-WAN includes local access from the customer premises to AT&T POP, generally using the OPT-E-MAN service described above.

EPLS-WAN Service and Features

Feature Name	Identifier	Feature Description
EPLS-WAN 50 Mbps	WAN50ae	Gigabit Ethernet port with point-point InterLATA Ethernet connections between equipped AT&T POPs at total throughput of 50 Mbps. Includes local access.
EPLS-WAN 150 Mbps	WAN15a-e	Gigabit Ethernet port with point-point InterLATA Ethernet connections between equipped AT&T POPs at total throughput of 150 Mbps. Includes local access.
EPLS-WAN 600 Mbps	WAN60a-e	Gigabit Ethernet port with point-point InterLATA Ethernet connections between equipped AT&T POPs at total throughput of 600 Mbps. Includes local access.
EPLS-WAN 1000Mbps	WAN1Ga-e	Gigabit Ethernet port with point-point InterLATA Ethernet connections between equipped AT&T POPs at total throughput of 1000 Mbps. Includes local access.

Customer Premises Equipment (CPE) and Services

AT&T offers a variety of CPE and pre-implementation, implementation and post-implementation services for CPE in support of all WAN access services.

See Required CPE and Other Equipment for descriptions of additional equipment and services offered.

6.1.3.2.5 Service Identifier: Metropolitan Area Network (MAN) and Wide Area Network (WAN) Services

Pricing is for standard components only, additional buildout shall be considered on an ICB basis.

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
GigaMAN®					
GigaMAN Local Distribution Channel	LNVX5	$ 1,350.00	$ 2,280.00	Per Channel	N/A
GigaMAN Repeater	VU4X5	N/A	$ 550.00	per additional repeater	N/A
GigaMAN Inter-Office Mileage - Variable	1L5X3	N/A	$ 10.00	per mile	N/A
GigaMAN Inter-Office Mileage Fixed	1L5X3	$ -	$ 160.00	channel	N/A
GigaMAN Channel Termination Diversity (Local Channel Diversity)	CPAL5	$ -	$ 600.00	channel	N/A
GigaMAN Alternate Wire Center Diversity	CPAA5	$ -	$ 960.00	channel	N/A
GigaMAN Inter-Wire Center Diversity	CPAT5	$ -	$ 475.00	circuit	N/A
GigaMAN Equipment Only Protection	CPAE3	$ 625.00	$ 840.00	channel	N/A
GigaMAN Equipment plus Alternate Wire Center Path Protection	CPAF3	$ 1,400.00	$ 1,280.00	channel	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
GigaMAN Equipment plus Channel Termination Path Protection	CPAG3	$ 1,225.00	$ 1,140.00	channel	N/A
GigaMAN Inter-Wire Center Path Protection	CPAH3	$ 625.00	$ 120.00	channel	N/A
GigaMAN Power Protection	VBBG3	$ 475.00	$ 384.00	rack or cabinet	N/A
GigaMAN Administration Charge	NRBAO	$ 46.00	N/A	order	N/A
DecaMAN®					
DecaMAN Local Distribution Channel LAN-PHY	1RSTX	$ 1,500.00	$ 8,400.00	channel	N/A
DecaMAN Local Distribution Channel WAN-PHY	1RSTX	$ 1,500.00	$ 10,560.00	channel	N/A
DecaMAN Interoffice Channel Mileage - Fixed	JZ68S	N/A	$ 1,260.00	channel	N/A
DecaMAN Interoffice Channel Mileage - Variable	JZ68S	N/A	$ 175.00	mile	N/A
DecaMAN Repeater	VU4	N/A	$ 1,920.00	per additional repeater	N/A
DecaMAN Channel Termination Diversity (Local Channel Diversity)	CPALX	$ 850.00	$ 2,160.00	channel	N/A
DecaMAN Alternate Wire Center Diversity	CPAAX	$ 950.00	$ 3,456.00	channel	N/A
DecaMAN Inter-Wire Center Diversity	CPATX	$ 700.00	$ 1,440.00	circuit	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
DecaMAN Equipment Only Protection	CPAEX	$ 3,000.00	$ 5,880.00	channel	N/A
DecaMAN Equipment plus Alternate Wire Center Path Protection	CPAFX	$ 4,500.00	$ 8,832.00	channel	N/A
DecaMAN Equipment plus Channel Termination Path Protection	CPAGX	$ 4,200.00	$ 7,920.00	channel	N/A
DecaMAN Inter-Wire Center Path Protection	CPAHX	$ 625.00	$ 480.00	circuit	N/A
DecaMAN Power Protection	VBBGX	$ 475.00	$ 420.00	rack or cabinet	N/A
DecaMAN Administration Charge	NRBAO	$ 46.00	N/A	order	N/A
FibreMAN®					
FibreMAN Local Distribution Channel - 1 Gbps	25P8X	$ 1,500.00	$ 2,850.00	channel	N/A
FibreMAN Local Distribution Channel - 2 Gbps	25P9X	$ 1,500.00	$ 4,000.00	channel	N/A
FibreMAN Repeater	VU4	$ -	$ 1,150.00	per additional repeater	N/A
FibreMAN Alternate Wire Center Diversity	AVOYX	$ -	$ 1,200.00	channel	N/A
FibreMAN Channel Termination Diversity (Local Channel Diversity)	DJVYX	$ -	$ 750.00	channel	N/A
FibreMAN Inter-Wire Center Diversity	DEQYX	$ -	$ 500.00	circuit	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
FibreMAN Inter-Office Mileage - Fixed	JZ4XS	$ -	$ 200.00	channel	N/A
FibreMAN Inter-Office Mileage - Variable	JZ4XS	$ -	$ 100.00	mile	N/A
MON Ring					
MON Ring Customer Prem Node	F2ND1	$ -	$ 4,680.00	node	N/A
MON Ring Customer Prem Node	F2NDS	$ -	$ 3,510.00	node	N/A
MON Ring Central Office Node	F2NC1	$ -	$ 4,680.00	node	N/A
MON Ring Central Office Node	F2NCS	$ -	$ 3,510.00	node	N/A
MON Ring Interoffice Mileage	1L5X5	$ -	$ 195.00	ring	N/A
MON Bulk Power	CBVDX	$ -	$ 1,240.00	node	N/A
MON Bulk Power	CVBDS	$ -	$ 992.00	node	N/A
MON Ring Central Office Optical Amplifier - Per location C-Band	67QXX	$ -	$ 3,240.00	amplifier	N/A
MON Ring Central Office Optical Amplifier - Per location L-Band	67QSX	$ -	$ 3,240.00	amplifier	N/A
MON Ring Central Office Regenerator	V8RXX	$ -	$ 4,500.00	regenerator	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MON Ring Central Office Regenerator	V8R2C	$ -	$ 9,000.00	regenerator	N/A
MON Ring Port ETR Unprotected	POYKW	$ -	$ 585.00	port	N/A
MON Ring Port Fibre Channel	POYNW	$ -	$ 720.00	port	N/A
MON Ring Port Fibre Channel Protected	POYNP	$ -	$ 1,440.00	port	N/A
MON Ring Port Fibre Channel 2G	POYYW	$ -	$ 1,020.00	port	N/A
MON Ring Port Fibre Channel 2G Protected	POYYP	$ -	$ 2,040.00	port	N/A
MON Ring Port FICON	POYMW	$ -	$ 585.00	port	N/A
MON Ring Port FICON Protected	POYMP	$ -	$ 1,170.00	port	N/A
MON Ring Port FICON 2G	POYWW	$ -	$ 1,020.00	port	N/A
MON Ring Channel Port FICON 2G	POYWP	$ -	$ 2,040.00	port	N/A
MON Ring Port Gigabit Ethernet	POYLW	$ -	$ 720.00	port	N/A
MON Ring Port Gigabit Ethernet Protected	POYLP	$ -	$ 1,440.00	port	N/A
MON Ring Port 10W Gigabit Ethernet	POYTW	$ -	$ 9,000.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MON Ring Port 10W Gigabit Ethernet Protected	POYTP	$ -	$ 12,000.00	port	N/A
MON Ring Port 10L Gigabit Ethernet	POYUW	$ -	$ 9,225.00	port	N/A
MON Ring Port 10L Gigabit Ethernet Protected	POYUP	$ -	$ 12,300.00	port	N/A
MON Ring Port SONET OC-12/OC-12c	POYFW	$ -	$ 780.00	port	N/A
MON Ring Port SONET OC-12/OC-12c Protected	POYFP	$ -	$ 1,560.00	port	N/A
MON Ring Port SONET OC-48/OC-48c	POYGW	$ -	$ 2,640.00	port	N/A
MON Ring Port SONET OC-48/OC-48c Protected	POYGP	$ -	$ 3,960.00	port	N/A
MON Ring Port SONET OC-192/OC-192c	POYOW	$ -	$ 9,000.00	port	N/A
MON Ring Port SONET OC-192/OC-192c Protected	POYOP	$ -	$ 12,000.00	port	N/A
MON Ring Fibre Channel SRM Port	POY6W	$ -	$ 300.00	port	N/A
MON Ring FibreChannel SRM Port Protected	POY6P	$ -	$ 600.00	port	N/A
MON Ring Ficon SRM Port	POY7W	$ -	$ 240.00	port	N/A
MON Ring Ficon SRM Port Protected	POY7P	$ -	$ 480.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MON Gigabit Ethernet SRM Port	POY4W	$ -	$ 300.00	port	N/A
MON Gigabit Ethernet SRM Port Protected	POY4P	$ -	$ 600.00	port	N/A
MON SONET OC-12/OC-12c SRM Port	POY5W	$ -	$ 300.00	port	N/A
MON SONET OC-12/OC-12c SRM Port Protected	POY5P	$ -	$ 600.00	port	N/A
MON SONET OC-3/OC-3c SRM Port	POYEW	$ -	$ 60.00	port	N/A
MON SONET OC-3/OC-3c SRM Port	POYEP	$ -	$ 60.00	port	N/A
MON ESCON SRM Port	POYHW	$ -	$ 60.00	port	N/A
MON ESCON SRM Port Protected	POYHP	$ -	$ 60.00	port	N/A
OPT-E-MAN®					
OPT-E-MAN Basic Connection 10/100 Mbps	P9FEX	N/A	$ 323.61	port	N/A
OPT-E-MAN Basic Connection Gigabit Ethernet	P9FGX	N/A	$ 681.66	port	N/A
OPT-E-MAN Basic Plus Connection 10/100 Mbps	P9FFX	N/A	$ 323.61	port	N/A
OPT-E-MAN Basic Plus Connection Gigabit Ethernet	P9FHX	N/A	$ 681.66	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OPT-E-MAN Additional MAC Addresses (51-100)	M2CAX	N/A	$ 4.00		N/A
OPT-E-MAN Repeater Service	VU4	N/A	$ 260.00	repeater	N/A
OPT-E-MAN Service Order Change Charge	NHCEO	$ 75.00	N/A		N/A
OPT-E-MAN Miscellaneous Change Charge	NHCEN	$ 50.00	N/A		N/A
OPT-E-MAN Service Order Cancellation Charge	OGCEO	$ 200.00	N/A		N/A
OPT-E-MAN Expedite Charge	EODEO	$ 300.00	N/A		N/A
OPT-E-MAN Ethernet Virtual Connection (EVC)	OMEVC	$ -	$ -	virtual circuit	N/A
Best Effort Grade of Service					
OPT-E-MAN Committed Information Rate – 2 Mbps Best Effort	R6E2E	N/A	$ 50.02	port	N/A
OPT-E-MAN Committed Information Rate – 4 Mbps Best Effort	R6E4E	N/A	$ 75.04	port	N/A
OPT-E-MAN Committed Information Rate – 8 Mbps Best Effort	R6E8E	N/A	$ 133.41	port	N/A
Bronze Grade of Service					

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OPT-E-MAN Committed Information Rate – 2 Mbps Bronze	R6E2B	N/A	$ 58.85	port	N/A
OPT-E-MAN Committed Information Rate – 4 Mbps Bronze	R6E4B	N/A	$ 88.28	port	N/A
OPT-E-MAN Committed Information Rate – 5 Mbps Bronze	R6EAB	N/A	$ 102.02	port	N/A
OPT-E-MAN Committed Information Rate – 8 Mbps Bronze	R6E8B	N/A	$ 156.95	port	N/A
OPT-E-MAN Committed Information Rate – 10 Mbps Bronze	R6EBB	N/A	$ 305.06	port	N/A
OPT-E-MAN Committed Information Rate – 20 Mbps Bronze	R6EDB	N/A	$ 427.67	port	N/A
OPT-E-MAN Committed Information Rate – 50 Mbps Bronze	R6EHB	N/A	$ 521.84	port	N/A
OPT-E-MAN Committed Information Rate – 100 Mbps Bronze	R6ELB	N/A	$ 616.01	port	N/A
OPT-E-MAN Committed Information Rate – 150 Mbps Bronze	R6ENB	N/A	$ 392.26	port	N/A
OPT-E-MAN Committed Information Rate – 250 Mbps Bronze	R6EQB	N/A	$ 588.54	port	N/A
OPT-E-MAN Committed Information Rate – 500 Mbps Bronze	R6ETB	N/A	$ 686.63	port	N/A
OPT-E-MAN Committed Information Rate – 600 Mbps	R6EUB	N/A	$ 735.68	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Bronze					
OPT-E-MAN Committed Information Rate – 1000 Mbps Bronze	R6EZB	N/A	$ 778.83	port	N/A
Silver Grade of Service					
OPT-E-MAN Committed Information Rate – 2 Mbps Silver	R6E2C	N/A	$ 58.85	port	N/A
OPT-E-MAN Committed Information Rate – 4 Mbps Silver	R6E4C	N/A	$ 88.28	port	N/A
OPT-E-MAN Committed Information Rate – 5 Mbps Silver	R6EAC	N/A	$ 102.02	port	N/A
OPT-E-MAN Committed Information Rate – 8 Mbps Silver	R6E8C	N/A	$ 156.95	port	N/A
OPT-E-MAN Committed Information Rate – 10 Mbps Silver	R6EBC	N/A	$ 368.82	port	N/A
OPT-E-MAN Committed Information Rate – 20 Mbps Silver	R6EDC	N/A	$ 503.20	port	N/A
OPT-E-MAN Committed Information Rate – 50 Mbps Silver	R6EHC	N/A	$ 607.18	port	N/A
OPT-E-MAN Committed Information Rate – 100 Mbps Silver	R6ELC	N/A	$ 711.15	port	N/A
OPT-E-MAN Committed Information Rate – 150 Mbps Silver	R6ENC	N/A	$ 490.45	port	N/A
OPT-E-MAN Committed Information Rate – 250 Mbps Silver	R6EQC	N/A	$ 784.72	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OPT-E-MAN Committed Information Rate – 500 Mbps Silver	R6ETC	N/A	$ 882.81	port	N/A
OPT-E-MAN Committed Information Rate – 600 Mbps Silver	R6EUC	N/A	$ 907.33	port	N/A
OPT-E-MAN Committed Information Rate – 1000 Mbps Silver	R6EZC	N/A	$ 924.99	port	N/A
AT&T Switched Ethernet (ASE) Service and Features					
Basic Service Arrangement (Basic or BSA) Ports					
ASE (BSA) Connection 10/100 Mbps	EYQEX	N/A	$324.00	port	N/A
ASE (BSA) Connection 1 Gigabit Ethernet	EYQFX	N/A	$682.00	port	N/A
ASE (BSA) Connection 10 Gigabit Ethernet	EYQGX	N/A	$3,800.00	port	N/A
Basic Service Arrangement Class of Service (CoS) and Committed Information Rate (CIR)					
Real Time					
ASE (BSA) Committed Information Rate – 2 Mbps Real Time	R6E2XRT	N/A	$113.00	port	N/A
ASE (BSA) Committed Information Rate – 4 Mbps Real Time	R6E4XRT	N/A	$160.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 5 Mbps Real Time	R6EAXRT	N/A	$171.00	port	N/A
ASE (BSA) Committed Information Rate – 8 Mbps Real Time	R6E8XRT	N/A	$247.00	port	N/A
ASE (BSA) Committed Information Rate – 10 Mbps Real Time	R6EBXRT	N/A	$427.00	port	N/A
ASE (BSA) Committed Information Rate – 20 Mbps Real Time	R6EDXRT	N/A	$581.00	port	N/A
ASE (BSA) Committed Information Rate – 50 Mbps Real Time	R6EHXRT	N/A	$700.00	port	N/A
ASE (BSA) Committed Information Rate – 100 Mbps Real Time	R6ELXRT	N/A	$821.00	port	N/A
ASE (BSA) Committed Information Rate – 150 Mbps Real Time	R6ENXRT	N/A	$566.00	port	N/A
ASE (BSA) Committed Information Rate – 250 Mbps Real Time	R6EQXRT	N/A	$904.00	port	N/A
ASE (BSA) Committed Information Rate – 500 Mbps Real Time	R6ETXRT	N/A	$1,018.00	port	N/A
ASE (BSA) Committed Information Rate – 600 Mbps Real Time	R6EUXRT	N/A	$1,045.00	port	N/A
ASE (BSA) Committed Information Rate – 1000 Mbps Real Time	R6EZXRT	N/A	$1,064.00	port	N/A
ASE (BSA) Committed Information Rate – 2000 Mbps Real Time	R61BXRT	N/A	$1,512.50	port	N/A
ASE (BSA) Committed Information Rate – 2500 Mbps Real Time	R61CXRT	N/A	$1,815.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 4000 Mbps Real Time	R61FXRT	N/A	$2,142.50	port	N/A
ASE (BSA) Committed Information Rate – 5000 Mbps Real Time	R61HXRT	N/A	$2,520.00	port	N/A
ASE (BSA) Committed Information Rate – 7500 Mbps Real Time	R61NXRT	N/A	$3,310.00	port	N/A
ASE (BSA) Committed Information Rate – 9500 Mbps Real Time	R61RXRT	N/A	$3,940.00	port	N/A
ASE (BSA) Committed Information Rate – 10000 Mbps Real Time	R61SXRT	N/A	$4,095.00	port	N/A
Interactive					
ASE (BSA) Committed Information Rate – 2 Mbps Interactive	R6E2XIA	N/A	$98.00	port	N/A
ASE (BSA) Committed Information Rate – 4 Mbps Interactive	R6E4XIA	N/A	$138.00	port	N/A
ASE (BSA) Committed Information Rate – 5 Mbps Interactive	R6EAXIA	N/A	$147.00	port	N/A
ASE (BSA) Committed Information Rate – 8 Mbps Interactive	R6E8XIA	N/A	$213.00	port	N/A
ASE (BSA) Committed Information Rate – 10 Mbps Interactive	R6EBXIA	N/A	$368.00	port	N/A
ASE (BSA) Committed Information Rate – 20 Mbps Interactive	R6EDXIA	N/A	$503.00	port	N/A
ASE (BSA) Committed Information Rate – 50 Mbps Interactive	R6EHXIA	N/A	$607.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 100 Mbps Interactive	R6ELXIA	N/A	$711.00	port	N/A
ASE (BSA) Committed Information Rate – 150 Mbps Interactive	R6ENXIA	N/A	$490.00	port	N/A
ASE (BSA) Committed Information Rate – 250 Mbps Interactive	R6EQXIA	N/A	$784.00	port	N/A
ASE (BSA) Committed Information Rate – 500 Mbps Interactive	R6ETXIA	N/A	$882.00	port	N/A
ASE (BSA) Committed Information Rate – 600 Mbps Interactive	R6EUXIA	N/A	$907.00	port	N/A
ASE (BSA) Committed Information Rate – 1000 Mbps Interactive	R6EZXIA	N/A	$925.00	port	N/A
ASE (BSA) Committed Information Rate – 2000 Mbps Interactive	R61BXIA	N/A	$1,415.00	port	N/A
ASE (BSA) Committed Information Rate – 2500 Mbps Interactive	R61CXIA	N/A	$1,695.00	port	N/A
ASE (BSA) Committed Information Rate – 4000 Mbps Interactive	R61FXIA	N/A	$2,002.50	port	N/A
ASE (BSA) Committed Information Rate – 5000 Mbps Interactive	R61HXIA	N/A	$2,355.00	port	N/A
ASE (BSA) Committed Information Rate – 7500 Mbps Interactive	R61NXIA	N/A	$3,092.50	port	N/A
ASE (BSA) Committed Information Rate – 9500 Mbps Interactive	R61RXIA	N/A	$3,680.00	port	N/A
ASE (BSA) Committed Information Rate – 10000 Mbps Interactive	R61SXIA	N/A	$3,827.50	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Business Critical-High					
ASE (BSA) Committed Information Rate – 2 Mbps Business Critical High	R6E2XBH	N/A	$83.40	port	N/A
ASE (BSA) Committed Information Rate – 4 Mbps Business Critical High	R6E4XBH	N/A	$120.75	port	N/A
ASE (BSA) Committed Information Rate – 5 Mbps Business Critical High	R6EAXBH	N/A	$133.75	port	N/A
ASE (BSA) Committed Information Rate – 8 Mbps Business Critical High	R6E8XBH	N/A	$199.31	port	N/A
ASE (BSA) Committed Information Rate – 10 Mbps Business Critical High	R6EBXBH	N/A	$325.82	port	N/A
ASE (BSA) Committed Information Rate – 20 Mbps Business Critical High	R6EDXBH	N/A	$457.27	port	N/A
ASE (BSA) Committed Information Rate – 50 Mbps Business Critical High	R6EHXBH	N/A	$557.54	port	N/A
ASE (BSA) Committed Information Rate – 100 Mbps Business Critical High	R6ELXBH	N/A	$660.21	port	N/A
ASE (BSA) Committed Information Rate – 150 Mbps Business Critical High	R6ENXBH	N/A	$470.70	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 250 Mbps Business Critical High	R6EQXBH	N/A	$705.78	port	N/A
ASE (BSA) Committed Information Rate – 500 Mbps Business Critical High	R6ETXBH	N/A	$806.22	port	N/A
ASE (BSA) Committed Information Rate – 600 Mbps Business Critical High	R6EUXBH	N/A	$837.96	port	N/A
ASE (BSA) Committed Information Rate – 1000 Mbps Business Critical High	R6EZXBH	N/A	$862.96	port	N/A
ASE (BSA) Committed Information Rate – 2000 Mbps Business Critical High	R61BXBH	N/A	$1,367.50	port	N/A
ASE (BSA) Committed Information Rate – 2500 Mbps Business Critical High	R61CXBH	N/A	$1,638.75	port	N/A
ASE (BSA) Committed Information Rate – 4000 Mbps Business Critical High	R61FXBH	N/A	$1,936.25	port	N/A
ASE (BSA) Committed Information Rate – 5000 Mbps Business Critical High	R61HXBH	N/A	$2,277.50	port	N/A
ASE (BSA) Committed Information Rate – 7500 Mbps Business Critical High	R61NXBH	N/A	$2,990.00	port	N/A
ASE (BSA) Committed Information Rate – 9500 Mbps Business Critical	R61RXBH	N/A	$3,558.75	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
High					
ASE (BSA) Committed Information Rate – 10000 Mbps Business Critical High	R61SXBH	N/A	$3,701.25	port	N/A
Business Critical-Medium					
ASE (BSA) Committed Information Rate – 2 Mbps Business Critical Medium	R6E2XBM	N/A	$58.00	port	N/A
ASE (BSA) Committed Information Rate – 4 Mbps Business Critical Medium	R6E4XBM	N/A	$88.00	port	N/A
ASE (BSA) Committed Information Rate – 5 Mbps Business Critical Medium	R6EAXBM	N/A	$102.00	port	N/A
ASE (BSA) Committed Information Rate – 8 Mbps Business Critical Medium	R6E8XBM	N/A	$157.00	port	N/A
ASE (BSA) Committed Information Rate – 10 Mbps Business Critical Medium	R6EBXBM	N/A	$305.00	port	N/A
ASE (BSA) Committed Information Rate – 20 Mbps Business Critical Medium	R6EDXBM	N/A	$427.00	port	N/A
ASE (BSA) Committed Information Rate – 50 Mbps Business Critical Medium	R6EHXBM	N/A	$521.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 100 Mbps Business Critical Medium	R6ELXBM	N/A	$616.00	port	N/A
ASE (BSA) Committed Information Rate – 150 Mbps Business Critical Medium	R6ENXBM	N/A	$392.00	port	N/A
ASE (BSA) Committed Information Rate – 250 Mbps Business Critical Medium	R6EQXBM	N/A	$588.00	port	N/A
ASE (BSA) Committed Information Rate – 500 Mbps Business Critical Medium	R6ETXBM	N/A	$686.00	port	N/A
ASE (BSA) Committed Information Rate – 600 Mbps Business Critical Medium	R6EUXBM	N/A	$735.00	port	N/A
ASE (BSA) Committed Information Rate – 1000 Mbps Business Critical Medium	R6EZXBM	N/A	$778.00	port	N/A
ASE (BSA) Committed Information Rate – 2000 Mbps Business Critical Medium	R61BXBM	N/A	$1,320.00	port	N/A
ASE (BSA) Committed Information Rate – 2500 Mbps Business Critical Medium	R61CXBM	N/A	$1,582.50	port	N/A
ASE (BSA) Committed Information Rate – 4000 Mbps Business Critical Medium	R61FXBM	N/A	$1,870.00	port	N/A
ASE (BSA) Committed Information Rate – 5000 Mbps Business Critical	R61HXBM	N/A	$2,200.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Medium					
ASE (BSA) Committed Information Rate – 7500 Mbps Business Critical Medium	R61NXBM	N/A	$2,887.50	port	N/A
ASE (BSA) Committed Information Rate – 9500 Mbps Business Critical Medium	R61RXBM	N/A	$3,437.50	port	N/A
ASE (BSA) Committed Information Rate – 10000 Mbps Business Critical Medium	R61SXBM	N/A	$3,575.00	port	N/A
Non-Critical High					
ASE (BSA) Committed Information Rate – 2 Mbps Non-Critical High	R6E2XNH	N/A	$55.42	port	N/A
ASE (BSA) Committed Information Rate – 4 Mbps Non-Critical High	R6E4XNH	N/A	$83.49	port	N/A
ASE (BSA) Committed Information Rate – 5 Mbps Non-Critical High	R6EAXNH	N/A	$94.86	port	N/A
ASE (BSA) Committed Information Rate – 8 Mbps Non-Critical High	R6E8XNH	N/A	$146.70	port	N/A
ASE (BSA) Committed Information Rate – 10 Mbps Non-Critical High	R6EBXNH	N/A	$283.82	port	N/A
ASE (BSA) Committed Information Rate – 20 Mbps Non-Critical High	R6EDXNH	N/A	$399.90	port	N/A
ASE (BSA) Committed Information Rate – 50 Mbps Non-Critical High	R6EHXNH	N/A	$487.35	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 100 Mbps Non-Critical High	R6ELXNH	N/A	$574.00	port	N/A
ASE (BSA) Committed Information Rate – 150 Mbps Non-Critical High	R6ENXNH	N/A	$363.63	port	N/A
ASE (BSA) Committed Information Rate – 250 Mbps Non-Critical High	R6EQXNH	N/A	$546.69	port	N/A
ASE (BSA) Committed Information Rate – 500 Mbps Non-Critical High	R6ETXNH	N/A	$639.34	port	N/A
ASE (BSA) Committed Information Rate – 600 Mbps Non-Critical High	R6EUXNH	N/A	$684.93	port	N/A
ASE (BSA) Committed Information Rate – 1000 Mbps Non-Critical High	R6EZXNH	N/A	$724.14	port	N/A
ASE (BSA) Committed Information Rate – 2000 Mbps Non-Critical High	R61BXNH	N/A	$1,230.00	port	N/A
ASE (BSA) Committed Information Rate – 2500 Mbps Non-Critical High	R61CXNH	N/A	$1,475.00	port	N/A
ASE (BSA) Committed Information Rate – 4000 Mbps Non-Critical High	R61FXNH	N/A	$1,742.50	port	N/A
ASE (BSA) Committed Information Rate – 5000 Mbps Non-Critical High	R61HXNH	N/A	$2,050.00	port	N/A
ASE (BSA) Committed Information Rate – 7500 Mbps Non-Critical High	R61NXNH	N/A	$2,691.25	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (BSA) Committed Information Rate – 9500 Mbps Non-Critical High	R61RXNH	N/A	$3,203.75	port	N/A
ASE (BSA) Committed Information Rate – 10000 Mbps Non-Critical High	R61SXNH	N/A	$3,331.25	port	N/A
Per Packet Class of Service (PPCoS) Arrangement Ports					N/A
ASE (PPCoS) Connection 10/100 Mbps	EYQLX	N/A	$423.36	port	N/A
ASE (PPCoS) Connection 1 Gigabit Ethernet	EYQMX	N/A	$818.40	port	N/A
ASE (PPCoS) Connection 10 Gigabit Ethernet	EYQNX	N/A	$4,560.00	port	N/A
Per Packet Class of Service Arrangement Class of Service (CoS) Packages and Committed Information Rate (CIR)					
Multimedia High					
ASE (PPCoS) Committed Information Rate – 2 Mbps Multimedia High	R6E2XMH	N/A	$113.00	port	N/A
ASE (PPCoS) Committed Information Rate – 4 Mbps Multimedia High	R6E4XMH	N/A	$160.00	port	N/A
ASE (PPCoS) Committed Information Rate – 5 Mbps	R6EAXMH	N/A	$171.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Multimedia High					
ASE (PPCoS) Committed Information Rate – 8 Mbps Multimedia High	R6E8XMH	N/A	$247.00	port	N/A
ASE (PPCoS) Committed Information Rate – 10 Mbps Multimedia High	R6EBXMH	N/A	$427.00	port	N/A
ASE (PPCoS) Committed Information Rate – 20 Mbps Multimedia High	R6EDXMH	N/A	$581.00	port	N/A
ASE (PPCoS) Committed Information Rate – 50 Mbps Multimedia High	R6EHXMH	N/A	$700.00	port	N/A
ASE (PPCoS) Committed Information Rate – 100 Mbps Multimedia High	R6ELXMH	N/A	$821.00	port	N/A
ASE (PPCoS) Committed Information Rate – 150 Mbps Multimedia High	R6ENXMH	N/A	$566.00	port	N/A
ASE (PPCoS) Committed Information Rate – 250 Mbps Multimedia High	R6EQXMH	N/A	$904.00	port	N/A
ASE (PPCoS) Committed Information Rate – 500 Mbps Multimedia High	R6ETXMH	N/A	$1,018.00	port	N/A
ASE (PPCoS) Committed Information Rate – 600 Mbps Multimedia High	R6EUXMH	N/A	$1,045.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (PPCoS) Committed Information Rate – 1000 Mbps Multimedia High	R6EZXMH	N/A	$1,064.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2000 Mbps Multimedia High	R61BXMH	N/A	$1,512.50	port	N/A
ASE (PPCoS) Committed Information Rate – 2500 Mbps Multimedia High	R61CXMH	N/A	$1,815.00	port	N/A
ASE (PPCoS) Committed Information Rate – 4000 Mbps Multimedia High	R61FXMH	N/A	$2,142.50	port	N/A
ASE (PPCoS) Committed Information Rate – 5000 Mbps Multimedia High	R61HXMH	N/A	$2,520.00	port	N/A
ASE (PPCoS) Committed Information Rate – 7500 Mbps Multimedia High	R61NXMH	N/A	$3,310.00	port	N/A
ASE (PPCoS) Committed Information Rate – 9500 Mbps Multimedia High	R61RXMH	N/A	$3,940.00	port	N/A
ASE (PPCoS) Committed Information Rate – 10000 Mbps Multimedia High	R61SXMH	N/A	$4,095.00	port	N/A
Multimedia Standard					
ASE (PPCoS) Committed Information Rate – 2 Mbps Multimedia Standard	R6E2XMS	N/A	$98.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (PPCoS) Committed Information Rate – 4 Mbps Multimedia Standard	R6E4XMS	N/A	$138.00	port	N/A
ASE (PPCoS) Committed Information Rate – 5 Mbps Multimedia Standard	R6EAXMS	N/A	$147.00	port	N/A
ASE (PPCoS) Committed Information Rate – 8 Mbps Multimedia Standard	R6E8XMS	N/A	$213.00	port	N/A
ASE (PPCoS) Committed Information Rate – 10 Mbps Multimedia Standard	R6EBXMS	N/A	$368.00	port	N/A
ASE (PPCoS) Committed Information Rate – 20 Mbps Multimedia Standard	R6EDXMS	N/A	$503.00	port	N/A
ASE (PPCoS) Committed Information Rate – 50 Mbps Multimedia Standard	R6EHXMS	N/A	$607.00	port	N/A
ASE (PPCoS) Committed Information Rate – 100 Mbps Multimedia Standard	R6ELXMS	N/A	$711.00	port	N/A
ASE (PPCoS) Committed Information Rate – 150 Mbps Multimedia Standard	R6ENXMS	N/A	$490.00	port	N/A
ASE (PPCoS) Committed Information Rate – 250 Mbps Multimedia Standard	R6EQXMS	N/A	$784.00	port	N/A
ASE (PPCoS) Committed Information Rate – 500 Mbps	R6ETXMS	N/A	$882.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Multimedia Standard					
ASE (PPCoS) Committed Information Rate – 600 Mbps Multimedia Standard	R6EUXMS	N/A	$907.00	port	N/A
ASE (PPCoS) Committed Information Rate – 1000 Mbps Multimedia Standard	R6EZXMS	N/A	$925.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2000 Mbps Multimedia Standard	R61BXMS	N/A	$1,415.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2500 Mbps Multimedia Standard	R61CXMS	N/A	$1,695.00	port	N/A
ASE (PPCoS) Committed Information Rate – 4000 Mbps Multimedia Standard	R61FXMS	N/A	$2,002.50	port	N/A
ASE (PPCoS) Committed Information Rate – 5000 Mbps Multimedia Standard	R61HXMS	N/A	$2,355.00	port	N/A
ASE (PPCoS) Committed Information Rate – 7500 Mbps Multimedia Standard	R61NXMS	N/A	$3,092.50	port	N/A
ASE (PPCoS) Committed Information Rate – 9500 Mbps Multimedia Standard	R61RXMS	N/A	$3,680.00	port	N/A
ASE (PPCoS) Committed Information Rate – 10000 Mbps Multimedia Standard	R61SXMS	N/A	$3,827.50	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Critical Data					
ASE (PPCoS) Committed Information Rate – 2 Mbps Critical Data	R6E2XCD	N/A	$58.00	port	N/A
ASE (PPCoS) Committed Information Rate – 4 Mbps Critical Data	R6E4XCD	N/A	$88.00	port	N/A
ASE (PPCoS) Committed Information Rate – 5 Mbps Critical Data	R6EAXCD	N/A	$102.00	port	N/A
ASE (PPCoS) Committed Information Rate – 8 Mbps Critical Data	R6E8XCD	N/A	$157.00	port	N/A
ASE (PPCoS) Committed Information Rate – 10 Mbps Critical Data	R6EBXCD	N/A	$305.00	port	N/A
ASE (PPCoS) Committed Information Rate – 20 Mbps Critical Data	R6EDXCD	N/A	$427.00	port	N/A
ASE (PPCoS) Committed Information Rate – 50 Mbps Critical Data	R6EHXCD	N/A	$521.00	port	N/A
ASE (PPCoS) Committed Information Rate – 100 Mbps Critical Data	R6ELXCD	N/A	$616.00	port	N/A
ASE (PPCoS) Committed Information Rate – 150 Mbps Critical Data	R6ENXCD	N/A	$392.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (PPCoS) Committed Information Rate – 250 Mbps Critical Data	R6EQXCD	N/A	$588.00	port	N/A
ASE (PPCoS) Committed Information Rate – 500 Mbps Critical Data	R6ETXCD	N/A	$686.00	port	N/A
ASE (PPCoS) Committed Information Rate – 600 Mbps Critical Data	R6EUXCD	N/A	$735.00	port	N/A
ASE (PPCoS) Committed Information Rate – 1000 Mbps Critical Data	R6EZXCD	N/A	$778.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2000 Mbps Critical Data	R61BXCD	N/A	$1,320.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2500 Mbps Critical Data	R61CXCD	N/A	$1,582.50	port	N/A
ASE (PPCoS) Committed Information Rate – 4000 Mbps Critical Data	R61FXCD	N/A	$1,870.00	port	N/A
ASE (PPCoS) Committed Information Rate – 5000 Mbps Critical Data	R61HXCD	N/A	$2,200.00	port	N/A
ASE (PPCoS) Committed Information Rate – 7500 Mbps Critical Data	R61NXCD	N/A	$2,887.50	port	N/A
ASE (PPCoS) Committed Information Rate – 9500 Mbps	R61RXCD	N/A	$3,437.50	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Critical Data					
ASE (PPCoS) Committed Information Rate – 10000 Mbps Critical Data	R61SXCD	N/A	$3,575.00	port	N/A
Business Data					
ASE (PPCoS) Committed Information Rate – 2 Mbps Business Data	R6E2XBD	N/A	$55.42	port	N/A
ASE (PPCoS) Committed Information Rate – 4 Mbps Business Data	R6E4XBD	N/A	$83.49	port	N/A
ASE (PPCoS) Committed Information Rate – 5 Mbps Business Data	R6EAXBD	N/A	$94.86	port	N/A
ASE (PPCoS) Committed Information Rate – 8 Mbps Business Data	R6E8XBD	N/A	$146.70	port	N/A
ASE (PPCoS) Committed Information Rate – 10 Mbps Business Data	R6EBXBD	N/A	$283.82	port	N/A
ASE (PPCoS) Committed Information Rate – 20 Mbps Business Data	R6EDXBD	N/A	$399.90	port	N/A
ASE (PPCoS) Committed Information Rate – 50 Mbps Business Data	R6EHXBD	N/A	$487.35	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ASE (PPCoS) Committed Information Rate – 100 Mbps Business Data	R6ELXBD	N/A	$574.00	port	N/A
ASE (PPCoS) Committed Information Rate – 150 Mbps Business Data	R6ENXBD	N/A	$363.63	port	N/A
ASE (PPCoS) Committed Information Rate – 250 Mbps Business Data	R6EQXBD	N/A	$546.69	port	N/A
ASE (PPCoS) Committed Information Rate – 500 Mbps Business Data	R6ETXBD	N/A	$639.34	port	N/A
ASE (PPCoS) Committed Information Rate – 600 Mbps Business Data	R6EUXBD	N/A	$684.93	port	N/A
ASE (PPCoS) Committed Information Rate – 1000 Mbps Business Data	R6EZXBD	N/A	$724.14	port	N/A
ASE (PPCoS) Committed Information Rate – 2000 Mbps Business Data	R61BXBD	N/A	$1,230.00	port	N/A
ASE (PPCoS) Committed Information Rate – 2500 Mbps Business Data	R61CXBD	N/A	$1,475.00	port	N/A
ASE (PPCoS) Committed Information Rate – 4000 Mbps Business Data	R61FXBD	N/A	$1,742.50	port	N/A
ASE (PPCoS) Committed Information Rate – 5000 Mbps	R61HXBD	N/A	$2,050.00	port	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Business Data					
ASE (PPCoS) Committed Information Rate – 7500 Mbps Business Data	R61NXBD	N/A	$2,691.25	port	N/A
ASE (PPCoS) Committed Information Rate – 9500 Mbps Business Data	R61RXBD	N/A	$3,203.75	port	N/A
ASE (PPCoS) Committed Information Rate – 10000 Mbps Business Data	R61SXBD	N/A	$3,331.25	port	N/A
Optional Features					
ASE Additional MAC Addresses (51-100) Per Port	M2CBX	$0.00	$0.00	port	$0.00
ASE Regenerator 10/100 Mbps port	EYQHX	$0.00	$260.80	port	$0.00
ASE Regenerator 1 Gbps port	EYQJX	$0.00	$260.80	port	$0.00
ASE Regenerator 10 Gbps port	EYQKX	$0.00	$768.00	port	$0.00
ASE Administrative Change Charge	ORCMX	$50.00	$0.00	Per order	$50.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OPT-E-MAN (OEM) Managed Service Bundles w/ Standard					

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Features					
10/100 Mbps Connection – Bronze CIR Grade of Service					
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB2A	$143.00	$751.45	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB2B	$143.00	$1,009.84	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB4A	$143.00	$780.88	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB4B	$143.00	$1,039.27	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB5A	$143.00	$794.62	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB5B	$143.00	$1,053.01	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB8A	$143.00	$849.55	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB8B	$143.00	$1,107.94	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB10A	$143.00	$997.66	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB10B	$143.00	$1,256.05	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Bronze w Type 7A Router Cu Ethernet	OEMB20A	$143.00	$1,120.27	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB20B	$143.00	$1,378.66	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Bronze w Type 22A Router Cu Ethernet	OEMB50A	$143.00	$1,472.83	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Bronze w Type 10A Router Cu Ethernet	OEMB50B	$143.00	$1,589.38	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 100 Mbps Bronze w Type 10A Router Cu Ethernet	OEMB100A	$143.00	$1,683.55	Bundle	N/A
10/100 Mbps Connection – Silver CIR Grade of Service					
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Silver w Type 7A Router Cu Ethernet	OEMS2A	$143.00	$751.45	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 2 Mbps Silver w Type 22A Router Cu Ethernet	OEMS2B	$143.00	$1,009.84	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Silver w Type 7A Router Cu Ethernet	OEMS4A	$143.00	$780.88	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 4 Mbps Silver w Type 22A Router Cu Ethernet	OEMS4B	$143.00	$1,039.27	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Silver w	OEMS5A	$143.00	$794.62	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Type 7A Router Cu Ethernet					
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 5 Mbps Silver w Type 22A Router Cu Ethernet	OEMS5B	$143.00	$1,053.01	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Silver w Type 7A Router Cu Ethernet	OEMS8A	$143.00	$849.55	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 8 Mbps Silver w Type 22A Router Cu Ethernet	OEMS8B	$143.00	$1,107.94	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Silver w Type 7A Router Cu Ethernet	OEMS10A	$143.00	$1,061.42	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 10 Mbps Silver w Type 22A Router Cu Ethernet	OEMS10B	$143.00	$1,319.81	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Silver w Type 7A Router Cu Ethernet	OEMS20A	$143.00	$1,195.80	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 20 Mbps Silver w	OEMS20B	$143.00	$1,454.19	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Type 22A Router Cu Ethernet					
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Silver w Type 22A Router Cu Ethernet	OEMS50A	$143.00	$1,558.17	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 50 Mbps Silver w Type 10A Router Cu Ethernet	OEMS50B	$143.00	$1,674.72	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 10/100 Mbps – 100 Mbps Silver w Type 10A Router Cu Ethernet	OEMS100A	$143.00	$1,778.69	Bundle	N/A
1 Gbps Connection – Bronze CIR Grade of Service					
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG2A	$143.00	$1,125.19	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG2B	$143.00	$1,383.58	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG4A	$143.00	$1,154.62	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG4B	$143.00	$1,413.01	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG5A	$143.00	$1,168.36	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG5B	$143.00	$1,426.75	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG8A	$143.00	$1,223.29	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG8B	$143.00	$1,481.68	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG10A	$143.00	$1,371.40	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG10B	$143.00	$1,629.79	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Bronze w Type 21A Router Fiber Ethernet	OEMBG20A	$143.00	$1,494.01	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG20B	$143.00	$1,752.40	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 9A Router Fiber Ethernet	OEMBG50A	$143.00	$1,846.57	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG50B	$143.00	$1,963.12	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG50C	$143.00	$2,348.44	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG100A	$143.00	$2,057.29	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG100B	$143.00	$2,442.61	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Bronze w Type 11A Router Fiber Ethernet	OEMBG150A	$143.00	$1,833.64	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG150B	$143.00	$2,218.96	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Bronze w Type 26 Router Fiber Ethernet	OEMBG200A	$143.00	$2,415.14	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG250B	$143.00	$2,836.58	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 500 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG500A	$143.00	$2,934.67	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 600 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG600A	$143.00	$2,983.72	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 1000 Mbps Bronze w Type 27 Router Fiber Ethernet	OEMBG1KA	$143.00	$3,026.87	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
1 Gbps Connection – Silver CIR Grade of Service					
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG2A	$143.00	$1,125.19	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 2 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG2B	$143.00	$1,383.58	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG4A	$143.00	$1,154.62	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 4 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG4B	$143.00	$1,413.01	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG5A	$143.00	$1,168.36	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 5 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG5B	$143.00	$1,426.75	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Silver w Type 21A	OEMSG8A	$143.00	$1,223.29	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Router Fiber Ethernet					
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 8 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG8B	$143.00	$1,481.68	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG10A	$143.00	$1,435.16	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 10 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG10B	$143.00	$1,693.55	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Silver w Type 21A Router Fiber Ethernet	OEMSG20A	$143.00	$1,569.54	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 20 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG20B	$143.00	$1,827.93	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 9A Router Fiber Ethernet	OEMSG50A	$143.00	$1,931.91	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 11A	OEMSG50B	$143.00	$2,048.46	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Router Fiber Ethernet					
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 50 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG50C	$143.00	$2,433.78	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Silver w Type 11A Router Fiber Ethernet	OEMSG100A	$143.00	$2,152.43	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 100 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG100B	$143.00	$2,537.75	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Silver w Type 11A Router Fiber Ethernet	OEMSG150A	$143.00	$1,931.73	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 150 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG150B	$143.00	$2,317.05	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Silver w Type 26 Router Fiber Ethernet	OEMSG250A	$143.00	$2,611.32	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 250 Mbps Silver w Type 27	OEMSG250B	$143.00	$3,032.76	Bundle	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Router Fiber Ethernet					
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 500 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG500A	$143.00	$3,130.85	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 600 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG600A	$143.00	$3,155.37	Bundle	N/A
OEM Managed Service Bundles Basic or Basic Plus Connection 1 Gbps – 1000 Mbps Silver w Type 27 Router Fiber Ethernet	OEMSG1KA	$143.00	$3,173.03	Bundle	N/A
OPT-E-MAN Managed Service Bundles Life Cycle Management Features and Services					
Moves, Adds, Changes and Deletes					
Move Router Site (Inside) - Low Complexity	13092L	$600.00	N/A	Router	N/A
Move Router Site (Inside) - Medium Complexity	13092M	$720.00	N/A	Router	N/A
Move Router Site (Inside) - High Complexity	13092H	$850.00	N/A	Router	N/A
Move Router Site (Outside) - Low Complexity	13093L	$1,200.00	N/A	Router	N/A
Move Router Site (Outside) - Medium Complexity	13093M	$1,440.00	N/A	Router	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Move Router Site (Outside) - High Complexity	13093H	$1,700.00	N/A	Router	N/A
Router Site Add - Low Complexity	13118L	$1,500.00	N/A	Router	N/A
Router Site Add - Medium Complexity	13118M	$1,620.00	N/A	Router	N/A
Router Site Add - High Complexity	13118H	$1,750.00	N/A	Router	N/A
Add/Delete Router Boards – Low Complexity	13127L	$300.00	N/A	Router	N/A
Add/Delete Router Boards – Medium Complexity	13127M	$360.00	N/A	Router	N/A
Add/Delete Router Boards – High Complexity	13127H	$425.00	N/A	Router	N/A
Site Delete for AT&T Provided Equipment	13119	$0.00	N/A	Router	N/A
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	$200.00	N/A	Router	N/A
Cancellation to Receive on Site Services with Less Than Five Business Days notice to AT&T	13109A	$200.00	N/A	Router	N/A
Supplementary Professional, Engineering and Technical Services					
Standard Hours (8AM – 5PM local time) First Hour	13109B	N/A	$360.00	Hour	N/A
Standard Hours (8AM – 5PM local time) Subsequent Hours	13109C	N/A	$180.00	Hour	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Non-Standard Hours First Hour	13109D	N/A	$460.00	Hour	N/A
Non-Standard Hours Subsequent Hours	13109E	N/A	$230.00	Hour	N/A
Lost Equipment Charge for AT&T Owned CPE	13054	Residual Value of Lost CPE	N/A	N/A	N/A
Router Configuration Changes	14158	$150.00	N/A	Router	N/A
OPT-E-MAN Managed Service Bundles Optional Up lift Features and Services					
Router Protocol, Memory and Misc Managed Router Feature Upgrades					
Enterprise Services IOS w/o encryption for 18XX series managed router feature upgrade	MSB1000	$590.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	$826.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	$1,180.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	$1,062.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 28XX series managed router feature upgrade	MSB1004	$1,416.00	N/A	Router	$150.00* *Applies to Upgrade to existing router

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Advanced Enterprise Services IOS w encryption for 38XX series managed router feature upgrade	MSB1005	$2,065.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	$3,835.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	$295.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port Card for 18XX, 28XX and 38XX series managed router feature upgrade	MSB1008	$236.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 Port Serial Port Adapter Card for 72XX and 73XX series managed router feature upgrade	MSB1009	$2,655.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	$2,242.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	$2,655.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	$3,540.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX	MSB1013	$295.00	N/A	Card	*See Professional Engineering and Technical

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
and 73XX series managed router feature upgrade					Services Charges for on-site upgrade to existing router.
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	$295.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	$250.75	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	$587.05	N/A	Connector	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX SFP (DOM) for 38XX series managed router feature upgrade	MSB1018	$324.50	N/A	Connector	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	$737.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Serial Cable managed router feature upgrade	MSB1020	$59.00	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Console Port to CAS cable managed router feature upgrade	MSB1021	$20.05	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					upgrade to existing router.
Fiber Cable managed router feature upgrade	MSB1022	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Rack Mount Kit managed router feature upgrade	MSB1023	$59.00	N/A	Kit	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port for ASR1000 series managed router feature upgrade	MSB1024	$324.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	$259.60	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1026	$6,277.60	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1027	$5,022.08	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					upgrade to existing router.
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades					
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	$587.05	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	$295.00	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-T SFP managed router feature upgrade	MSB1032	$233.05	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GigE high speed WIC managed router feature upgrade	MSB1034	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port Serial WAN Interface Card managed router feature upgrade	MSB1035	$236.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port 10/100 Ethernet switch interface card managed router feature upgrade	MSB1036	$250.75	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	$324.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	$767.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	$354.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 29XX Series managed router feature upgrade	MSB1042	$413.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	$708.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	$1,180.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					upgrade to existing router.
COS device 4 port COS switch managed router feature upgrade	MSB1046	$432.47	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	$17.70	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature upgrade	MSB1048	$11.83	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	$1,475.00	N/A	Module	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
12 port COS Switch managed router feature upgrade	MSB1051	$6,590.60	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Optional Architectural Validation Professional Services	13096	N/A	$350.00	Hour	N/A
Dial Backup					N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Analog (POTS) Dial Backup Management	13060A	N/A	$10.00	Router	N/A
ISDN Basic Rate Interface (BRI) Dial Backup Management	13060B	N/A	$10.00	Router	N/A
ISDN Primary Rate Interface (PRI) Dial Backup Management	13060C	N/A	$25.00	Router	N/A
TACACS (Terminal Access Controller Access Control System) Read Only Access					
TACACS Read Only Access – Router Enablement	TACACSRE	$40.00	N/A	Router	$150.00
TACACS Read Only Access – Support	TACACSRS	N/A	$18.00	Router	N/A
TACACS Read Only Access – Enablement 1-6 Enabled Employees	TACACS1	$0.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 7-12 Enabled Employees	TACACS2	$250.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	$750.00	N/A	Enabled Employee	$150.00
OPT-E-MAN Managed Services Data Center Stand Alone Routers					
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	$0.00	$1,324.00	Router	$0.00
IPSEC Standalone router Type 24	MSDCRT2	$0.00	$1,084.34	Router	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Traffic Aggregation Standalone router Type 25	MSDCRT3	$0.00	$3,355.44	Router	$0.00
Traffic Aggregation Standalone router Type 27	MSDCRT4	$0.00	$1,340.07	Router	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OPT-E-WAN					
OPT-E-WAN (OEW) Switched Port Only					
OEW Switched Port - .5M (IntraState)	84433	$500.00	$191.29	Port	$500.00
OEW Switched Port - .5M (InterState)	84435	$500.00	$191.29	Port	$500.00
OEW Switched Port - 1M (IntraState)	80326	$500.00	$227.01	Port	$500.00
OEW Switched Port - 1M (InterState)	80390	$500.00	$227.01	Port	$500.00
OEW Switched Port - 1.5M (IntraState)	84434	$500.00	$229.36	Port	$500.00
OEW Switched Port - 1.5M (InterState)	84436	$500.00	$229.36	Port	$500.00
OEW Switched Port - 2M (IntraState)	80327	$500.00	$293.28	Port	$500.00
OEW Switched Port - 2M (InterState)	80391	$500.00	$293.28	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port - 3M (IntraState)	80328	$500.00	$353.44	Port	$500.00
OEW Switched Port - 3M (InterState)	80392	$500.00	$353.44	Port	$500.00
OEW Switched Port - 4M (IntraState)	80329	$500.00	$412.19	Port	$500.00
OEW Switched Port - 4M (InterState)	80393	$500.00	$412.19	Port	$500.00
OEW Switched Port - 5M (IntraState)	80330	$500.00	$513.24	Port	$500.00
OEW Switched Port - 5M (InterState)	80394	$500.00	$513.24	Port	$500.00
OEW Switched Port - 6M (IntraState)	80331	$500.00	$544.26	Port	$500.00
OEW Switched Port - 6M (InterState)	80395	$500.00	$544.26	Port	$500.00
OEW Switched Port - 7M (IntraState)	80332	$500.00	$586.09	Port	$500.00
OEW Switched Port - 7M (InterState)	80396	$500.00	$586.09	Port	$500.00
OEW Switched Port - 8M (IntraState)	80333	$500.00	$634.03	Port	$500.00
OEW Switched Port - 8M (InterState)	80397	$500.00	$634.03	Port	$500.00
OEW Switched Port - 9M (IntraState)	80334	$500.00	$681.97	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port - 9M (InterState)	80398	$500.00	$681.97	Port	$500.00
OEW Switched Port - 10M (IntraState)	80335	$500.00	$717.22	Port	$500.00
OEW Switched Port - 10M (InterState)	80399	$500.00	$717.22	Port	$500.00
OEW Switched Port - 11M (IntraState)	80336	$500.00	$747.77	Port	$500.00
OEW Switched Port - 11M (InterState)	80400	$500.00	$747.77	Port	$500.00
OEW Switched Port – 12M (IntraState)	80337	$500.00	$807.46	Port	$500.00
OEW Switched Port – 12M (InterState)	80401	$500.00	$807.46	Port	$500.00
OEW Switched Port – 13M (IntraState)	80338	$500.00	$809.34	Port	$500.00
OEW Switched Port – 13M (InterState)	80402	$500.00	$809.34	Port	$500.00
OEW Switched Port – 14M (IntraState)	80339	$500.00	$811.22	Port	$500.00
OEW Switched Port – 14M (InterState)	80403	$500.00	$811.22	Port	$500.00
OEW Switched Port – 15M (IntraState)	80340	$500.00	$831.90	Port	$500.00
OEW Switched Port – 15M (InterState)	80404	$500.00	$831.90	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port – 16M (IntraState)	80341	$500.00	$855.40	Port	$500.00
OEW Switched Port – 16M (InterState)	80405	$500.00	$855.40	Port	$500.00
OEW Switched Port – 17M (IntraState)	80342	$500.00	$878.90	Port	$500.00
OEW Switched Port – 17M (InterState)	80406	$500.00	$878.90	Port	$500.00
OEW Switched Port – 18M (IntraState)	80343	$500.00	$902.40	Port	$500.00
OEW Switched Port – 18M (InterState)	80407	$500.00	$902.40	Port	$500.00
OEW Switched Port – 19M (IntraState)	80344	$500.00	$925.90	Port	$500.00
OEW Switched Port – 19M (InterState)	80408	$500.00	$925.90	Port	$500.00
OEW Switched Port – 20M (IntraState)	80345	$500.00	$1,048.50	Port	$500.00
OEW Switched Port – 20M (InterState)	80409	$500.00	$1,048.50	Port	$500.00
OEW Switched Port – 30M (IntraState)	80346	$500.00	$1,531.75	Port	$500.00
OEW Switched Port – 30M (InterState)	80410	$500.00	$1,531.75	Port	$500.00
OEW Switched Port – 40M (IntraState)	80347	$500.00	$1,848.00	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port – 40M (InterState)	80411	$500.00	$1,848.00	Port	$500.00
OEW Switched Port – 50M (IntraState)	80348	$500.00	$2,367.08	Port	$500.00
OEW Switched Port – 50M (InterState)	80412	$500.00	$2,367.08	Port	$500.00
OEW Switched Port – 60M (IntraState)	80349	$500.00	$2,762.97	Port	$500.00
OEW Switched Port – 60M (InterState)	80413	$500.00	$2,762.97	Port	$500.00
OEW Switched Port – 70M (IntraState)	80350	$500.00	$3,132.90	Port	$500.00
OEW Switched Port – 70M (InterState)	80414	$500.00	$3,132.90	Port	$500.00
OEW Switched Port – 80M (IntraState)	80351	$500.00	$3,487.37	Port	$500.00
OEW Switched Port – 80M (InterState)	80415	$500.00	$3,487.37	Port	$500.00
OEW Switched Port – 90M (IntraState)	80352	$500.00	$3,740.40	Port	$500.00
OEW Switched Port – 90M (InterState)	80416	$500.00	$3,740.40	Port	$500.00
OEW Switched Port – 100M (IntraState)	80353	$500.00	$4,091.27	Port	$500.00
OEW Switched Port – 100M (InterState)	80417	$500.00	$4,091.27	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port – 150M (IntraState)	80354	$500.00	$5,255.28	Port	$500.00
OEW Switched Port – 150M (InterState)	80418	$500.00	$5,255.28	Port	$500.00
OEW Switched Port – 200M (IntraState)	80355	$500.00	$7,453.00	Port	$500.00
OEW Switched Port – 200M (InterState)	80419	$500.00	$7,453.00	Port	$500.00
OEW Switched Port – 250M (IntraState)	80356	$500.00	$8,163.72	Port	$500.00
OEW Switched Port – 250M (InterState)	80420	$500.00	$8,163.72	Port	$500.00
OEW Switched Port – 300M (IntraState)	80357	$500.00	$8,991.54	Port	$500.00
OEW Switched Port – 300M (InterState)	80421	$500.00	$8,991.54	Port	$500.00
OEW Switched Port – 350M (IntraState)	80358	$500.00	$9,818.82	Port	$500.00
OEW Switched Port – 350M (InterState)	80422	$500.00	$9,818.82	Port	$500.00
OEW Switched Port – 400M (IntraState)	80359	$500.00	$10,646.10	Port	$500.00
OEW Switched Port – 400M (InterState)	80423	$500.00	$10,646.10	Port	$500.00
OEW Switched Port – 450M (IntraState)	80360	$500.00	$11,685.85	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Switched Port – 450M (InterState)	80424	$500.00	$11,685.85	Port	$500.00
OEW Switched Port – 500M (IntraState)	80361	$500.00	$12,528.45	Port	$500.00
OEW Switched Port – 500M (InterState)	80425	$500.00	$12,528.45	Port	$500.00
OPT-E-WAN (OEW) Dedicated Port Only					
OEW Dedicated Port – 550M (IntraState)	80362	$500.00	$13,370.23	Port	$500.00
OEW Dedicated Port – 550M (InterState)	80426	$500.00	$13,370.23	Port	$500.00
OEW Dedicated Port – 600M (IntraState)	80363	$500.00	$14,212.00	Port	$500.00
OEW Dedicated Port – 600M (InterState)	80427	$500.00	$14,212.00	Port	$500.00
OEW Dedicated Port – 650M (IntraState)	80364	$500.00	$16,063.58	Port	$500.00
OEW Dedicated Port – 650M (InterState)	80428	$500.00	$16,063.58	Port	$500.00
OEW Dedicated Port – 700M (IntraState)	80365	$500.00	$18,240.88	Port	$500.00
OEW Dedicated Port – 700M (InterState)	80429	$500.00	$18,240.88	Port	$500.00
OEW Dedicated Port – 750M (IntraState)	80366	$500.00	$19,077.52	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Dedicated Port – 750M (InterState)	80430	$500.00	$19,077.52	Port	$500.00
OEW Dedicated Port – 800M (IntraState)	80367	$500.00	$19,914.16	Port	$500.00
OEW Dedicated Port – 800M (InterState)	80431	$500.00	$19,914.16	Port	$500.00
OEW Dedicated Port – 850M (IntraState)	80368	$500.00	$20,792.24	Port	$500.00
OEW Dedicated Port – 850M (InterState)	80432	$500.00	$20,792.24	Port	$500.00
OEW Dedicated Port – 900M (IntraState)	80369	$500.00	$21,670.32	Port	$500.00
OEW Dedicated Port – 900M (InterState)	80433	$500.00	$21,670.32	Port	$500.00
OEW Dedicated Port – 950M (IntraState)	80370	$500.00	$22,541.40	Port	$500.00
OEW Dedicated Port – 950M (InterState)	80434	$500.00	$22,541.40	Port	$500.00
OEW Dedicated Port – 1G (IntraState)	80371	$500.00	$23,412.48	Port	$500.00
OEW Dedicated Port – 1G (InterState)	80435	$500.00	$23,412.48	Port	$500.00
OPT-E-WAN (OEW) Dedicated Port Only					
OEW Dedicated Port – 1500M (IntraState)	96777	$500.00	$33,281.36	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Dedicated Port – 1500M (InterState)	96776	$500.00	$33,281.36	Port	$500.00
OEW Dedicated Port – 2000M (IntraState)	96779	$500.00	$44,120.72	Port	$500.00
OEW Dedicated Port – 2000M (InterState)	96778	$500.00	$44,120.72	Port	$500.00
OEW Dedicated Port – 2500M (IntraState)	96781	$500.00	$52,754.24	Port	$500.00
OEW Dedicated Port – 2500M (InterState)	96780	$500.00	$52,754.24	Port	$500.00
OEW Dedicated Port – 3000M (IntraState)	96783	$500.00	$61,129.04	Port	$500.00
OEW Dedicated Port – 3000M (InterState)	96782	$500.00	$61,129.04	Port	$500.00
OEW Dedicated Port – 3500M (IntraState)	96785	$500.00	$69,237.84	Port	$500.00
OEW Dedicated Port – 3500M (InterState)	96784	$500.00	$69,237.84	Port	$500.00
OEW Dedicated Port – 4000M (IntraState)	96787	$500.00	$77,127.12	Port	$500.00
OEW Dedicated Port – 4000M (InterState)	96786	$500.00	$77,127.12	Port	$500.00
OEW Dedicated Port – 4500M (IntraState)	96789	$500.00	$84,828.24	Port	$500.00
OEW Dedicated Port – 4500M (InterState)	96788	$500.00	$84,828.24	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Dedicated Port – 5000M (IntraState)	96791	$500.00	$92,368.08	Port	$500.00
OEW Dedicated Port – 5000M (InterState)	96790	$500.00	$92,368.08	Port	$500.00
OEW Dedicated Port – 5500M (IntraState)	96793	$500.00	$99,762.88	Port	$500.00
OEW Dedicated Port – 5500M (InterState)	96792	$500.00	$99,762.88	Port	$500.00
OEW Dedicated Port – 6000M (IntraState)	96795	$500.00	$107,030.00	Port	$500.00
OEW Dedicated Port – 6000M (InterState)	96794	$500.00	$107,030.00	Port	$500.00
OEW Dedicated Port – 6500M (IntraState)	96797	$500.00	$114,181.20	Port	$500.00
OEW Dedicated Port – 6500M (InterState)	96796	$500.00	$114,181.20	Port	$500.00
OEW Dedicated Port – 7000M (IntraState)	96799	$500.00	$121,228.80	Port	$500.00
OEW Dedicated Port – 7000M (InterState)	96798	$500.00	$121,228.80	Port	$500.00
OEW Dedicated Port – 7500M (IntraState)	96801	$500.00	$128,179.52	Port	$500.00
OEW Dedicated Port – 7500M (InterState)	96800	$500.00	$128,179.52	Port	$500.00
OEW Dedicated Port – 8000M (IntraState)	96803	$500.00	$135,041.20	Port	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Dedicated Port – 8000M (InterState)	96802	$500.00	$135,041.20	Port	$500.00
OEW Dedicated Port – 8500M (IntraState)	96805	$500.00	$141,822.80	Port	$500.00
OEW Dedicated Port – 8500M (InterState)	96804	$500.00	$141,822.80	Port	$500.00
OEW Dedicated Port – 9000M (IntraState)	96807	$500.00	$148,526.56	Port	$500.00
OEW Dedicated Port – 9000M (InterState)	96806	$500.00	$148,526.56	Port	$500.00
OEW Dedicated Port – 9500M (IntraState)	96809	$500.00	$155,159.76	Port	$500.00
OEW Dedicated Port – 9500M (InterState)	96808	$500.00	$155,159.76	Port	$500.00
OEW Dedicated Port – 10G (IntraState)	96811	$500.00	$161,725.76	Port	$500.00
OEW Dedicated Port – 10G (InterState)	96810	$500.00	$161,725.76	Port	$500.00
OEW Class of Service Options:					
CoS 1 Real Time - IntraState	92993	$0.00	See below	Port	$0.00
CoS 1 Real Time - InterState	92997	$0.00	See below	Port	$0.00
CoS 1 – 0.5M	See above	$0.00	$31.75	Port	$0.00
CoS 1 – 1M	See above	$0.00	$37.67	Port	$0.00
CoS 1 – 1.5M	See above	$0.00	$38.06	Port	$0.00
CoS 1 – 2M	See above	$0.00	$48.67	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 1 – 3M	See above	$0.00	$58.66	Port	$0.00
CoS 1 – 4M	See above	$0.00	$68.41	Port	$0.00
CoS 1 – 5M	See above	$0.00	$85.18	Port	$0.00
CoS 1 – 6M	See above	$0.00	$90.32	Port	$0.00
CoS 1 – 7M	See above	$0.00	$97.27	Port	$0.00
CoS 1 – 8M	See above	$0.00	$105.22	Port	$0.00
CoS 1 – 9M	See above	$0.00	$113.18	Port	$0.00
CoS 1 – 10M	See above	$0.00	$119.03	Port	$0.00
CoS 1 – 11M	See above	$0.00	$124.10	Port	$0.00
CoS 1 – 12M	See above	$0.00	$134.00	Port	$0.00
CoS 1 – 13M	See above	$0.00	$134.32	Port	$0.00
CoS 1 – 14M	See above	$0.00	$134.63	Port	$0.00
CoS 1 – 15M	See above	$0.00	$138.06	Port	$0.00
CoS 1 – 16M	See above	$0.00	$141.96	Port	$0.00
CoS 1 – 17M	See above	$0.00	$145.86	Port	$0.00
CoS 1 – 18M	See above	$0.00	$149.76	Port	$0.00
CoS 1 – 19M	See above	$0.00	$153.66	Port	$0.00
CoS 1 – 20M	See above	$0.00	$163.57	Port	$0.00
CoS 1 – 30M	See above	$0.00	$217.23	Port	$0.00
CoS 1 – 40M	See above	$0.00	$262.08	Port	$0.00
CoS 1 – 50M	See above	$0.00	$312.94	Port	$0.00
CoS 1 – 60M	See above	$0.00	$365.27	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 1 – 70M	See above	$0.00	$414.18	Port	$0.00
CoS 1 – 80M	See above	$0.00	$445.93	Port	$0.00
CoS 1 – 90M	See above	$0.00	$486.25	Port	$0.00
CoS 1 – 100M	See above	$0.00	$523.15	Port	$0.00
CoS 1 – 150M	See above	$0.00	$759.10	Port	$0.00
CoS 1 – 200M	See above	$0.00	$1,002.30	Port	$0.00
CoS 1 – 250M	See above	$0.00	$1,179.20	Port	$0.00
CoS 1 – 300M	See above	$0.00	$1,298.78	Port	$0.00
CoS 1 – 350M	See above	$0.00	$1,418.27	Port	$0.00
CoS 1 – 400M	See above	$0.00	$1,537.77	Port	$0.00
CoS 1 – 450M	See above	$0.00	$1,657.27	Port	$0.00
CoS 1 – 500M	See above	$0.00	$1,776.76	Port	$0.00
CoS 1 – 550M	See above	$0.00	$1,896.14	Port	$0.00
CoS 1 – 600M	See above	$0.00	$2,015.52	Port	$0.00
CoS 1 – 650M	See above	$0.00	$2,278.11	Port	$0.00
CoS 1 – 700M	See above	$0.00	$2,540.69	Port	$0.00
CoS 1 – 750M	See above	$0.00	$2,657.23	Port	$0.00
CoS 1 – 800M	See above	$0.00	$2,773.76	Port	$0.00
CoS 1 – 850M	See above	$0.00	$2,896.06	Port	$0.00
CoS 1 – 900M	See above	$0.00	$3,018.37	Port	$0.00
CoS 1 – 950M	See above	$0.00	$3,139.70	Port	$0.00
CoS 1 – 1G	See above	$0.00	$3,261.02	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 1 – 1500M	See above	$0.00	$4,635.62	Port	$0.00
CoS 1 – 2000M	See above	$0.00	$6,145.39	Port	$0.00
CoS 1 – 2500M	See above	$0.00	$7,347.91	Port	$0.00
CoS 1 – 3000M	See above	$0.00	$8,514.40	Port	$0.00
CoS 1 – 3500M	See above	$0.00	$9,643.84	Port	$0.00
CoS 1 – 4000M	See above	$0.00	$10,742.71	Port	$0.00
CoS 1 – 4500M	See above	$0.00	$11,815.36	Port	$0.00
CoS 1 – 5000M	See above	$0.00	$12,865.55	Port	$0.00
CoS 1 – 5500M	See above	$0.00	$13,895.54	Port	$0.00
CoS 1 – 6000M	See above	$0.00	$14,907.75	Port	$0.00
CoS 1 – 6500M	See above	$0.00	$15,903.81	Port	$0.00
CoS 1 – 7000M	See above	$0.00	$16,885.44	Port	$0.00
CoS 1 – 7500M	See above	$0.00	$17,853.58	Port	$0.00
CoS 1 – 8000M	See above	$0.00	$18,809.31	Port	$0.00
CoS 1 – 8500M	See above	$0.00	$19,753.89	Port	$0.00
CoS 1 – 9000M	See above	$0.00	$20,687.63	Port	$0.00
CoS 1 – 9500M	See above	$0.00	$21,611.54	Port	$0.00
CoS 1 – 10G	See above	$0.00	$22,526.09	Port	$0.00
COS 2V – Interactive (Video) (IntraState)	92994	$0.00	See below	Port	$0.00
COS 2V – Interactive (Video) (InterState)	92998	$0.00	See below	Port	$0.00
CoS 2V – 0.5M	See above	$0.00	$31.75	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 2V – 1M	See above	$0.00	$37.67	Port	$0.00
CoS 2V – 1.5M	See above	$0.00	$38.06	Port	$0.00
CoS 2V – 2M	See above	$0.00	$48.67	Port	$0.00
CoS 2V – 3M	See above	$0.00	$58.66	Port	$0.00
CoS 2V – 4M	See above	$0.00	$68.41	Port	$0.00
CoS 2V – 5M	See above	$0.00	$85.18	Port	$0.00
CoS 2V – 6M	See above	$0.00	$90.32	Port	$0.00
CoS 2V – 7M	See above	$0.00	$97.27	Port	$0.00
CoS 2V – 8M	See above	$0.00	$105.22	Port	$0.00
CoS 2V – 9M	See above	$0.00	$113.18	Port	$0.00
CoS 2V – 10M	See above	$0.00	$119.03	Port	$0.00
CoS 2V – 11M	See above	$0.00	$124.10	Port	$0.00
CoS 2V – 12M	See above	$0.00	$134.00	Port	$0.00
CoS 2V – 13M	See above	$0.00	$134.32	Port	$0.00
CoS 2V – 14M	See above	$0.00	$134.63	Port	$0.00
CoS 2V – 15M	See above	$0.00	$138.06	Port	$0.00
CoS 2V – 16M	See above	$0.00	$141.96	Port	$0.00
CoS 2V – 17M	See above	$0.00	$145.86	Port	$0.00
CoS 2V – 18M	See above	$0.00	$149.76	Port	$0.00
CoS 2V – 19M	See above	$0.00	$153.66	Port	$0.00
CoS 2V – 20M	See above	$0.00	$163.57	Port	$0.00
CoS 2V – 30M	See above	$0.00	$217.23	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 2V – 40M	See above	$0.00	$262.08	Port	$0.00
CoS 2V – 50M	See above	$0.00	$312.94	Port	$0.00
CoS 2V – 60M	See above	$0.00	$365.27	Port	$0.00
CoS 2V – 70M	See above	$0.00	$414.18	Port	$0.00
CoS 2V – 80M	See above	$0.00	$445.93	Port	$0.00
CoS 2V – 90M	See above	$0.00	$486.25	Port	$0.00
CoS 2V – 100M	See above	$0.00	$523.15	Port	$0.00
CoS 2V – 150M	See above	$0.00	$759.10	Port	$0.00
CoS 2V – 200M	See above	$0.00	$1,002.30	Port	$0.00
CoS 2V – 250M	See above	$0.00	$1,179.20	Port	$0.00
CoS 2V – 300M	See above	$0.00	$1,298.78	Port	$0.00
CoS 2V – 350M	See above	$0.00	$1,418.27	Port	$0.00
CoS 2V – 400M	See above	$0.00	$1,537.77	Port	$0.00
CoS 2V – 450M	See above	$0.00	$1,657.27	Port	$0.00
CoS 2V – 500M	See above	$0.00	$1,776.76	Port	$0.00
CoS 2V – 550M	See above	$0.00	$1,896.14	Port	$0.00
CoS 2V – 600M	See above	$0.00	$2,015.52	Port	$0.00
CoS 2V – 650M	See above	$0.00	$2,278.11	Port	$0.00
CoS 2V – 700M	See above	$0.00	$2,540.69	Port	$0.00
CoS 2V – 750M	See above	$0.00	$2,657.23	Port	$0.00
CoS 2V – 800M	See above	$0.00	$2,773.76	Port	$0.00
CoS 2V – 850M	See above	$0.00	$2,896.06	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 2V – 900M	See above	$0.00	$3,018.37	Port	$0.00
CoS 2V – 950M	See above	$0.00	$3,139.70	Port	$0.00
CoS 2V – 1G	See above	$0.00	$3,261.02	Port	$0.00
CoS 2V – 1500M	See above	$0.00	$4,635.62	Port	$0.00
CoS 2V – 2000M	See above	$0.00	$6,145.39	Port	$0.00
CoS 2V – 2500M	See above	$0.00	$7,347.91	Port	$0.00
CoS 2V – 3000M	See above	$0.00	$8,514.40	Port	$0.00
CoS 2V – 3500M	See above	$0.00	$9,643.84	Port	$0.00
CoS 2V – 4000M	See above	$0.00	$10,742.71	Port	$0.00
CoS 2V – 4500M	See above	$0.00	$11,815.36	Port	$0.00
CoS 2V – 5000M	See above	$0.00	$12,865.55	Port	$0.00
CoS 2V – 5500M	See above	$0.00	$13,895.54	Port	$0.00
CoS 2V – 6000M	See above	$0.00	$14,907.75	Port	$0.00
CoS 2V – 6500M	See above	$0.00	$15,903.81	Port	$0.00
CoS 2V – 7000M	See above	$0.00	$16,885.44	Port	$0.00
CoS 2V – 7500M	See above	$0.00	$17,853.58	Port	$0.00
CoS 2V – 8000M	See above	$0.00	$18,809.31	Port	$0.00
CoS 2V – 8500M	See above	$0.00	$19,753.89	Port	$0.00
CoS 2V – 9000M	See above	$0.00	$20,687.63	Port	$0.00
CoS 2V – 9500M	See above	$0.00	$21,611.54	Port	$0.00
CoS 2V – 10G	See above	$0.00	$22,526.09	Port	$0.00
COS 3 – Business Critical Medium	92995	$0.00	See below	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
(IntraState)					
COS 3 – Business Critical Medium (InterState)	92999	$0.00	See below	Port	$0.00
CoS 3 – 0.5M	See above	$0.00	$15.87	Port	$0.00
CoS 3 – 1M	See above	$0.00	$18.84	Port	$0.00
CoS 3 – 1.5M	See above	$0.00	$19.03	Port	$0.00
CoS 3 – 2M	See above	$0.00	$24.34	Port	$0.00
CoS 3 – 3M	See above	$0.00	$29.33	Port	$0.00
CoS 3 – 4M	See above	$0.00	$34.20	Port	$0.00
CoS 3 – 5M	See above	$0.00	$42.59	Port	$0.00
CoS 3 – 6M	See above	$0.00	$45.16	Port	$0.00
CoS 3 – 7M	See above	$0.00	$48.63	Port	$0.00
CoS 3 – 8M	See above	$0.00	$52.61	Port	$0.00
CoS 3 – 9M	See above	$0.00	$56.59	Port	$0.00
CoS 3 – 10M	See above	$0.00	$59.51	Port	$0.00
CoS 3 – 11M	See above	$0.00	$62.05	Port	$0.00
CoS 3 – 12M	See above	$0.00	$67.00	Port	$0.00
CoS 3 – 13M	See above	$0.00	$67.16	Port	$0.00
CoS 3 – 14M	See above	$0.00	$67.31	Port	$0.00
CoS 3 – 15M	See above	$0.00	$69.03	Port	$0.00
CoS 3 – 16M	See above	$0.00	$70.98	Port	$0.00
CoS 3 – 17M	See above	$0.00	$72.93	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 3 – 18M	See above	$0.00	$74.88	Port	$0.00
CoS 3 – 19M	See above	$0.00	$76.83	Port	$0.00
CoS 3 – 20M	See above	$0.00	$81.78	Port	$0.00
CoS 3 – 30M	See above	$0.00	$108.62	Port	$0.00
CoS 3 – 40M	See above	$0.00	$131.04	Port	$0.00
CoS 3 – 50M	See above	$0.00	$156.47	Port	$0.00
CoS 3 – 60M	See above	$0.00	$182.64	Port	$0.00
CoS 3 – 70M	See above	$0.00	$207.09	Port	$0.00
CoS 3 – 80M	See above	$0.00	$222.96	Port	$0.00
CoS 3 – 90M	See above	$0.00	$243.13	Port	$0.00
CoS 3 – 100M	See above	$0.00	$261.57	Port	$0.00
CoS 3 – 150M	See above	$0.00	$379.55	Port	$0.00
CoS 3 – 200M	See above	$0.00	$501.15	Port	$0.00
CoS 3 – 250M	See above	$0.00	$589.60	Port	$0.00
CoS 3 – 300M	See above	$0.00	$649.39	Port	$0.00
CoS 3 – 350M	See above	$0.00	$709.14	Port	$0.00
CoS 3 – 400M	See above	$0.00	$768.89	Port	$0.00
CoS 3 – 450M	See above	$0.00	$828.63	Port	$0.00
CoS 3 – 500M	See above	$0.00	$888.38	Port	$0.00
CoS 3 – 550M	See above	$0.00	$948.07	Port	$0.00
CoS 3 – 600M	See above	$0.00	$1,007.76	Port	$0.00
CoS 3 – 650M	See above	$0.00	$1,139.05	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 3 – 700M	See above	$0.00	$1,270.35	Port	$0.00
CoS 3 – 750M	See above	$0.00	$1,328.61	Port	$0.00
CoS 3 – 800M	See above	$0.00	$1,386.88	Port	$0.00
CoS 3 – 850M	See above	$0.00	$1,448.03	Port	$0.00
CoS 3 – 900M	See above	$0.00	$1,509.18	Port	$0.00
CoS 3 – 950M	See above	$0.00	$1,569.85	Port	$0.00
CoS 3 – 1G	See above	$0.00	$1,630.51	Port	$0.00
CoS 3 – 1500M	See above	$0.00	$2,317.81	Port	$0.00
CoS 3 – 2000M	See above	$0.00	$3,072.69	Port	$0.00
CoS 3 – 2500M	See above	$0.00	$3,673.96	Port	$0.00
CoS 3 – 3000M	See above	$0.00	$4,257.20	Port	$0.00
CoS 3 – 3500M	See above	$0.00	$4,821.92	Port	$0.00
CoS 3 – 4000M	See above	$0.00	$5,371.35	Port	$0.00
CoS 3 – 4500M	See above	$0.00	$5,907.68	Port	$0.00
CoS 3 – 5000M	See above	$0.00	$6,432.78	Port	$0.00
CoS 3 – 5500M	See above	$0.00	$6,947.77	Port	$0.00
CoS 3 – 6000M	See above	$0.00	$7,453.88	Port	$0.00
CoS 3 – 6500M	See above	$0.00	$7,951.91	Port	$0.00
CoS 3 – 7000M	See above	$0.00	$8,442.72	Port	$0.00
CoS 3 – 7500M	See above	$0.00	$8,926.79	Port	$0.00
CoS 3 – 8000M	See above	$0.00	$9,404.66	Port	$0.00
CoS 3 – 8500M	See above	$0.00	$9,876.95	Port	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS 3 – 9000M	See above	$0.00	$10,343.81	Port	$0.00
CoS 3 – 9500M	See above	$0.00	$10,805.77	Port	$0.00
CoS 3 – 10G	See above	$0.00	$11,263.04	Port	$0.00
CoS 4 Non Critical High (IntraState)	92996	Included	Included	Port	$0.00
CoS 4 Non Critical High (InterState)	93000	Included	Included	Port	$0.00
Other Non-Recurring Charges:					
OPT-E-WAN Bandwidth Setup (IntraState)	80372	$500.00	N/A	Port	$500.00
OPT-E-WAN Bandwidth Setup (InterState)	80436	$500.00	N/A	Port	$500.00
CoS Service Establishment (IntraState)	80376	$0.00	N/A	Port	$0.00
CoS Service Establishment (InterState)	80440	$0.00	N/A	Port	$0.00
Additional MAC Addresses, EVCs/VLANs (50 per site) (IntraState)	80385	$0.00	N/A	Per order	$0.00
Additional MAC Addresses, EVCs/VLANs (50 per site) (InterState)	80443	$0.00	N/A	Per order	$0.00
Initial Service Order Change Charge (IntraState)	80386	$0.00	N/A	Per order	$0.00
Initial Service Order Change Charge (InterState)	80444	$0.00	N/A	Per order	$0.00
Service Order Cancellation (IntraState)	80387	$0.00	N/A	Per location	$0.00
Service Order Cancellation (InterState)	80445	$0.00	N/A	Per location	$0.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Miscellaneous Change Charge (IntraState)	80388	$0.00	N/A	Per order	$0.00
Miscellaneous Change Charge (InterState)	80446	$0.00	N/A	Per order	$0.00
OPT-E-WAN Site Termination Charge (IntraState)	80389	$0.00	N/A	Per location	$0.00
OPT-E-WAN Site Termination Charge (InterState)	80447	$0.00	N/A	Per location	$0.00
Other Features:					
Diverse POP Service Set-Up Charge (IntraState)	80384	$1,000.00	N/A	Port	$0.00
Diverse POP Service Set-Up Charge (InterState)	80442	$1,000.00	N/A	Port	$0.00
Diverse Line Card (IntraState)	93013	N/A	10% of Port MRC	Card	N/A
Diverse Line Card (InterState)	93014	N/A	10% of Port MRC	Card	N/A
POP Diversity (IntraState)	93018	N/A	10% of Port MRC	Port	N/A
POP Diversity (InterState)	93019	N/A	10% of Port MRC	Port	N/A
OPT-E-WAN (OEW) Managed Service Bundles w/ Standard Features					
OEW Managed Service Bundle - .5M w / Type 7A Router Cu Ethernet	OEWMS05A	$643.00	$942.74	Bundle	$500.00
OEW Managed Service Bundle - .5M w / Type 22A Router Cu Ethernet	OEWMS05B	$643.00	$1,201.13	Bundle	$500.00
OEW Managed Service Bundle - 1M w / Type 7A Router Cu Ethernet	OEWMS1A	$643.00	$978.46	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 1M w / Type 22A Router Cu Ethernet	OEWMS1B	$643.00	$1,236.85	Bundle	$500.00
OEW Managed Service Bundle – 1.5M w / Type 7A Router Cu Ethernet	OEWMS015A	$643.00	$980.81	Bundle	$500.00
OEW Managed Service Bundle – 1.5M w / Type 22A Router Cu Ethernet	OEWMS015B	$643.00	$1,239.20	Bundle	$500.00
OEW Managed Service Bundle - 2M w / Type 7A Router Cu Ethernet	OEWMS2A	$643.00	$1,044.73	Bundle	$500.00
OEW Managed Service Bundle - 2M w / Type 22A Router Cu Ethernet	OEWMS2B	$643.00	$1,303.12	Bundle	$500.00
OEW Managed Service Bundle - 3M w / Type 7A Router Cu Ethernet	OEWMS3A	$643.00	$1,134.32	Bundle	$500.00
OEW Managed Service Bundle - 3M w / Type 22A Router Cu Ethernet	OEWMS3B	$643.00	$1,392.71	Bundle	$500.00
OEW Managed Service Bundle - 4M w / Type 7A Router Cu Ethernet	OEWMS4A	$643.00	$1,193.07	Bundle	$500.00
OEW Managed Service Bundle - 4M w / Type 22A Router Cu Ethernet	OEWMS4B	$643.00	$1,451.46	Bundle	$500.00
OEW Managed Service Bundle - 5M w / Type 7A Router Cu Ethernet	OEWMS5A	$643.00	$1.307.86	Bundle	$500.00
OEW Managed Service Bundle - 5M w / Type 22A Router Cu Ethernet	OEWMS5B	$643.00	$1,566.25	Bundle	$500.00
OEW Managed Service Bundle - 6M w / Type 7A Router Cu Ethernet	OEWMS6A	$643.00	$1,393.81	Bundle	$500.00
OEW Managed Service Bundle - 6M w / Type 22A Router Cu Ethernet	OEWMS6B	$643.00	$1,652.20	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 7M w / Type 7A Router Cu Ethernet	OEWMS7A	$643.00	$1,435.64	Bundle	$500.00
OEW Managed Service Bundle - 7M w / Type 22A Router Cu Ethernet	OEWMS7B	$643.00	$1,694.03	Bundle	$500.00
OEW Managed Service Bundle - 8M w / Type 7A Router Cu Ethernet	OEWMS8A	$643.00	$1,483.58	Bundle	$500.00
OEW Managed Service Bundle - 8M w / Type 22A Router Cu Ethernet	OEWMS8B	$643.00	$1,741.97	Bundle	$500.00
OEW Managed Service Bundle - 9M w / Type 7A Router Cu Ethernet	OEWMS9A	$643.00	$1,743.39	Bundle	$500.00
OEW Managed Service Bundle - 9M w / Type 22A Router Cu Ethernet	OEWMS9B	$643.00	$2,001.78	Bundle	$500.00
OEW Managed Service Bundle - 10M w / Type 7A Router Cu Ethernet	OEWMS10A	$643.00	$1,778.64	Bundle	$500.00
OEW Managed Service Bundle - 10M w / Type 22A Router Cu Ethernet	OEWMS10B	$643.00	$2,037.03	Bundle	$500.00
OEW Managed Service Bundle - 11M w / Type 7A Router Cu Ethernet	OEWMS11A	$643.00	$1,943.57	Bundle	$500.00
OEW Managed Service Bundle - 11M w / Type 22A Router Cu Ethernet	OEWMS11B	$643.00	$2,201.96	Bundle	$500.00
OEW Managed Service Bundle - 12M w / Type 7A Router Cu Ethernet	OEWMS12A	$643.00	$2,003.26	Bundle	$500.00
OEW Managed Service Bundle - 12M w / Type 22A Router Cu Ethernet	OEWMS12B	$643.00	$2,261.65	Bundle	$500.00
OEW Managed Service Bundle - 13M w / Type 7A Router Cu Ethernet	OEWMS13A	$643.00	$2,005.14	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 13M w / Type 22A Router Cu Ethernet	OEWMS13B	$643.00	$2,263.53	Bundle	$500.00
OEW Managed Service Bundle - 14M w / Type 7A Router Cu Ethernet	OEWMS14A	$643.00	$2,007.02	Bundle	$500.00
OEW Managed Service Bundle - 14M w / Type 22A Router Cu Ethernet	OEWMS14B	$643.00	$2,265.41	Bundle	$500.00
OEW Managed Service Bundle - 15M w / Type 7A Router Cu Ethernet	OEWMS15A	$643.00	$2,027.70	Bundle	$500.00
OEW Managed Service Bundle - 15M w / Type 22A Router Cu Ethernet	OEWMS15B	$643.00	$2,286.09	Bundle	$500.00
OEW Managed Service Bundle - 16M w / Type 7A Router Cu Ethernet	OEWMS16A	$643.00	$2,051.20	Bundle	$500.00
OEW Managed Service Bundle - 16M w / Type 22A Router Cu Ethernet	OEWMS16B	$643.00	$2,309.59	Bundle	$500.00
OEW Managed Service Bundle - 17M w / Type 7A Router Cu Ethernet	OEWMS17A	$643.00	$2,074.70	Bundle	$500.00
OEW Managed Service Bundle - 17M w / Type 22A Router Cu Ethernet	OEWMS17B	$643.00	$2,333.09	Bundle	$500.00
OEW Managed Service Bundle - 18M w / Type 7A Router Cu Ethernet	OEWMS18A	$643.00	$2,098.20	Bundle	$500.00
OEW Managed Service Bundle - 18M w / Type 22A Router Cu Ethernet	OEWMS18B	$643.00	$2,356.59	Bundle	$500.00
OEW Managed Service Bundle - 19M w / Type 7A Router Cu Ethernet	OEWMS19A	$643.00	$2,121.70	Bundle	$500.00
OEW Managed Service Bundle - 19M w / Type 22A Router Cu Ethernet	OEWMS19B	$643.00	$2,380.09	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 20M w / Type 22A Router Cu Ethernet	OEWMS20A	$643.00	$2,244.30	Bundle	$500.00
OEW Managed Service Bundle - 20M w / Type 10A Router Cu Ethernet	OEWMS20B	$643.00	$2,502.69	Bundle	$500.00
OEW Managed Service Bundle - 30M w / Type 22A Router Cu Ethernet	OEWMS30A	$643.00	$3,089.92	Bundle	$500.00
OEW Managed Service Bundle - 30M w / Type 10A Router Cu Ethernet	OEWMS30B	$643.00	$3,206.47	Bundle	$500.00
OEW Managed Service Bundle - 40M w / Type 22A Router Cu Ethernet	OEWMS40A	$643.00	$3,406.17	Bundle	$500.00
OEW Managed Service Bundle - 40M w / Type 10A Router Cu Ethernet	OEWMS40B	$643.00	$3,522.72	Bundle	$500.00
OEW Managed Service Bundle - 50M w / Type 22A Router Cu Ethernet	OEWMS50A	$643.00	$3,925.25	Bundle	$500.00
OEW Managed Service Bundle - 50M w / Type 10A Router Cu Ethernet	OEWMS50B	$643.00	$4,041.80	Bundle	$500.00
OEW Managed Service Bundle - 60M w / Type 10A Router Cu Ethernet	OEWMS60A	$643.00	$4,541.66	Bundle	$500.00
OEW Managed Service Bundle - 70M w / Type 10A Router Cu Ethernet	OEWMS70A	$643.00	$4,911.59	Bundle	$500.00
OEW Managed Service Bundle - 80M w / Type 10A Router Cu Ethernet	OEWMS80A	$643.00	$5,266.06	Bundle	$500.00
OEW Managed Service Bundle - 90M w / Type 10A Router Cu Ethernet	OEWMS90A	$643.00	$5,519.09	Bundle	$500.00
OEW Managed Service Bundle - 100M w / Type 10A Router Cu Ethernet	OEWMS100A	$643.00	$5,869.96	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 150M w / Type 11A Router Fiber Ethernet	OEWMS150A	$643.00	$7,187.01	Bundle	$500.00
OEW Managed Service Bundle - 150M w / Type 26 Router Fiber Ethernet	OEWMS150B	$643.00	$7,572.33	Bundle	$500.00
OEW Managed Service Bundle - 200M w / Type 11A Router Fiber Ethernet	OEWMS200A	$643.00	$9,679.00	Bundle	$500.00
OEW Managed Service Bundle - 200M w / Type 26 Router Fiber Ethernet	OEWMS200B	$643.00	$10,064.32	Bundle	$500.00
OEW Managed Service Bundle - 250M w / Type 26 Router Fiber Ethernet	OEWMS250A	$643.00	$10,775.04	Bundle	$500.00
OEW Managed Service Bundle - 250M w / Type 27 Router Fiber Ethernet	OEWMS250B	$643.00	$11,196.48	Bundle	$500.00
OEW Managed Service Bundle - 300M w / Type 26 Router Fiber Ethernet	OEWMS300A	$643.00	$11,700.95	Bundle	$500.00
OEW Managed Service Bundle - 300M w / Type 27 Router Fiber Ethernet	OEWMS300B	$643.00	$12,122.39	Bundle	$500.00
OEW Managed Service Bundle - 350M w / Type 27 Router Fiber Ethernet	OEWMS350A	$643.00	$12,949.67	Bundle	$500.00
OEW Managed Service Bundle - 400M w / Type 27 Router Fiber Ethernet	OEWMS400A	$643.00	$13,776.95	Bundle	$500.00
OEW Managed Service Bundle - 450M w / Type 27 Router Fiber Ethernet	OEWMS450A	$643.00	$14,816.70	Bundle	$500.00
OEW Managed Service Bundle - 500M w / Type 27 Router Fiber Ethernet	OEWMS500A	$643.00	$15,659.30	Bundle	$500.00
OEW Managed Service Bundle - 550M w / Type 11 Router Fiber Ethernet	OEWMS550A	ICB	ICB	Bundle	ICB

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 550M w / Type 26 Router Fiber Ethernet	OEWMS550B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 600M w / Type 11 Router Fiber Ethernet	OEWMS600A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 600M w / Type 26 Router Fiber Ethernet	OEWMS600B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 650M w / Type 11 Router Fiber Ethernet	OEWMS650A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 650M w / Type 26 Router Fiber Ethernet	OEWMS650B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 700M w / Type 11 Router Fiber Ethernet	OEWMS700A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 700M w / Type 26 Router Fiber Ethernet	OEWMS700B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 750M w / Type 11 Router Fiber Ethernet	OEWMS750A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 750M w / Type 26 Router Fiber Ethernet	OEWMS750B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 800M w / Type 11 Router Fiber Ethernet	OEWMS800A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 800M w / Type 26 Router Fiber Ethernet	OEWMS800B	ICB	ICB	Bundle	$500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
OEW Managed Service Bundle - 850M w / Type 11 Router Fiber Ethernet	OEWMS850A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 850M w / Type 26 Router Fiber Ethernet	OEWMS850B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 900M w / Type 11 Router Fiber Ethernet	OEWMS900A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 900M w / Type 26 Router Fiber Ethernet	OEWMS900B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 950M w / Type 11 Router Fiber Ethernet	OEWMS950A	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 950M w / Type 26 Router Fiber Ethernet	OEWMS950B	ICB	ICB	Bundle	$500.00
OEW Managed Service Bundle - 1G w / Type 11 Router Fiber Ethernet	OEWMS1KA	ICB	ICB	Bundle	ICB
OEW Managed Service Bundle - 1000M w / Type 26 Router Fiber Ethernet	OEWMS1KB	ICB	ICB	Bundle	$500.00
OPT-E-WAN Managed Service Bundles Life Cycle Management Features and Services					
Moves, Adds, Changes and Deletes					
Move Router Site (Inside) - Low Complexity	13092L	$600.00	N/A	Router	N/A
Move Router Site (Inside) - Medium Complexity	13092M	$720.00	N/A	Router	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Move Router Site (Inside) - High Complexity	13092H	$850.00	N/A	Router	N/A
Move Router Site (Outside) - Low Complexity	13093L	$1,200.00	N/A	Router	N/A
Move Router Site (Outside) - Medium Complexity	13093M	$1,440.00	N/A	Router	N/A
Move Router Site (Outside) - High Complexity	13093H	$1,700.00	N/A	Router	N/A
Router Site Add - Low Complexity	13118L	$1,500.00	N/A	Router	N/A
Router Site Add - Medium Complexity	13118M	$1,620.00	N/A	Router	N/A
Router Site Add - High Complexity	13118H	$1,750.00	N/A	Router	N/A
Add/Delete Router Boards – Low Complexity	13127L	$300.00	N/A	Router	N/A
Add/Delete Router Boards – Medium Complexity	13127M	$360.00	N/A	Router	N/A
Add/Delete Router Boards – High Complexity	13127H	$425.00	N/A	Router	N/A
Site Delete for AT&T Provided Equipment	13119	$0.00	N/A	Router	N/A
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	$200.00	N/A	Router	N/A
Cancellation to Receive on Site Services with Less Than Five Business Days notice to AT&T	13109A	$200.00	N/A	Router	N/A
Supplementary Professional, Engineering and Technical Services					
Standard Hours (8AM – 5PM local time) First Hour	13109B	N/A	$360.00	Hour	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Standard Hours (8AM – 5PM local time) Subsequent Hours	13109C	N/A	$180.00	Hour	N/A
Non-Standard Hours First Hour	13109D	N/A	$460.00	Hour	N/A
Non-Standard Hours Subsequent Hours	13109E	N/A	$230.00	Hour	N/A
Lost Equipment Charge for AT&T Owned CPE	13054	Residual Value of Lost CPE	N/A	N/A	N/A
Router Configuration Changes	14158	$150.00	N/A	Router	N/A
OPT-E-WAN Managed Service Bundles Optional Up lift Features and Services					
Router Protocol, Memory and Misc Managed Router Feature Upgrades					
Enterprise Services IOS w/o encryption for 18XX series managed router feature upgrade	MSB1000	$590.00	N/A	Router	$150.00* *Applies to Upgrade to existing router.
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	$826.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	$1,180.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	$1,062.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 28XX series managed	MSB1004	$1,416.00	N/A	Router	$150.00* *Applies to Upgrade to

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
router feature upgrade					existing router
Advanced Enterprise Services IOS w encryption for 38XX series managed router feature upgrade	MSB1005	$2,065.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	$3,835.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	$295.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port Card for 18XX, 28XX and 38XX series managed router feature upgrade	MSB1008	$236.00	N/A	Port	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 Port Serial Port Adapter Card for 72XX and 73XX series managed router feature upgrade	MSB1009	$2,655.00	N/A	Port	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	$2,242.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	$2,655.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	$3,540.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX and 73XX series managed router feature upgrade	MSB1013	$295.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	$295.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	$250.75	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	$587.05	N/A	Connector	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX SFP (DOM) for 38XX series managed router feature upgrade	MSB1018	$324.50	N/A	Connector	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	$737.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Serial Cable managed router feature upgrade	MSB1020	$59.00	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Console Port to CAS cable managed router feature upgrade	MSB1021	$20.05	N/A	Cable	*See Professional Engineering and Technical

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					Services Charges for on-site upgrade to existing router.
Fiber Cable managed router feature upgrade	MSB1022	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Rack Mount Kit managed router feature upgrade	MSB1023	$59.00	N/A	Kit	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port for ASR1000 series managed router feature upgrade	MSB1024	$324.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	$259.60	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1026	$6,277.60	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1027	$5,022.08	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					upgrade to existing router.
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades					
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	$587.05	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	$295.00	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-T SFP managed router feature upgrade	MSB1032	$233.05	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GigE high speed WIC managed router feature upgrade	MSB1034	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port Serial WAN Interface Card managed router feature upgrade	MSB1035	$236.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port 10/100 Ethernet switch interface card managed router feature upgrade	MSB1036	$250.75	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	$324.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	$767.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	$354.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 29XX Series managed router feature upgrade	MSB1042	$413.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	$708.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	$1,180.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
					upgrade to existing router.
COS device 4 port COS switch managed router feature upgrade	MSB1046	$432.47	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	$17.70	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature upgrade	MSB1048	$11.83	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	$1,475.00	N/A	Module	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
12 port COS Switch managed router feature upgrade	MSB1051	$6,590.60	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Optional Architectural Validation Professional Services	13096	N/A	$350.00	Hour	N/A
Dial Backup					
Analog (POTS) Dial Backup Management	13060A	N/A	$10.00	Router	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ISDN Basic Rate Interface (BRI) Backup Management	13060B	N/A	$10.00	Router	N/A
ISDN Primary Rate Interface (PRI) Backup Management	13060C	N/A	$25.00	Router	N/A
TACACS (Terminal Access Controller Access Control System) Read Only Access					
TACACS Read Only Access – Router Enablement	TACACSRE	$40.00	N/A	Router	$150.00
TACACS Read Only Access - Support	TACACSRS	N/A	$18.00	Router	N/A
TACACS Read Only Access – Enablement 1-6 Enabled Employees	TACACS1	$0.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 7-12 Enabled Employees	TACACS2	$250.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	$750.00	N/A	Enabled Employee	$150.00
OPT-E-WAN Managed Services Data Center Stand Alone Routers					
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	$0.00	$1,324.00	Router	$0.00
IPSEC Standalone router Type 24	MSDCRT2	$0.00	$1,084.34	Router	$0.00
Traffic Aggregation Standalone router Type 25	MSDCRT3	$0.00	$3,355.44	Router	$0.00
Traffic Aggregation Standalone router Type 27	MSDCRT4	$0.00	$1,340.07	Router	$0.00

CSME					
CSME Basic Connection 10 Mbps	P9FYX	$ 1,600.00	$ 967.20	port	NRC applies
CSME Basic Connection - subsequent 10 Mbps	P9FZX	$ 1,150.00	$ 725.00	port	NRC applies
CSME Basic Connection 100 Mbps	P9FKX	$ 1,925.00	$ 1,246.20	port	NRC applies
CSME Basic Connection Subsequent 100 Mbps	P9FPX	$ 1,200.00	$ 1,012.00	port	NRC applies
CSME Basic Connection 1 Gigabit	P9FLX	$ 2,500.00	$ 2,717.00	port	NRC applies
CSME Ethernet Virtual Connection (EVC)	EVNDE	$ -	$ -	virtual circuit	
CSME Media Access Control (MAC) Addresses	M2CAX	$ 70.00	$ 5.00	block	NRC applies
CSME Repeater	VU4	$ 250.00	$ 320.00	repeater	NRC applies
CSME Service Order Change Charge	NHCEO	$ 75.00	N/A		N/A
CSME Miscellaneous Change Charge	NHCEN	$ 50.00	N/A		N/A
CSME Service Order Cancellation Charge	OGCEO	$ 200.00	N/A		N/A
CSME Service Expedite Charge	EODEO	$ 300.00	N/A		N/A
EPLS-WAN					

EPLS-WAN 50Mbps SCRM-OKLD (includes local access)	WAN50A	$ 9,300.00	$ 10,700.00	circuit	NRC applies
EPLS-WAN 50Mbps SCRM-ANHM (includes local access)	WAN50B	$ 9,300.00	$ 11,800.00	circuit	NRC applies
EPLS-WAN 50Mbps SCRM-SNDG (includes local access)	WAN50C	$ 9,300.00	$ 11,900.00	circuit	NRC applies
EPLS-WAN 50Mbps OKLD-ANHM (includes local access)	WAN50D	$ 9,300.00	$ 11,100.00	circuit	NRC applies
EPLS-WAN 50Mbps ANHM-SNDG (includes local access)	WAN50E	$ 9,300.00	$ 10,500.00	circuit	NRC applies
EPLS-WAN 150Mbps SCRM-OKLD (includes local access)	WAN15A	$ 9,300.00	$ 12,500.00	circuit	NRC applies
EPLS-WAN 150Mbps SCRM-ANHM (includes local access)	WAN15B	$ 9,300.00	$ 15,800.00	circuit	NRC applies
EPLS-WAN 150Mbps SCRM-SNDG (includes local access)	WAN15C	$ 9,300.00	$ 16,100.00	circuit	NRC applies
EPLS-WAN 150Mbps OKLD-ANHM (includes local access)	WAN15D	$ 9,300.00	$ 13,600.00	circuit	NRC applies
EPLS-WAN 150Mbps ANHM-SNDG (includes local access)	WAN15E	$ 9,300.00	$ 12,000.00	circuit	NRC applies
EPLS-WAN 600Mbps SCRM-OKLD (includes local access)	WAN60A	$ 9,300.00	$ 21,100.00	circuit	NRC applies
EPLS-WAN 600Mbps SCRM-ANHM (includes local access)	WAN60B	$ 9,300.00	$ 34,400.00	circuit	NRC applies
EPLS-WAN 600Mbps SCRM-SNDG (includes local access)	WAN60C	$ 9,300.00	$ 35,600.00	circuit	NRC applies
EPLS-WAN 600Mbps OKLD-ANHM (includes local access)	WAN60D	$ 9,300.00	$ 25,300.00	circuit	NRC applies

EPLS-WAN 600Mbps ANHM-SNDG (includes local access)	WAN60E	$ 9,300.00	$ 19,100.00	circuit	NRC applies
EPLS-WAN 1000Mbps SCRM-OKLD (includes local access)	WAN1GA	$ 9,300.00	$ 30,400.00	circuit	NRC applies
EPLS-WAN 1000Mbps SCRM-ANHM (includes local access)	WAN1GB	$ 9,300.00	$ 57,000.00	circuit	NRC applies
EPLS-WAN 1000Mbps SCRM-SNDG (includes local access)	WAN1GC	$ 9,300.00	$ 59,400.00	circuit	NRC applies
EPLS-WAN 1000Mbps OKLD-ANHM (includes local access)	WAN1GD	$ 9,300.00	$ 38,800.00	circuit	NRC applies
EPLS-WAN 1000Mbps ANHM-SNDG (includes local access)	WAN1GE	$ 9,300.00	$ 26,400.00	circuit	NRC applies
See Required CPE and Other Equipment for descriptions of additional equipment and service offered					

6.1.3.2.6 Service Identifier: Multi Protocol Label Switching (MPLS) Services

Description of Service

AT&T's MPLS service (AT&T VPN or AVPN) is a network-based IP VPN solution that is enabled by Multiprotocol Label Switching (MPLS) technology. AT&T VPN service enables Customers to build an application aware virtual private network to link locations and efficiently transmit critical, delay-sensitive, and general data over a single connection using Multiprotocol Label Switching. Customers have the option of choosing the access method to AT&T VPN which best meets their requirements. ATM, Dedicated Private Line and Frame Relay may all be used to connect to an MPLS port. DSL and Ethernet (where available) may also be used.

AT&T's VPN service integrates Ethernet and Frame Relay/ATM traffic over a single shared infrastructure to allow service providers to offer new Ethernet services and support Frame Relay/ATM services at the same time.

MPLS complies with industry definitions and standards as set by the IETF and provides the following features:

- Remote VPN Tunneling—The AT&T Network Based IP VPN Remote Access (ANIRA) introduces a standard set of capabilities to access data and IP network-based VPNs. Customers using ANIRA can connect to these private networks using any of the ANIRA options described below.
- Access to Internet Providers—AVPN offers two key features to facilitate secure VPN access to the public Internet. The network-based firewall provides comprehensive firewall functionality and services within the network, providing a secure gateway between the VPN and the Internet. The AVPN unilink feature delivers a separate connection for Internet access over the same physical link as the AVPN port. A fuller description of both features appears below.
- VPN Management—The AT&T BusinessDirect Map tool provides extensive VPN management capabilities end users. See below for more information.
- Non-IP Traffic—As a standards-based MPLS network, AVPN supports IP tunneling to support non-IP traffic.
- Encryption—Encryption is typically used when accessing the VPN from a source outside of the VPN, typically the Internet. The AT&T Network Based IP VPN Remote Access (ANIRA) fully supports standards-based encryption for remote access. A full description for ANIRA appears below. When encryption is required between users of the VPN, CPE-based IPSec compatible with AVPN, and the required CPE is available as an unsolicited feature.
- Authentication—Authentication is typically used when accessing the VPN from a source outside of the VPN, typically the Internet. The AT&T Network Based IP VPN Remote Access (ANIRA) fully supports standards-based authentication for remote access. A full description for ANIRA appears below.
- Firewall Features—The network-based firewall provides comprehensive firewall functionality and services within the network, providing a secure gateway between the VPN

and outside sources, typically the Internet. Also, firewall features are integral to both the software and CPE clients for ANIRA.

- Managed Router and CSU features-AT&T VPN Service further allows customers to combine Managed Router / CSU and Transport sites enabling them to select the service option that best meets their needs on a site-by-site basis.

MPLS Service and Features

Feature Name	Identifier	Feature Description
AVPN Port and Access Service Bundle		AVPN port and access using frame relay, ATM, or IP (PPP) protocol. Port is rate limited to selected port bandwidth. See service elements below.
AVPN DS0 Port and Access	17972	AVPN MPLS 56 Kbps frame relay port. Includes DS0 access circuit.
AVPN DS1 Port and Access	Varies by speed – see Attachment 4	AVPN MPLS Frame Relay or IP Port. Speeds from 64 Kbps to 1.544 Mbps. ATM port at 1.544 Mbps. Includes DS1 access circuit.
AVPN NxDS1 Port and Access	Varies by speed – see Attachment 4	ATM IMA port using multiple DS1 access; AVPN MPLS ATM IMA Port. Speeds from 3.088 Mbps to 12.352 Mbps. Includes DS1 access circuits.
AVPN DS3 Port and Access	Varies by speed – see Attachment 4	Frame Relay, ATM, or IP port using DS3 access; AVPN MPLS frame relay, ATM, or IP Port. Speeds from 5 Mbps to 45 Mbps. Includes DS3 access circuit.
AVPN Port Only		AVPN port only using frame relay, ATM, or IP (PPP) protocol. Port is rate limited to selected port bandwidth. See separate Port Speed Availability Table below.
AVPN Port Only - 128 Kbps to 45 Mbps	Varies by speed – See Attachment 4	Port only – speeds from 128 Kbps to 45 Mbps. Requires DS1 or DS3 access circuit(s).
AVPN OC-3 Port Only	Varies by speed – See Attachment 4	ATM, or IP port using OC-3c access; AVPN MPLS ATM, or IP Port. Speeds from 50 Mbps to 155 Mbps. Requires OC-3c access circuit.
AVPN OC-12 Port Only	Varies by speed – See Attachment 4	IP port using OC-12c access. AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Requires OC-12c access circuit.
AVPN Gigabit Ethernet Port Only	Varies by speed – See Attachment 4	IP port using Gigabit Ethernet access; AVPN MPLS IP Port. Speeds from 1 Mbps to 10 Gbps. Requires gigabit Ethernet access circuit.
AVPN VLAN	AVVL*	**Note: This Product is no longer available. Existing customers will continue to be supported.**

Feature Name	Identifier	Feature Description
		VLAN definition on Ethernet access port; AVPN Virtual LAN (VLAN) defines separate LANs on a single Ethernet port. VLAN speeds available from 1 Mbps to 1000 Mbps. Requires Unilink feature

Port Speeds Availability by Protocol:

Speed	Identifier	IP (PPP)	Frame	ATM	Ethernet
56 Kbps	17972	-	X	-	-
128 Kbps	17974	X	X	-	-
256 Kbps	17976	X	X	-	-
384 Kbps	17978	X	X	-	-
512 Kbps	17980	X	X	-	-
640 Kbps	17982	-	-	-	-
Note: This Port speed is no longer available. Existing customers will continue to be supported.					
768 Kbps	17984	X	X	-	-
1 Mbps	19616	-	-	-	X
1024 Kbps	17985	X	X	-	-
1.544 Mbps	17986	X	X	X	-
2 Mbps	19617	-	-	-	X
3 Mbps	19618	-	-	-	X
3.088 Mbps	17990	X	-	X	-
4 Mbps	19619	-	-	-	X
4.632 Mbps	17992	X	-	X	-
5 Mbps	17995	X	X	X	X
6 Mbps	19620	-	-	-	X
6.176 Mbps	17994	X	-	X	-
7 Mbps	19621	-	-	-	X
7.720 Mbps	17996	X	-	X	-
8 Mbps	19622	-	-	-	X
9 Mbps	19623	-	-	-	X
9.264 Mbps	17998	X	-	X	-
10 Mbps	17999	X	X	X	X
10.808 Mbps	18001	X	-	X	-
12.352 Mbps	18003	X	-	X	-
15 Mbps	18005	X	X	X	-
20 Mbps	18007	X	X	X	X
25 Mbps	18008	X	X	X	-
30 Mbps	18009	X	X	X	X
40 Mbps	19624	-	-	-	X
45 Mbps	18013	X	X	X	-
50 Mbps	18010	X	-	X	X
60 Mbps	19625	-	-	-	X

Speed	Identifier	IP (PPP)	Frame	ATM	Ethernet
70 Mbps	19626	-	-	-	X
75 Mbps	18011	X	-	X	-
80 Mbps	19627	-	-	-	X
90 Mbps	19628	-	-	-	X
100 Mbps	18014	X	-	X	X
150 Mbps	19629	-	-	-	X
155 Mbps	18015	X	-	X	-
200 Mbps	18016	X	-	-	X
250 Mbps	20410	-	-	-	X
300 Mbps	18017	X	-	-	X
400 Mbps	18018	X	-	-	X
450 Mbps	20401	-	-	-	X
500 Mbps	18019	-	-	-	X
600 Mbps	18020	-	-	-	X
622 Mbps	18021	X	-	-	-
700 Mbps	18022	-	-	-	X
800 Mbps	18023	-	-	-	X
900 Mbps	18024	-	-	-	X
1 Gbps	18025	-	-	-	X
2 Gbps	21943	-	-	-	X
2.5 Gbps	21944	-	-	-	X
3 Gbps	21945	-	-	-	X
3.5 Gbps	21946	-	-	-	X
4 Gbps	21947	-	-	-	X
4.5 Gbps	21948	-	-	-	X
5 Gbps	21949	-	-	-	X
5.5 Gbps	21950	-	-	-	X
6 Gbps	21951	-	-	-	X
6.5 Gbps	21952	-	-	-	X
7 Gbps	21953	-	-	-	X
7.5 Gbps	21954	-	-	-	X
8 Gbps	21955	-	-	-	X
8.5 Gbps	21956	-	-	-	X
9 Gbps	21957	-	-	-	X
9.5 Gbps	21958	-	-	-	X
10 Gbps	21959	-	-	-	X

AT&T VPN Diversity Options

The AT&T VPN Diversity Options help protect Customer's network in the event of a failure of an AT&T switch or router at an AT&T POP. Customer may designate one or more AT&T VPN

Diversity Options. AT&T VPN Diversity Options are available only for Frame Relay MPLS Ports, ATM MPLS Ports, and IP MPLS Ports.

For Frame Relay MPLS Ports and ATM MPLS Ports, each Diversity Option includes up to three mutually exclusive groups of MPLS Ports. The total number of MPLS Ports in each Diversity Option may not exceed 1,000.

For IP MPLS Ports, each Diversity Option may include up to six mutually exclusive groups of MPLS Ports. The total number of MPLS Ports in each Group may not exceed one.

Changing the assignment of an MPLS Port from one AT&T VPN Diversity Option to another is considered a disconnection of the existing Diversity Option MPLS Port assignment and a new assignment of the MPLS Port to the new AT&T VPN Diversity Option arrangement.

For Ports located in the US, AT&T VPN Diversity Options are not available for MPLS DSL Access Connections or MPLS Ethernet Ports

- **AT&T VPN Service Diversity Option**

  In the Service Diversity Option, AT&T will provision each group of MPLS Ports to a different group of AT&T switches or routers at the same AT&T POP. An MPLS Port may not be included in more than one Service Diversity Option.

- **AT&T VPN POP Diversity Option**

  In the POP Diversity Option, AT&T will provision each group of MPLS Ports to switches or routers at a different AT&T POPs or group of AT&T POPs. An MPLS Port may not be included in more than one POP Diversity Option.

Feature Name	Identifier	Feature Description
AVPN Service Diversity	18032-18081	Frame Relay or ATM Port Diversity within the same MPLS POP; AVPN MPLS frame relay or ATM service diversity within the same MPLS POP. Access speeds from 56 Kbps to 622 Mbps at corresponding port speeds.
AVPN POP Diversity	18093-18146 19644-19656 20403,20412	Frame Relay or ATM MPLS POP Diversity; AVPN MPLS frame relay or ATM POP diversity. Access speeds from 56 Kbps to 1 Gbps at corresponding port speeds.

AVPN Layer 2 PVCs
Note: This Product is no longer available. Existing customers will continue to be supported.

Feature Name	Identifier	Feature Description
AVPN Layer 2 PVCs	18152-18189	**Note: This Product is no longer available. Existing customers will continue to be supported.** Layer 2 PVC between two frame relay or ATM MPLS ports. PVC speeds from 4 Kbps to 40 Mbps.

AVPN Class of Service (CoS)

The 6 Class of Service (CoS) feature enables Customer to classify traffic among six classes:

- CoS 1: Designed for jitter and latency sensitive applications.
- CoS 2V: Designed to carry very high priority business applications or may carry jitter sensitive applications like video when CoS1 is already in use.
- CoS 2: Designed to carry high priority business applications.
- CoS 3: Designed to carry medium priority business applications.
- CoS 4: Designed to carry low priority business applications.
- CoS 5: Designed to carry low priority background business applications.

Each CoS has a specific amount of bandwidth allocation. If any class does not use its entire bandwidth allocation, data packets from other classes can share the unused bandwidth. To implement the 6 CoS feature, Customer may select one of four CoS Packages at the MPLS Port level, each of which supports a specified number of Classes of Service. Once the CoS Package is selected, Customer then selects a CoS Profile from the Profiles Available for that CoS Package, which may be done at the Logical Channel level if Customer has multiple Logical Channels on the MPLS Port. The CoS Profile defines the bandwidth allocation for each CoS, as indicated in the 6 CoS Profile Bandwidth Allocation Table.

The 6 CoS feature is available on IP MPLS Ports, subject to the following limitation: Multimedia High and Multimedia Low packages are not available on IP MPLS port speeds of 64k, 128k, 192k, 256k, 320k, 384k, 448k, 512k, 576k, 640k, 704k.

The 6 CoS feature is available on MPLS DSL Access Connections, MPLS ADSL Line Shared Connections, and MPLS DSL Ports, subject to the following limitation: Customer traffic will be routed in the AT&T Network consistent with the CoS markings applied by Customer at the CPE router; however, Customer traffic may not be routed consistent with COS traffic prioritization over the MPLS DSL Access Connection or MPLS ADSL Line Shared Connection, as applicable,

between the DSL provider and the MPLS Port. Due to this limitation, there is no charge for the 6 CoS feature on these ports/connections.

Feature Name	Identifier	Feature Description
AVPN CoS Package Multi-Media High	18193-18246, 19672-19685, 21977-21993, 20405, 20414	Class of Service (CoS) package for heavy multimedia traffic; Seven profiles, 60-90% real time, and speeds from 56 Kbps to 10 Gbps. Supports CoS 1, 2V, 2, 3, 4, 5, and No CoS.
AVPN CoS Package Multi-Media Standard	18251-18304, 19686-19699, 21994-22010, 20406, 20415	Class of Service (CoS) package for moderate multimedia traffic; Ten profiles, 10-50% real time, and speeds from 56 Kbps to 10 Gbps. Supports CoS 1, 2V, 2, 3, 4, 5, and No CoS.
AVPN CoS Package Critical Data	18309-18362, 19700-19713, 22011-22027, 20407, 20416	Class of Service (CoS) package for high-priority business data traffic; Four profiles, 0-30% best effort, speeds from 56 Kbps to 10 Gbps. Supports CoS 2, 3, 4, 5, and No CoS.
AVPN CoS Package Business Data	18367-18420, 19714-19727, 22028-22044, 20408, 20417	Class of Service (CoS) package for normal business data traffic; Four profiles, 0-30% Best Effort, speeds from 56 Kbps to 10 Gbps. Supports CoS 3, 4, and No CoS.

AVPN Unilink

Feature Name	Identifier	Feature Description
AVPN Unilink	18428-18481, 19658-19671, 21960-21976, 20404, 20413	Multiple logical connections on AVPN port; Allows multiple logical connections on AVPN port. Speeds from 56 Kbps to 10 Gbps.

AVPN Managed Router Features and Options

Under the AT&T VPN Managed Router feature, AT&T provides, configures, monitors, manages and maintains the AT&T-provided Equipment located at the Customer Site. The Equipment may consist of a router and other Equipment, as applicable, e.g. an asynchronous modem used to diagnose and manage the router.

The management demarcation point for AT&T VPN is the LAN interface card on the router at the Customer Site. ***Note:*** *The customer must provide a non-PBX dial up line for each managed router.*

Logical configurations or other router management commands employed by AT&T with Managed Router Equipment, whether AT&T or Customer-owned Equipment, are the sole and

exclusive property of AT&T. Logical configurations and other router commands are confidential AT&T Information. Upon termination of Service or disconnection or termination of a Site, Customer shall have no right to use, or ownership interest in, the logical configurations or other router management commands present or loaded on Equipment. Upon termination of Service or disconnection or termination of a Site, Customer shall ensure that Equipment is returned or made available to AT&T to allow removal of all AT&T confidential Information, including logical configurations and router management commands

AVPN Managed Router Features:

- Managed Router
  - AT&T-owned, AT&T-managed Routers
  - Customer-owned, AT&T-managed Routers
- Class of Service (CoS4 and CoS6)
- IPv4/IPv6 Dual Stack
- Resiliency (Backup, Redundancy, and Load Sharing) options (10 options, including ISDN backup) for Frame/ATM ports:
  - **Resiliency Level 1**
    Single Customer Site CPE (CE), Single Access line, back up via ISDN
    Single CE, Dual Access lines, Primary/Backup
    Single CE, Dual Access lines, Primary/Backup, ISDN
    Single CE Dual Access lines, Load Sharing
    Single CE Dual Access lines, Load Sharing, ISDN
    Dual CE, Single Access line, ISDN

  - **Resiliency Level 2**
    Dual CE, Dual Access, Primary/Backup
    Dual CE, Dual Access, Primary/Backup, ISDN
    Dual CE, Dual Access, Load Sharing
    Dual CE, Dual Access, Load Sharing, ISDN

- Unilink (multiple VPN) support
- Port Diversity options: POP & Service
- Hybrid networks (a combination of Transport and Managed sites)
- Hub and Spoke VPNs
- SNMP Read-only Router Access
- Netflow v5 Enablement
- Managed Reports
- Managed SLAs
  - Network SLAs (latency, delay, jitter)
  - On-time Provisioning, Availability/TTR, and Site-to-Site performance SLAs (delay, latency, and jitter)

Router Selection

Engineering rules drive default router selection, based on the port size and features selected by the customer; Router configuration will default to the smallest serviceable device for the site; however, default router selection can be overridden by the customer. In addition to port size, engineering rules factor in features such class of service. For example, a different router could be selected based on the real-time requirements: a small router would be selected for no real-time traffic, a medium router would be selected for a Multimedia Standard COS package, and a large router would be selected for a Multimedia High COS package.

Diagnostics and Life Cycle Maintenance

AT&T performs life-cycle maintenance and diagnostic monitoring. AT&T's support includes:

- Proactive 7-days-per-week, 24-hours-per-day (7 x 24) diagnostic monitoring of Service Components provided;
- Help desk support;
- Coordination, as appropriate, with the local carrier or the hardware or software vendor in the event of a disruption or a degradation of service performance or in connection with AT&T's ongoing capacity management;
- Router maintenance hardware replacement as needed in the event of service disruption or degradation.
- Ongoing proactive software maintenance updates to AT&T-provided CPE in accordance with AT&T's maintenance schedule; and
- Problem management, including logging, tracking and escalating reported problems based on severity levels, as well as dispatch of and problem diagnosis by local carrier or hardware maintenance personnel.

Basic Inside Wiring Extension for US Sites

At new Customer Sites in the contiguous 48 United States, AT&T will install up to 300 feet of industry standard 2-Pair, 24-gauge shielded cable connecting the interface point where the local access provider terminates the access circuit in a modular jack at the Site to the AT&T-managed router at the Site for fractional T1, T1, and NxT1 MPLS Ports ("Inside Wire").

AT&T will arrange for the provision of all cable, jacks and necessary tools to perform the necessary work activities for Inside Wire Service. AT&T will terminate both ends of the installed cable in AT&T-provided RJxx jacks and label the jacks. AT&T will also test the continuity of AT&T-installed cable by testing the AT&T-installed cable for opens, shorts, reversals, miswires and split pairs.

All Inside Wire Service will be performed between the hours of 8:00 a.m. and 5:00 p.m. local time, Monday through Friday, excluding holidays ("Business Hours").

Inside Wire is only available at Customer Sites where there is a Standard Wiring Environment. Standard Wiring Environment means AT&T is able to: (a) install all necessary cable at the Site on a single floor through, and attach to, the support structure of a suspended ceiling that does not exceed a height of ten (10) feet; (b) pull all necessary cable through the interior portion of a wall

that does not require holes drilled in order to pull through the cables or through empty (or pull string equipped) conduit existing at the Site; (c) utilize one technician for no more than two hours per cable run of 300 feet or less, (d) use existing conduits that are free and clear with pull strings, adequate pull boxes, and sufficient capacity for installations and are owned by the Customer, and (e) utilize sufficient space in the Customer's computer room, telephone closet, equipment room, or electrical room to install cables. A Standard Wiring Environment does not require (a) the assistance of union workers, (b) core drilling, fire-stopping, installation of surface raceway or conduit, or use of special equipment (e.g. scissors lift, extension ladder, hammer drill, concrete saw, jackhammer, mechanical lifts or scaffolding) (c) cable runs that exceed three hundred (300) feet from the local access demarcation point, (d) removal and/or replacement of interlocking ceiling tiles, (e) wire mold or power/communication poles, (f) coring, conduit placement, penetration of firewall, sleeve placement, installing or painting of backboards, or (g) any work to be performed in any area that has been certified or suspected as being asbestos hazarded.

In conjunction with the Site survey, AT&T will inspect the location and determine if the Site qualifies as a Standard Wiring Environment. If the Site qualifies as a Standard Wiring Environment, then at Customer's request AT&T will provide Inside Wire.

Inside Wire is not available where the local access demarcation point is not inside the physical premises at the Site. Inside Wire is not available in connection with moves at existing Sites. AT&T will install inside wire only to connect the AT&T VPN router to the local access demarcation point. AT&T will not provide Inside Wire for demarcation extensions for other services or features of AT&T VPN, such as ISDN, analog lines, or extensions for DS3 and OCx connections.

AT&T-Owned/AT&T-Managed Option

Under the AT&T-Owned/AT&T-Managed option, the Managed Router is owned by AT&T and made available to Customer for use as part of AT&T VPN Service.

Upon termination of the Service or de-installation of any Site, Customer shall make the AT&T CPE at such Site available for removal by AT&T or third party designated by AT&T and return it in the same condition as originally installed, ordinary wear or tear excepted, or Customer shall pay for restoration of the AT&T CPE to such condition.

Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.

Feature Name	Identifier	Feature Description
AVPN Managed	18495	Installation of a Basic size router, including basic

Feature Name	Identifier	Feature Description
Router (AT&T Owned) – Basic		inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 FE LAN ports and 1 WAN port. Supports 56kbps to 4xT1 WAN links.
AVPN Managed Router (AT&T Owned) – Small	18496	Installation of a Small size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 FE LAN ports and 1 WAN port. Supports 56kbps to 6xT1 WAN link.
AVPN Managed Router (AT&T Owned) – Medium	18497	Installation of a Medium size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. 56kbps to 8xT1 or WAN link.
AVPN Managed Router (AT&T Owned) – Large	18498	Installation of a Large size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3 or Ethernet to 100 Mbps WAN Link.
AVPN Managed Router (AT&T Owned) – XLarge	18499	Installation of an XLarge size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3 or Ethernet to 100 Mbps WAN link.
AVPN Managed Router (AT&T Owned) – XLarge +	18500	Installation of an XLarge+ size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 3 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3, Ethernet to 200 Mbps, or OC3 WAN link.
AVPN Managed Router (AT&T Owned) – XXLarge	19205	Installation of an XXLarge size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 3 GE LAN ports and 1 WAN port. Supports 56 Kbps to 8xT1, T3, Ethernet to 1000 Mbps, OC3 or OC12 WAN link.
Lost Equipment Charge for AT&T Owned CPE	N/A	Upon termination of Service or de-installation at any site, if AT&T CPE is lost or destroyed, or Customer is not able to return AT&T-owned CPE, the Customer shall be responsible for paying a lost equipment charge equal to the residual value of the CPE lost or destroyed.

Customer-Owned/AT&T-Managed Option

Under the Customer-owned/AT&T-Managed option, Customer purchases the Managed Router that is used as part of AT&T VPN Service. AT&T configures, monitors, manages and maintains the AT&T-provided Equipment located at the Customer Site. Additional Customer Responsibilities apply to Customers who elect the Customer-Owned/AT&T-Managed Option.

The router will be ordered through as a "Customer Owned Router," which will generate an Equipment Order List (EOL) that will be provided to the customer by the AVPN Deployment Manager (ADM). Customers will use this EOL to order the correct router configuration from AT&T Connectivity Services (ACS), Cisco, or a Cisco VAR. The Customer must order the equipment as shown – no variations or substitutions. The equipment will be shipped to the AT&T Staging Center. If the equipment is found to be incorrect upon arrival at the AT&T Staging Center, the order will be placed on hold and the equipment will be returned to the Customer at the Customer's expense for correction.

For COR feature, customers are required to:

- Purchase a new Router. Refurbished or reused routers are not supported.
- Purchase and have delivered to AT&T only routers listed on the AT&T supplied Equipment Order List (EOL). Only the router manufacturer and type listed on the EOL are supported under the Customer-Owned Router Option. Customer is responsible for and shall bear all shipping costs (and bears any risk during shipment) associated with supplying AT&T with a customer-owned router.
- AT&T's acceptance of the router delivered by Customer shall be at AT&T's sole discretion and shall be based on compliance with the EOL listed requirements that (a) the router hardware/software configuration are consistent with the configuration on the EOL; and (b) the router passes an operational (power-up) test.
- Customer is solely responsible for remediation of any issues that result in a noncompliant router. Customer shall be responsible for communication of any requirements to the router manufacture to remediate noncompliant configurations or operational failures. Customer is solely responsible and shall bear all costs (including shipping, packaging, etc.) associated with router return or remediation and shall bear all risk of loss during shipment of returned or remediated routers.

Demarcation of customer-owned vs. AT&T-owned equipment is the router itself – anything inside the router is customer owned, equipment outside the router on the WAN side (cables, CAS, modem) is AT&T owned.

AT&T assumes responsibility for all hardware/software maintenance of router, once installed.

For the Customer-owned/AT&T-Managed option, the customer purchases the Managed Router that is used as part of AT&T VPN Service. Upon termination of the Service or de-installation of any Site, the customer must make the CPE at the site available to AT&T to allow for the removal of the confidential AT&T Information from the router configuration.

Feature Name	Identifier	Feature Description
AVPN Managed Router (Customer Owned) – Basic	18522	Installation of a Basic size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 FE LAN ports and 1 WAN port. Supports 56kbps to 4xT1 WAN links.
AVPN Managed Router (Customer Owned) – Small	18523	Installation of a Small size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 FE LAN ports and 1 WAN port. Supports 56kbps to 6xT1 WAN links.
AVPN Managed Router (Customer Owned) – Medium	18524	Installation of a Medium size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. 56kbps to 8xT1 WAN links.
AVPN Managed Router (Customer Owned) – Large	18525	Installation of a Large size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3, or Ethernet to 100 Mbps WAN link.
AVPN Managed Router (Customer Owned) – XLarge	18526	Installation of an XLarge size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 2 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3, or Ethernet to 100 Mbps WAN link.
AVPN Managed Router (Customer Owned) – XLarge +	18527	Installation of an XLarge+ size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 3 GE LAN ports and 1 WAN port. Supports 56kbps to 8xT1, T3, Ethernet to 200 Mbps, or OC3 WAN link.
AVPN Managed Router (Customer Owned) – XXLarge	19204	Installation of an XXLarge size router, including basic inside wiring. Includes configuration, life-cycle maintenance and diagnostic monitoring. Base router with 3 GE LAN ports and 1 WAN port. Supports 56 Kbps to 8xt1, T3, Ethernet to 1000 Mbps, OC3 or OC12 WAN link.

Internal and External CSU Options

The CSU options will be determined by the AVPN port speed and type selected above.

- Internal CSUs may be AT&T Owned or Customer Owned.

- AT&T Owned and Managed Probes (External CSU) – may be used with AT&T Owned or Customer Owned Managed Router.
- External CSU is required for AVPN Managed Enhanced Reports

Feature Name	Identifier	Feature Description
AVPN Managed Internal CSU (AT&T Owned):		
AVPN Managed Internal CSU (AT&T Owned) – 56/64K	18487	Per serial port (56Kbps w/ CSU function) added & used on the router for either Frame Relay or Private Line connectivity.
AVPN Managed Internal CSU (AT&T Owned) – Internal T1	18488	Per serial port (<=T1 w/ CSU function) added & used on the router for either Frame Relay or Private Line connectivity.
AVPN Managed Internal CSU (AT&T Owned) –T3DS3	18489	Per T3 port added & used on the router for Frame Relay connectivity.
AVPN Managed Internal CSU (AT&T Owned) –IMA	19925	Per T1 port added & used on the router for IMA connectivity. One per IMA port.
AVPN Managed Internal CSU(AT&T Owned) –MLPPP	19926	Per T1 port added & used on the router for MLPPP connectivity. One per IMA port.
AVPN Managed Internal CSU(AT&T Owned) –T3/DS3 ATM protocol	19927	Per T3 port added & used on the router for ATM connectivity.
AVPN Managed Internal CSU (AT&T Owned) – Internal T3/DS3 PPP protocol	19928	Per T3 port added & used on the router for Private Line (PPP or Frame Encap) connectivity.
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – Low End	21797	Gigabit Ethernet port with SFP LC connector and SX or LX/LH transceiver. Per port added.
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – High End	21798	Gigabit Ethernet port Network Module with 1000BASE-T GBIC, or 1000BASE-SX Short Wavelength GBIC (Multimode only), or 1000BASE-LX/LH long haul GBIC (singlemode or multimode). Per port added.
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet Combo	21799	Gigabit Ethernet port Network Module with 1000Base-ZX extended reach GBIC (singlemode). Per port added.
AVPN Managed Internal CSU (AT&T	21903	Per OC3 ATM ports added.

Feature Name	Identifier	Feature Description
Owned) – OC3/STM1 ATM		
AVPN Managed Internal CSU (AT&T Owned) – OC3/ STM1 PPP	21904	Per OC3 PPP ports added.
AVPN Managed Internal CSU (AT&T Owned) – OC3/STM4 PPP	21905	Per OC12 PPP ports added.
AVPN Managed Internal CSU (Customer Owned):		
AVPN Managed Internal CSU (Customer Owned) – 56/64K	22852	Per serial port (56Kbps w/ CSU function) added & used on the router for either Frame Relay or Private Line connectivity.
AVPN Managed Internal CSU (Customer Owned) – T1	22853	Per serial port (<=T1 w/ CSU function) added & used on the router for either Frame Relay or Private Line connectivity.
AVPN Managed Internal CSU (Customer Owned) – T3/DS3	21919	Per T3 port added & used on the router for Frame Relay connectivity.
AVPN Managed Internal CSU (Customer Owned) – IMA	22854	Per T1 port added & used on the router for IMA connectivity. One per IMA port.
AVPN Managed Internal CSU (Customer Owned) – MLPPP	22855	Per T1 port added & used on the router for MLPPP connectivity. One per IMA port.
AVPN Managed Internal CSU (Customer Owned) – T3/DS3 ATM protocol	22856	Per T3 port added & used on the router for ATM connectivity.
AVPN Managed Internal CSU (Customer Owned) – Internal T3/DS3 PPP protocol	22857	Per T3 port added & used on the router for Private Line (PPP or Frame Encap) connectivity.
AVPN Managed Internal CSU (Customer Owned) –	21927	Gigabit Ethernet port with SFP LC connector and SX or LX/LH transceiver. Per port added.

Feature Name	Identifier	Feature Description
Gig Ethernet – Low End		
AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – High End	21928	Gigabit Ethernet port Network Module with 1000BASE-T GBIC, or 1000BASE-SX Short Wavelength GBIC (Multimode only), or 1000BASE-LX/LH long haul GBIC (singlemode or multimode). Per port added.
AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – Combo	21929	Gigabit Ethernet port Network Module with 1000Base-ZX extended reach GBIC(singlemode). Per port added.
AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 ATM	21910	Per OC3 ATM ports added.
AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 PPP	21911	Per OC3 PPP ports added.
AVPN Managed Internal CSU (Customer Owned) – OC12/STM4 PPP	21912	Per OC12 PPP ports added.
AT&T Owned and Managed External CSU:		
AT&T Owned and Managed External CSU 56K	19932	**Note: This Product is no longer available. Existing customers will continue to be supported.** External CSU per 56K port. Required for Enhanced Reporting.
AVPN Managed External CSU/DSU T1/E1	19933	External CSU/DSU per T1 port. V.35 connection to router. Required for Enhanced Reporting.
AVPN Managed External In-line Probe NXT1/E1 PPP	19935	External probed per NXT1 port for MLPPP connectivity. RJ45 connection to router. Required for Enhanced Reporting.
AVPN Managed External Probe T3/E3 FR	19937	External Probe per T3 FR port. Coax interface to router. Required for Enhanced Reporting.
AVPN Managed External Probe T3/E3 ATM	19936	External Probe per T3 ATM port. Coax interface to router. Required for Enhanced Reporting.
AVPN Managed External Probe T3/E3	19938	External CSU per T3 PPP port. Coax interface to router. Required for Enhanced Reporting.

Feature Name	Identifier	Feature Description
PPP		
AVPN Managed External Probe OC3 ATM/PPP	19939	External Probe per OC3 ATM port. Fiber interface to router. Required for Enhanced Reporting.
AVPN Managed External Probe 10/100 Mbps Ethernet	22663	External Probe per Ethernet 10/100 port. RJ-45 connection to router. Required for Enhanced Reporting.
AVPN Managed External Probe 1 Gbps Ethernet	22664	External Probe per Ethernet 1 Gbps port. Fiber connection to router. Required for Enhanced Reporting.
Reports:		
AVPN Managed Enhanced Reports	19947	Enhanced network performance reporting. Requires external CSU/DSU or probe. Per CSU/DSU or probe.

Additional Router Features:
Options below may be added to the AT&T Owned Router or Customer Owned router depending on the selection of WAN port speed, COS, resiliency, protocol, and LAN port quantities.

Feature Name	Identifier	Feature Description
AVPN Managed (AT&T Owned) Additional Router Features:		
AVPN Managed (AT&T Owned) Router - Additional Protocol Support	18502	SNA or IPX - Includes cost for additional IOS feature set required. In some cases additional router memory may be required in order to hold the IOS and allow the router to function. These additional memory costs are NOT covered under this charge, but will be charged under the Additional Memory feature
AVPN Managed (AT&T Owned) Router - Additional Serial Port	18517	Per serial port added & used on the router
AVPN Managed (AT&T Owned) Router - Additional LAN Port	18518	Per card added & used Token Ring, ethernet or Fast ethernet port in use on the router
AVPN Managed (AT&T Owned) Router - Additional Memory up to XL	18516	All available memory above the defaults are available at additional monthly recurring charge

Feature Name	Identifier	Feature Description
AVPN Managed (AT&T Owned) Router – Additional Memory XL+	21906	All available memory above the defaults are available at additional monthly recurring charge.
AT&T Managed (AT&T Owned) Router – Dual Power XL+	21908	Added for routers equipped with dual power supplies.
AT&T Managed (AT&T Owned) Router – Dual Power XXL	21909	Added for routers equipped with dual power supplies.
AVPN Managed (AT&T Owned) Router- ISDN Backup BRI	19728	Per BRI port in use on the router
AVPN Managed (AT&T Owned) Router-ISDN Backup PRI	19729	Per PRI port in use on the router
AT&T Managed (AT&T Owned) Router – Multicast	22698	Added for routers configured with multicast feature.
AVPN Managed (Customer Owned) Additional Router Features:		
AVPN Managed (Customer Owned) Router - Additional Protocol Support	21917	SNA or IPX - Includes cost for additional IOS feature set required. In some cases additional router memory may be required in order to hold the IOS and allow the router to function. These additional memory costs are NOT covered under this charge, but will be charged under the Additional Memory feature
AVPN Managed (Customer Owned) Router - Additional Serial Port	21924	Per serial port added & used on the router
AVPN Managed (Customer Owned) Router - Additional LAN Port	21925	Per card added & used Token Ring, ethernet or Fast ethernet port in use on the router
AVPN Managed (Customer Owned)	21923	All available memory above the defaults are available at additional monthly recurring charge

Feature Name	Identifier	Feature Description
Router - Additional Memory up to XL		
AVPN Managed (Customer Owned) Router – Additional Memory XL+	21913	All available memory above the defaults are available at additional monthly recurring charge
AT&T Managed (Customer Owned) Router – Dual Power XL+	21915	Added for routers equipped with dual power supplies.
AT&T Managed (Customer Owned) Router – Dual Power XXL	21916	Added for routers equipped with dual power supplies.
AVPN Managed (Customer Owned) Router- ISDN Backup BRI	21920	Per BRI port in use on the router
AVPN Managed (Customer Owned) Router-ISDN Backup PRI	21921	Per PRI port in use on the router
AT&T Managed (Customer Owned) Router – Multicast	22698	Added for routers configured with multicast feature.

Managed Router Feature Resiliency Options

AT&T provides the following resiliency options for the Managed Router feature:

- Single Managed Router connected to a single MPLS Port and to an ISDN Backup connection. Network traffic is automatically re-routed to the ISDN backup connection if there is a network failure related to the MPLS Port.

- Single Managed Router connected to dual MPLS Ports configured in a Primary/Backup arrangement. Network traffic is automatically re-routed from the Primary MPLS Port to the Backup MPLS Port if there is a network failure related to the Primary MPLS Port.

- Single Managed Router connected to dual MPLS Ports configured in a Primary/Backup arrangement, with an additional ISDN backup connection. Network traffic is automatically re-routed from the Primary MPLS Port to the Backup MPLS Port if there is a network failure related to the Primary MPLS Port. Network traffic is automatically re-routed from the Backup MPLS Port to the ISDN backup connection if there is a network failure related to the Backup MPLS Port.

- Single Managed Router connected to dual MPLS Ports configured in a Load Sharing arrangement. Network traffic is distributed between the MPLS Ports based on customer-defined traffic distribution criteria. If there is a network failure related to one of the MPLS Ports, all network traffic is automatically re-routed over the active MPLS Port.

- Single Managed Router connected to dual MPLS Ports configured in a Load Sharing arrangement, with an ISDN connection available for backup. Network traffic is distributed between the MPLS Ports based on customer-defined traffic distribution criteria. If there is a network failure related to one of the MPLS Ports, all network traffic is automatically re-routed over the active MPLS Port. If there is a network failure related to both MPLS Ports, the network traffic is automatically re-routed to the ISDN Backup connection.

- Dual Managed Routers, with one Managed Router connected to an MPLS Port and the other Managed Router connected using ISDN for backup. If there is a network failure related to the Managed Router connected to the MPLS Port, the network traffic is automatically re-routed to the ISDN Backup connection.

- Dual Managed Routers connected to dual MPLS Ports configured in a Primary/Backup arrangement. Network traffic is automatically re-routed from the Primary MPLS Port to the Backup MPLS Port if there is a network failure related to the Primary MPLS Port.

- Dual Managed Routers connected to dual MPLS Ports configured in a Primary/Backup arrangement, with an ISDN connection available for backup. Network traffic is automatically re-routed from the Primary MPLS Port to the Backup MPLS Port if there is a network failure related to the Primary MPLS Port. Network traffic is automatically re-routed from the Backup MPLS Port to the ISDN backup connection if there is a network failure related to the Backup MPLS Port.

- Dual Managed Routers connected to dual MPLS Ports configured in a Load Sharing arrangement. Network traffic is distributed between the MPLS Ports based on customer-defined traffic distribution criteria. If there is a network failure related to one of the MPLS Ports, all network traffic is automatically re-routed over the active MPLS Port.

- Dual Managed Routers connected to dual MPLS Ports configured in a Load Sharing arrangement, with an ISDN connection available for backup. Network traffic is distributed between the MPLS Ports based on Customer-defined traffic distribution criteria. If there is a network failure related to one of the MPLS Ports, all network traffic is automatically re-routed over the active MPLS Port. If there is a network failure related to both MPLS Ports, the network traffic is automatically re-routed to the ISDN Backup connection.

Where ISDN back up is required, Customer must order the ISDN service directly from an ISDN service provider. Customer is responsible for the ISDN charges, including connection and usage charges. AT&T will separately provide and will charge Customer for the management of the

ISDN connection and additional charges apply for the equipment associated with the ISDN connection.

AVPN Managed Service Bundles

Description of Service

AT&T VPN Managed Service Bundle is a fully managed Customer Edge to Customer Edge service providing a managed solution for AT&T VPN Transport ("AT&T VPN").

AT&T VPN is a network-based IP VPN solution that is enabled by Multiprotocol Label Switching (MPLS). AT&T VPN service enables Customers to build a network-based MPLS virtual private network to link locations and transmit applications such as data, and video over a single connection. AT&T VPN provides the capability to establish any-to-any connectivity through a single MPLS Port to each Customer location.

Under the AT&T VPN Managed Service Bundle, AT&T provides the following:

Standard:

- AVPN Port
- Best Effort CoS
- AVPN Access Circuit
- Low-speed PPP (LSPPP) / Multilink PPP (MLPPP)
- High-speed PPP (HSPPP) Transport includes OC3 and OC12 Packet over SONET (POS)
- AT&T owned Managed Router (7X24X365)
- Router Maintenance (7X24X4 Hr Response)
- Inside Wiring and/or Demarc extension (up to 300 feet in customer provided conduit)
- Business line and modem for Out-of Band (OOB) emergency access to the Managed Router
- Any to Any and Hub and Spoke VPNs
- Network Operations Management Reports
- Managed SLAs
    - Network Performance SLAs (Packet Loss and Latency))
    - Standard Provisioning, Availability/TTR, and Proactive Notification SLAs
    - Cat 1, 2 and 3 Outages

Standard Features and Functions

Design and Engineering

AT&T will design and/or document the Customer's Network topology, applications, connectivity, projected traffic flows, and performance based upon Customer provided information and Customer-specified requirements.

- AT&T will validate hardware, software and network platforms provided as the result of the engineered router network design utilizing established AT&T testing and troubleshooting criteria.
- AT&T will also develop specifications for the type of router hardware and software necessary to support the mutually agreed goals, objectives and requirements of the engineered network solution. The specifications will include the manufacturer's router model, port capacity, software version, appropriate memory and protocol support, and addressing/routing tables.
- AT&T will review with Customer all pre-existing hardware configurations for compatibility with the Customer's requested network design.
- AT&T will document the network addressing plans, logical network device assignments and logical parameters for network management connectivity to the Customer's Network.

Installation Functions

AT&T furnishes and installs all network components and AT&T Furnished Equipment at all Sites on the Customer Network. At AT&T's option, the AT&T Furnished Equipment may come from AT&T inventory or directly from the manufacturer. As part of the installation function, AT&T provides staging of AT&T Furnished Equipment in which the AT&T Furnished Equipment is configured, and shipped to the designated Site.

During test and turn-up, the Field Engineer installs AT&T Furnished Equipment on the installation date specified in the Project Schedule. AT&T verifies connectivity to the Site and transfers the Site to the Global Client Service Center (GCSC) for management center acceptance. This marks the end of the implementation process for that particular site. AT&T technicians test connectivity through the network equipment into the AT&T Network.

AT&T will perform physical installations of AT&T Furnished Equipment or Customer Provided Equipment during local Standard Business Hours, Monday through Friday, utilizing an AT&T provided on-site supplier.

Implementation Functions

AT&T provides project implementation, management and installation services for all network and equipment components.

Project Implementation Management ("PIM") includes the development of project schedules and identification of all Customer and AT&T activities necessary to implement the network solution. This includes:

- Development of project timeline
- Coordination of transport and provisioning of Equipment
- Tracking and managing to completion all activities in AT&T project plan
- Logical Management Configuration

- AT&T will load the logical management configurations and perform logical connectivity testing to determine that connected Sites can communicate with each other and with the appropriate AT&T network management center.
- AT&T will utilize network acceptance tests between the AT&T work centers and designated Customer interface(s) to verify connectivity between Customer LAN ports. These tests do not test host/LAN applications through the network.
- Logical configurations loaded on Equipment, whether AT&T or Customer Equipment, are the sole and exclusive intellectual property of AT&T. Logical Configurations are confidential and proprietary AT&T Information. Upon termination of Service, Customer shall have no right to use, or ownership interest in, the logical configurations loaded on Equipment. Upon Service termination, including individual Site deletions, Customer shall ensure that AT&T has all opportunities to erase logical configurations.

Network Management

Standard Management functions consist of the following:

- Network Monitoring and Fault Identification,
- Fault Resolution, and
- Ongoing Configuration Management

Network Monitoring and Fault Identification

AT&T will proactively monitor the Customer Network, 7 days a week/ 24 hours per day, to identify faults within the Service Boundaries. AT&T WAN transport problems will be isolated, diagnosed and resolved by the AT&T network management center.

In providing the Network Monitoring and Fault Identification function, AT&T will:

- Monitor CPE interfaces within the Service Boundary utilizing SNMP techniques in-band and out-of-band.
- Perform diagnostic testing of CPE interfaces and isolate, sectionalize and identify faults as being physical or logical in nature.
- Maintain databases consisting of the logical configurations of Customer wide area network, WAN site and network connectivity, software specifications and Customer contact information.
- Provide trouble status to Customers at 1 hour intervals.

The AT&T GCSC Global Client Support Center serves as an SPOC for AT&T related faults. This activity includes the coordinated resolution with an AT&T network management center of Router Site faults caused by AT&T transport problems. In addition, the California Major Account Center (CMAC) will receive and track trouble ticket status until the trouble ticket is closed out with the customer NOC or the customer. Either the AT&T GCSC or the CMAC can be contacted to initiate a trouble ticket, get status of an existing trouble ticket or request an escalation.

Logical Fault Resolution

AT&T manages the logical configuration design for the Customer Network. Fault resolution provides for the coordinated identification and resolution of logical connectivity network problems for AT&T Furnished Equipment or Customer Equipment within the Service Boundary. Logical fault resolution includes:

- Management of the logical trouble resolution process;
- Proactive problem management and engagement of additional tiered expertise, if necessary, to resolve the logical trouble;
- If the root cause of the logical failure is outside the Service Boundary, the problem will be referred to the Customer with the diagnosis. If the cause of the failure is beyond the Service Boundary, Customer may request AT&T to assist in resolving the failure in which case Customer shall be billed on an hourly basis in accordance with the AVPN Managed Service Bundle Pricing Schedule entitled "Supplementary Professional, Engineering and Technical Services."

Ongoing Configuration Management (OCM)

AT&T will manage a database of specific information regarding the logical address configuration(s) of the AT&T Furnished Equipment and Customer Equipment and associated software specifications. AT&T will manage changes made to access lists, device passwords, and will use secured community strings for SNMP access. Configuration changes due to maintenance and moves, adds, changes or deletes ("MACDs") will be included in the database. Reloads of router configurations from the AT&T technical platform database will be performed by the AT&T work center(s) if required as a result of major outages or system failures. AT&T work center(s) may initiate software updates to Customer Equipment with prior notification to and approval from Customer.

Maintenance Functions

Except as limited herein, maintenance applies to the physical, software and firmware failure of Equipment maintained by AT&T. AT&T Furnished Equipment may be maintained only by AT&T. Customer may request AT&T to provide maintenance of Customer Equipment. Customer Equipment must be AT&T-certified. AT&T maintenance extends only to the following equipment:

- CSU/DSU
- dial backup modem
- Out of band management access modems
- Routers

AT&T will proactively isolate and diagnose Equipment hardware faults and will interface with Equipment vendors and other vendors for engineering support, parts ordering and fault resolution of physical faults within the identified service boundaries, as well as respond to Customer-reported faults. If the physical failure's root cause is outside the contractually defined service boundaries, the problem will be referred back to the Customer with the diagnosis. Equipment maintenance will also cover software/firmware problems that cannot be resolved remotely.

Equipment Maintenance Support Levels

Four Hour, 24-Hour-a-Day Service (7X24)

Under Four Hour, 24-Hour-a-Day Service (7x24), repair coverage is offered 24 hours per day, seven days per week. If dispatch is required, a field engineer will arrive at the Customer premises within four hours of the completion of trouble resolution processes, regardless of the time of day or day of the week. Dispatch of technicians will only occur after remote trouble resolution processes have determined that the problem is in the Equipment.

Network Operations Management Reports

The standard AVPN MANAGED SERVICE BUNDLE Network operations reports focus on basic router performance and include WAN and LAN utilization information. These reports are available, in color charts and graphs, via a web-based, HTML viewable format. Operations management reports are provided on a scheduled periodic basis as agreed to by AT&T and the customer, with each report displaying information gathered during the previous period's activity. Reports cover both AT&T Furnished Equipment and Customer Equipment. The standard reports are the following:

Router Information Report

The Router Detail Report provides basic inventory and logistical information about the router, such as router name, location, PVC terminations, DLCI and port speeds.

Router Performance Report

The Router Performance Report provides network and router utilization information, and network health information. The report may summarize network usage volumes and averages or report router performance on an exception basis.

Access Port Report

The Access Port Report provides the network and router performance from the volume of data that has been sent or received at the WAN port interface. This report gives a summary of WAN port activity and also lists areas for concern, based on pre-defined thresholds for WAN use.

LAN Port Report

The LAN Port Report provides the router performance based on the utilization of the LAN ports on the router. These reports, like WAN reports, provide information on utilization of LAN ports on the router and also indicate exceptions to pre-described thresholds.

AVPN Managed Service Bundles

Feature Name	Identifier	Feature Description
AVPN Managed Service Bundles w/ Standard Features		AVPN port and access using IP (PPP) protocol, POTS line, IW and/or Demarc extension services (up to 300 feet in customer provided conduit), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring, applicable CSU and Modem. AVPN Port is rate limited to selected port bandwidth. See service elements below.
AVPN Managed Service Bundle DS0 - 56 Kbps w / Type 17A Router	AVMS56A	AVPN Managed MPLS 56 Kbps service bundle. Includes: 56 Kbps MPLS Port, DS0 access circuit, POTS line, IW and or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 128 Kbps w / Type 1A Router T1	AVMS128A	AVPN Managed MPLS 128 Kbps Service Bundle. Includes: 128 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 128 Kbps w / Type 2A Router MLPPP	AVMS128B	AVPN Managed MPLS 128 Kbps Service Bundle. Includes: 128 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle

Feature Name	Identifier	Feature Description
		maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 256 Kbps w / Type 1A Router T1	AVMS256A	AVPN Managed MPLS 256 Kbps Service Bundle. Includes: 256 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 256 Kbps w / Type 2A Router MLPPP	AVMS256B	AVPN Managed MPLS 256 Kbps Service Bundle. Includes: 256 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 384 Kbps w / Type 1A Router T1	AVMS384A	AVPN Managed MPLS 384 Kbps Service Bundle. Includes: 384 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 384 Kbps w / Type 2A Router MLPPP	AVMS384B	AVPN Managed MPLS 384 Kbps Service Bundle. Includes: 384 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 512 Kbps w / Type 1A Router T1	AVMS512A	AVPN Managed MPLS 512 Kbps Service Bundle. Includes: 512 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 512 Kbps w / Type 2A Router MLPPP	AVMS512B	AVPN Managed MPLS 512 Kbps Service Bundle. Includes: 512 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.

Feature Name	Identifier	Feature Description
AVPN Managed Service Bundle DS1 - 768 Kbps w / Type 1A Router T1	AVMS768A	AVPN Managed MPLS 768 Kbps Service Bundle. Includes: 768 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 768 Kbps w / Type 2A Router MLPPP	AVMS768B	AVPN Managed MPLS 768 Kbps Service Bundle. Includes: 768 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 1024 Kbps w / Type 1A Router T1	AVMS1024A	AVPN Managed MPLS 1024 Kbps Service Bundle. Includes: 1024 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 1024 Kbps w / Type 2A Router MLPPP	AVMS1024B	AVPN Managed MPLS 1024 Kbps Service Bundle. Includes: 1024 Kbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 1.544 Mbps w/ Type 1A Router T1	AVMS1544A	AVPN Managed MPLS 1.544 Mbps Service Bundle. Includes: 1.544 Mbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS1 - 1.544 Mbps w / Type 2A Router MLPPP	AVMS1544B	AVPN Managed MPLS 1.544 Mbps Service Bundle. Includes: 1.544 Mbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle	AVMS2A	AVPN Managed MPLS 2 Mbps Service Bundle. Includes: 2 Mbps MPLS port, DS1 access circuit,

Feature Name	Identifier	Feature Description
Ethernet- Bronze - 2 Mbps w / Type 7A Router Ethernet		POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 2 Mbps w / Type 22A Router Ethernet	AVMS2B	AVPN Managed MPLS 2 Mbps Service Bundle. Includes: 2 Mbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 2 Mbps w / Type 7A Router Ethernet	AVMS2C	AVPN Managed MPLS 2 Mbps Service Bundle. Includes: 2 Mbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 2 Mbps w / Type 22A Router Ethernet	AVMS2D	AVPN Managed MPLS 2 Mbps Service Bundle. Includes: 2 Mbps MPLS port, DS1 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle NxDS1 - 3.088 Mbps w / Type 2A Router MLPPP	AVMS3088A	AVPN Managed MPLS 3.088 Mbps Service Bundle. Includes: 3.088 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 4 Mbps w / Type 7A Router Ethernet	AVMS4A	AVPN Managed MPLS 4 Mbps. Includes: 4 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 4 Mbps w / Type 22A Router Ethernet	AVMS4B	AVPN Managed MPLS 4 Mbps. Includes: 4 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 4	AVMS4C	AVPN Managed MPLS 4 Mbps. Includes: 4 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to

Feature Name	Identifier	Feature Description
Mbps w / Type 7A Router Ethernet		300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 4 Mbps w / Type 22A Router Ethernet	AVMS4D	AVPN Managed MPLS 4 Mbps. Includes: 4 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle NxDS1 - 4.632 Mbps w / Type 3A Router MLPPP	AVMS4632A	AVPN Managed MPLS 4 Mbps. Includes: 4 Mbps MPLS MLPPP port, DS1 access circuits, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 5 Mbps w / Type 7A Router Ethernet	AVMS5A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 5 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 5 Mbps w / Type 22A Router Ethernet	AVMS5B	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 5 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 5 Mbps w / Type 7A Router Ethernet	AVMS5C	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 5 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 5 Mbps w / Type 22A Router Ethernet	AVMS5D	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 5 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a

Feature Name	Identifier	Feature Description
		managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 – 5A Mbps w / Type 5 Router PPP	AVMS5E	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 5 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle NxDS1 – 6.176 Mbps w / Type 4A Router MLPPP	AVMS6176A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 6.176 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 8 Mbps w / Type 7A Router Ethernet	AVMS8A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 8 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 8 Mbps w / Type 22A Router Ethernet	AVMS8B	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 8 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 8 Mbps w / Type 7A Router Ethernet	AVMS8C	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 8 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed	AVMS8D	IP port using DS3 access;

Feature Name	Identifier	Feature Description
Service Bundle Ethernet- Silver - 8 Mbps w / Type 22A Router Ethernet		AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 8 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 10 Mbps w / Type 7A Router Ethernet	AVMS10A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 10 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 10 Mbps w / Type 22A Router Ethernet	AVMS10B	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 10 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 10 Mbps w / Type 7A Router Ethernet	AVMS10C	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 10 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 10 Mbps w / Type 22A Router Ethernet	AVMS10D	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 10 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 10 Mbps w / Type 5A Router PPP	AVMS10E	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 10 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a

Feature Name	Identifier	Feature Description
		managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 15 Mbps w / Type 5A Router PPP/	AVMS15A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 15 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 20 Mbps w / Type 7A Router Ethernet	AVMS20A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 20 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 20 Mbps w / Type 22A Router Ethernet	AVMS20B	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 20 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 20 Mbps w / Type 7A Router Ethernet	AVMS20C	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 20 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 20 Mbps w / Type 22A Router Ethernet	AVMS20D	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 20 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed	AVMS20E	IP port using DS3 access;

Feature Name	Identifier	Feature Description
Service Bundle DS3 - 20 Mbps w / Type 5A Router PPP		AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 20 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 25 Mbps w / Type Type 5A Router MLPPP	AVMS25A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 25 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 30 Mbps w / Type 5A Router PPP	AVMS30A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 30 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 40 Mbps w / Type 5A Router PPP	AVMS40A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 40 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle DS3 - 45 Mbps w / Type 5A Router PPP	AVMS45A	IP port using DS3 access; AVPN MPLS IP Port. Speeds from 5 Mbps to 45 Mbps. Includes: 45 Mbps MPLS IP Port, DS3 access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 50 Mbps w / Type 22A Router Ethernet	AVMS50A	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including

Feature Name	Identifier	Feature Description
		configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 50 Mbps w / Type 10A Router Ethernet	AVMS50B	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 50 Mbps w / Type 22A Router Ethernet	AVMS50C	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 50 Mbps w / Type 10A Router Ethernet	AVMS50D	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 100 Mbps w / Type 10A Router Ethernet	AVMS100A	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 100 Mbps w / Type 10A Router Ethernet	AVMS100B	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 150 Mbps w / Type 11A Router Ethernet	AVMS150A	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.

Feature Name	Identifier	Feature Description
AVPN Managed Service Bundle Ethernet- Bronze - 150 Mbps w / Type 26 Router Ethernet	AVMS150B	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 150 Mbps w / Type 11A Router Ethernet	AVMS150C	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 150 Mbps w / Type 26 Router Ethernet	AVMS150D	ATM, or IP port using OC-3c access; AVPN MPLS IP Port. Speeds from 50 Mbps to 155 Mbps. Includes: OC-3c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 250 Mbps w / Type 26 Router Ethernet	AVMS250A	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 250 Mbps w / Type 27 Router Ethernet	AVMS250B	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 250 Mbps w / Type 26 Router Ethernet	AVMS250C	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle	AVMS250D	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps.

Feature Name	Identifier	Feature Description
Ethernet- Silver - 250 Mbps w / Type 27 Router Ethernet		Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 500 Mbps w / Type 27 Router Ethernet	AVMS500A	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 500 Mbps w / Type 27 Router Ethernet	AVMS500B	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 600 Mbps w / Type 27 Router Ethernet	AVMS600A	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Silver - 600 Mbps w / Type 27 Router Ethernet	AVMS600B	IP port using OC-12c access, AVPN MPLS IP Port. Speeds from 200 Mbps to 622 Mbps. Includes: OC-12c access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem.
AVPN Managed Service Bundle Ethernet- Bronze - 1000 Mbps w / Type 27 Router Ethernet	AVMS1000A	IP port using Gigabit Ethernet access; AVPN MPLS IP Port. Speeds from 1 Mbps to 1000 Mbps. Includes: gigabit Ethernet access circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem
AVPN Managed Service Bundle Ethernet- Silver - 1000	AVMS1000B	IP port using Gigabit Ethernet access; AVPN MPLS IP Port. Speeds from 1 Mbps to 1000 Mbps. Includes: gigabit Ethernet access

Feature Name	Identifier	Feature Description
Mbps w / Type 27 Router Ethernet		circuit, POTS line, IW and/or Demarc extension services (up to 300 feet), installation of a managed router including configuration, life-cycle maintenance and diagnostic monitoring CSU and Modem

AVPN Managed Service Bundles Life Cycle Management Features and Services

Life Cycle Management is composed of the following functions:

- Moves, Adds, Changes and Deletes (MACDs) (via Business Direct)
- Supplementary Professional, Engineering and Technical Services
- Configuration Changes

Moves, Adds, Changes and Deletes

Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order.

All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate for non-Standard Business Hours will apply in addition to the lifecycle charges.

Supplementary Professional, Engineering and Technical Services

AT&T will provide supplementary professional, engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the table entitled "Supplementary Professional, Engineering and Technical Services."

AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. If AT&T is required to perform Services outside of Standard Business Hours, then the Non-Standard Hours rates will apply in addition to the appropriate charge for the Service being performed.

Configuration Changes

Configuration changes will be performed as requested by Customer and will be billed at the hourly rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features."

AVPN Managed Service Bundles Life Cycle Management Features and Services

Feature Name	Identifier	Feature Description
Moves, Adds, Changes and Deletes		Moves, Adds, Changes and Deletes consist of: Addition, Deletion or Moves of hardware at a Customer site, modifying routing tables, adding, deleting or modifying protocols or protocol prioritization schemes, Software Additions/Modifications of Serial and/or LAN connections. The AT&T Work Center will perform such work. Moves, Adds and Changes are provided on a per network, per transaction and/or per event basis as set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Features." Any movement that is not an Inside Move or an Outside Move is billed as a Site de-install and new order. All rates for Lifecycle activity assume that work will be performed and completed during Standard Business Hours. In the event work is performed during non-Standard Business Hours, the applicable hourly rate will apply in addition to the lifecycle charges.
Move Router Site (Inside) – Low Complexity	13092L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Inside) – Medium Complexity	13092M	38xx, 39xx series routers
Move Router Site (Inside) – High Complexity	13092H	72xx, 73xx, 76xx, ASR1002 series routers
Move Router Site (Outside) - Low Complexity	13093L	18xx, 19xx, 28xx, 29xx series routers
Move Router Site (Outside) - Medium Complexity	13093M	38xx, 39xx series routers
Move Router Site (Outside) - High Complexity	13093H	72xx, 73xx, 76xx, ASR1002 series routers
Router Site Add - Low Complexity	13118L	18xx, 19xx, 28xx, 29xx series routers
Router Site Add - Medium Complexity	13118M	38xx, 39xx series routers

Feature Name	Identifier	Feature Description
Router Site Add - High Complexity	13118H	72xx, 73xx, 76xx, ASR1002 series routers
Add/Delete Router Boards – Low Complexity	13127L	18xx, 19xx, 28xx, 29xx series routers
Add/Delete Router Boards – Medium Complexity	13127M	38xx, 39xx series routers
Add/Delete Router Boards – High Complexity	13127H	72xx, 73xx, 76xx, ASR1002 series routers
Site Delete for AT&T Provided Equipment	13119	Site Delete for AT&T Provided Equipment
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away
Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T	13109A	Cancellation to Receive On-Site Services with Less than Five Business Days notice to AT&T
Supplementary Professional, Engineering and Technical Services		AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services." AT&T will perform Professional Services as requested by Customer and agreed to by AT&T. If AT&T is required to perform Services outside of Standard Business Hours, then the Non-Standard Hours rates will apply in addition to the appropriate charge for the Service being performed.
Standard Hours (8am – 5pm local time)	13109B	Standard Hours (8am – 5pm local time) First Hour.

Feature Name	Identifier	Feature Description
First Hour		AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Standard Hours (8am – 5pm local time) Subsequent Hour	13109C	Standard Hours (8am – 5pm local time) Subsequent Hour. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Non-Standard Hours First Hour	13109D	Non-Standard Hours First Hour. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Non-Standard Hours Subsequent Hours	13109E	Non-Standard Hours Subsequent Hours. AT&T will provide supplementary engineering and technical activities, including but not limited to network re-design and re-configuration to support additional protocols, re-addressing of

Feature Name	Identifier	Feature Description
		the network and other agreed upon changes. These activities will be defined on a per Customer basis (detailed Scope of Work required) and will be priced according to the Professional services rates and charges as defined in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Lost Equipment Charge for AT&T Owned CPE	13054	Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.
Router Configuration Changes	14158	Configuration changes will be performed as requested by Customer and will be billed at the rates set forth in the Pricing Schedule, in the table entitled "Life Cycle Management Changes."

AVPN Managed Service Bundles Optional Up Lift Features and Services

- Router Protocol, Memory and Misc. Feature Upgrades to AT&T Owned and Managed Routers
- Optional Architectural Validation Professional Services
- Dial back up (Analog and ISDN (BRI and PRI)
- TACACS Read Only Access

AVPN Managed Service Bundles Optional Up Lift Features and Services

Feature Name	Identifier	Feature Description
Router Protocol, Memory and Misc Managed Router Feature Upgrades		Router protocol, memory and misc. features upgrades to AT&T owned and managed service bundle routers.
Enterprise Services IOS w/o encryption for 18XX series	MSB1000	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 1 and 17 (see router description table).

Feature Name	Identifier	Feature Description
managed router feature upgrade		
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 2, 3, 4 and 7 (see router description table).
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	IP/SNA/IPX Enterprise Services IOS w/o encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 1 and 17 (see router description table).
Advanced Enterprise Services IOS w encryption for 28XX series managed router feature upgrade	MSB1004	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 2, 3, 4 and 7 (see router description table).
Advanced Enterprise Services IOS w encryption for 38XX series managed router feature upgrade	MSB1005	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 5, 6, 8, 9, 21, and 22 (see router description table).
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	IP/SNA/IPX Advanced Enterprise Services IOS w encryption for router types 26 (see router description table).
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	Extra Memory for Enterprise and Advanced Enterprise IOS for router types 1 and 17 (see router description table).
Extra Serial Port Card for 18XX, 28XX and 38XX series managed router feature upgrade	MSB1008	Extra Serial Port Card for router types 1-9, 17, 21 and 22 (see router description table).
Extra 4 Port Serial	MSB1009	Extra 4 Port Serial Port Adapter Card for router

Feature Name	Identifier	Feature Description
Port Adapter Card for 72XX and 73XX series managed router feature upgrade		types 10, 11, 18 and 26 (see router description table).
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	2-Port Fast Ethernet 100Base TX Port Adapter for router types 10, 11, 18 & 26 (see router description table).
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	4-Port Ethernet 10BaseT Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	1-Port Gigabit Ethernet Port Adapter for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX and 73XX series managed router feature upgrade	MSB1013	1000BASE-SX Short Wavelength GBIC (Multimode only) for router types 10, 11, 18 & 26 (see router description table).
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	1000BASE-SX Short Wavelength GBIC (Copper) for router types 10, 11, 18 & 26 (see router description table).
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	Extra 4 port 10/100 Ethernet switch interface card for router types 1-9, 21 and 22 (see router description table).
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	10/100 routed port HWIC Card for router types 1-9, 21 and 22 (see router description table).

Feature Name	Identifier	Feature Description
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	GE SFP, LC connector LX/LH transceiver
1000BASE-SX SFP (DOM) for 38XX series managed router feature upgrade	MSB1018	1000BASE-SX SFP (DOM)
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	7304 Carrier Card for 7200 Series Port Adapters for router types 10, 11, 18 & 26 (see router description table).
Serial Cable managed router feature upgrade	MSB1020	Serial Cable
Console Port to CAS cable managed router feature upgrade	MSB1021	Console Port to CAS cable
Fiber Cable managed router feature upgrade	MSB1022	Fiber Cable
Rack Mount Kit managed router feature upgrade	MSB1023	Rack Mount Kit for 1841 for router types 1 & 17 (see router description table).
Extra Serial Port for ASR1000 series managed router feature upgrade	MSB1024	Extra Serial Port 1000BASE-SX SFP
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	Extra Serial Port 1000BASE-T SFP (NEBS 3 ESD)
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1026	Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared	MSB1027	2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter

Feature Name	Identifier	Feature Description
Port Adapter for ASR1000 series managed router feature upgrade		
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	Cisco ASR 1000 Series RP1 ADVANCED ENTERPRISE SERVICES
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades		
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	GE SFP, LC connector LX/LH transceiver
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	GE SFP, LC connector SX transceiver
1000BASE-T SFP managed router feature upgrade	MSB1032	1000BASE-T SFP
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	1-port 10/100 Routed Port HWIC
GigE high speed WIC managed router feature upgrade	MSB1034	GigE high speed WIC with one SFP slot
1-Port Serial WAN Interface Card managed router feature upgrade	MSB1035	1-Port Serial WAN Interface Card
4-Port 10/100 Ethernet switch	MSB1036	4-Port 10/100 Ethernet switch interface card

Feature Name	Identifier	Feature Description
interface card managed router feature upgrade		
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	1000BASE-SX SFP (DOM)
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	Data IOS for Cisco 19XX Series
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	Security IOS for Cisco 19XX Series
Data IOS for Cisco 29XX Series managed router feature upgrade	MSB1042	Data IOS for Cisco 29XX Series
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	Security IOS for Cisco 29XX Series
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	Data IOS for Cisco 39XX Series
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	Security IOS for Cisco 39XX Series
COS device 4 port	MSB1046	COS device 4 port COS switch

Feature Name	Identifier	Feature Description
COS switch managed router feature upgrade		
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	cable from: OOB modem to: COS/4
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature upgrade	MSB1048	cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.)
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	AIM Module 1800/2800/3800 DES/3DES/AES/SSL VPN Encryption/Compression
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules
12 port COS Switch managed router feature upgrade	MSB1051	12 port COS Switch
Optional Architectural Validation Professional Services	13096	AT&T's experts analyze an existing router network based upon the customer's network goals and provide specific recommendations for improvements. Additional charges will apply, as specified in the Pricing Schedule, in the section entitled "Supplementary Professional, Engineering and Technical Services."
Dial Backup		
Analog (POTS) Dial Backup Management	13060A	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. Analog dial backup provides for individual telephone lines at remote sites to access a dial line at speeds up to 56k in case of primary

Feature Name	Identifier	Feature Description
		transport failure. HUB sites may be configured with multiple, bonded analog lines to backup the primary transport in increments of 56k.
ISDN Basic Rate Interface (BRI) Dial Backup Management	13060B	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. BRI ports for ISDN may be added to a site router. Up to 4 BRI ports per site router are allowed, subject to capability constraints of the site router.
ISDN Primary Rate Interface (PRI) Dial Backup Management	13060C	The Dial Backup feature offers Customers the ability to backup their primary Wide Area Network (WAN) circuits with secondary switched circuits in order to protect against network and/or access failures. The managed ISDN and Analog Dial back up features requires Customer to obtain ISDN line (BRI or PRI) or Analog Dial line. PRI port for ISDN may be added to a site router, subject to capability constraints of the site router.
TACACS (Terminal Access Controller Access Control System) Read Only Access		
TACACS Read Only Access – Router Enablement	TACACSRE	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.
TACACS Read Only Access - Support	TACACSRS	TACACS (Terminal Access Controller Access Control System) Read Only Access Provides secure remote access to AT&T Managed router using an authentication protocol that allows a remote (customer) access server to

Feature Name	Identifier	Feature Description
		forward a customer user's logon password to an AT&T server to determine whether access can be allowed to a router.
TACACS Read Only Access – Enablement 1 to 6 Enabled Employees	TACACS1	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 7 to 12 Enabled Employees	TACACS2	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	A user will be authorized to execute simple router commands, extended ping, extended trace route, show tech-support commands to view basic router features, interface status and router configuration information. *TACACS Read Only Access is not available for more than 25 Enabled Employees for a defined customer entity.

AT&T provides all network components and configures monitors, manages and maintains the AT&T-provided Equipment located at the Customer Site.

The management demarcation point for AT&T VPN is the LAN interface card on the router at the Customer Site (Service Boundary).

Logical configurations or other router management commands employed by AT&T with Managed Router Equipment, whether AT&T or Customer-owned Equipment, are the sole and exclusive property of AT&T. Logical configurations and other router commands are confidential AT&T Information. Upon termination of Service or disconnection or termination of a Site, Customer shall have no right to use, or ownership interest in, the logical configurations or other router management commands present or loaded on Equipment. Upon termination of Service or disconnection or termination of a Site, Customer shall ensure that Equipment is returned or made available to AT&T to allow removal of all AT&T confidential Information, including logical configurations and router management commands

AVPN Managed Service Bundles Router Description

Pricing for at least two routers options, where feasible, are given for each bandwidth. The base router will be sufficient for a basic IP networking. An upgrade router is available for each speed to provide extra performance if needed for adding additional services such as IPX, DLSW, IOS firewall support or anticipation of future growth. In addition, optional versions of software and associated memory are available in addition to address various network requirements. See router description table below.

Router Description Table

Router Type	Router Description	Suggested Max EVC Mbps
AVPN, OPTEMAN and OPTEWAN Managed Service Bundle Router Types	A managed router with internal CSU will be included in each Managed Service Bundle. Engineering rules drive default router selection, based on the port size and optional features selected by the customer; Router configuration will default to the smallest serviceable device for the site. In addition to port size, engineering rules factor in features such class of service. Optional Router models are included where appropriate. For example, a different router could be selected based on the real-time requirements. A base model router may be selected for lower utilization needs such as no or modest real-time traffic, whereas a higher level router may be selected for a more taxing requirement such as supporting an AVPN port with a Multimedia High COS package near the routes bandwidth capacity. The following are a descriptions of the default routers used for the Managed Service Bundles	
Type 1 Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	1.544Mbps
Type 1A Router MLPPP	Installation of Managed Router Bundled. Includes configuration, life-cycle maintenance and diagnostic monitoring. T1 PPP Configuration: Cisco 1941 with 2 onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	1.544Mbps
Type 2 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic	3.088Mbps

Router Type	Router Description	Suggested Max EVC Mbps
	monitoring. 2-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X,IP BASE,64F/256D, Cisco 2821 or successor model	
Type 2A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 2-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	3.088Mbps
Type 3 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: AC PWR, 2GE, 4HWICs, 3PVDM,1NME-X, IP BASE,64F/256D, Cisco 2821 or successor model	4.632Mbps
Type 3A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 3-T1 MLPPP Configuration: Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	4.632Mbps
Type 4 Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Up to 25M DS3 Configuration: AC PWR, 2GE, 1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model. For Frame Relay or PPP access	6.176Mbps
Type 4A Router MLPPP	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	6.176Mbps
Type 5 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. UP to 25M DS3 Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D, Cisco 3825 or successor model	Up to 10Mbps
Type 5A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP	Up to 45Mbps

Router Type	Router Description	Suggested Max EVC Mbps
	Base, Cisco 3925 or successor model	
Type 6 Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model. For Frame Relay or PPP access	45Mbps
Type 6A Router	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Full DS3 Configuration: Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base, Cisco 3925 or successor model	45Mbps
Type 7 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration: AC PWR,2GE,4HWICs,3PVDM,1NME-X,2AIM,IP BASE,64F/256D, Cisco 2821 or successor model	10Mbps
Type 7A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Low speed Ethernet Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	20Mbps
Type 8 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps
Type 8A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps
Type 9 Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. AC PWR, 2GE, 1SFP, 4NME, 4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model.	50Mbps Fiber
Type 9A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic	50Mbps Fiber

Router Type	Router Description	Suggested Max EVC Mbps
	monitoring. Cisco 3925 with 3 onboard GE, C3900-SPE100/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 2 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3925 or successor model.	
Type 10 Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	100Mbps Cu
Type 10A Router Gig Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base., Cisco 3945 or successor model	100Mbps Cu
Type 11 Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 7304 or successor model	1Gig Fiber
Type 11A Router Gig Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	200M Fiber
Type 17 Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Modular Router w/2xFE, 2 WAN slots, 32 FL/128 DR, Cisco 1841 or successor model	56Kbps
Type 17A Router DS0	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. DS0 Configuration: Cisco 1941 with 2 onboard GE, 2 EHWIC slots, 1 ISM slot, 256MB CF default, 512MB DRAM default, IP Base, Cisco 1921 or successor model	56Kbps
Type 18 Router DR #1	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 4-slot chassis, NSE-150, 1 Power Supply,	Up to 1G fiber

Router Type	Router Description	Suggested Max EVC Mbps
	2GB Memory, 2 GE WAN Port, Cisco 7304 or successor model. (configured for dual router DR pair – must be ordered with complementary router).	
Type 20 Router DLSW Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Ent. IP SW, Dual Power Supply, Cisco 7206VXR or successor model	DLSW
Type 21 Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: AC PWR, 2GE,1SFP, 2NME, 4HWIC, IP Base, 64F/256D , Cisco 3825 or successor model	30Mbps Fiber
Type 21A Router Fiber Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Medium Speed Ethernet Configuration: Configuration Cisco 2921 with 3 onboard GE, 4 EHWIC slots, 3 DSP slots, 1 ISM slot, 256MB CF default , 512MB DRAM default, IP Base, Cisco 2921 or successor model	30Mbps Fiber
Type 22 Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. 10/100 Copper Ethernet Configuration: 4-slot chassis, NSE-150, 1 Power Supply, 2GB Memory, 1 GE WAN Port., Cisco 3845 or successor model	50Mbps
Type 22A Router Cu Ethernet	Installation of Managed Router Bundle. Includes configuration, life-cycle maintenance and diagnostic monitoring. Gigabit Ethernet Configuration: Cisco 3945 with 3 onboard GE, C3900-SPE150/K9, 4 EHWIC slots, 4 DSP slots, 1 ISM slot, 4 SM slots, 256MB CF default, 1 GB DRAM default, IP Base Cisco 3945 or successor model	100Mbps
Type 23 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. High Speed (10/100) Ethernet Configuration: AC PWR,2GE,1SFP,4NME,4HWIC, IP Base, 64F/256D, Cisco 3845 or successor model	IPSEC router
Type 24 Router IPsec Host	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and IP SW, Cisco 7200 Series IOS Advanced Enterprise Services, Cisco	IPSEC router

Router Type	Router Description	Suggested Max EVC Mbps
	7206VXR or successor model	
Type 25 Router Gig Fiber Ethernet	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco 7606-S, Cisco 7600 Supervisor 720 Fabric MSFC3 PFC3B, SUP720 IOS Advanced IP Services SSH, Cat6500 4-port 10 Gigabit Ethernet Module, Cat6500 48-port 10/100/1000 GE Mod: fabric enabled, RJ-45,2700W AC power supply,	10Gig-SR Fiber Handoff
Type 26 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. NPE-G1 includes 3GigE/FE/E Ports and Enterprise IP SW, Cisco 7206VXR or successor mode	Up to 250M
Type 27 Router – Gig E	Installation of Managed Router. Includes configuration, life-cycle maintenance and diagnostic monitoring. Cisco ASR1002 Chassis, 4 built-in GE, Dual P/S, 4GB DRAM, Cisco ASR1002 or successor model	Up to 1G

AVPN Managed Services Data Center Stand Alone Routers

Feature Name	Identifier	Feature Description
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20
IPSEC Standalone router Type 24	MSDCRT2	IPSEC Standalone router Type 24
Traffic Aggregation Standalone router Type 25	MSDCRT3	Traffic Aggregation Standalone router Type 25
Traffic Aggregation Standalone router Type 27	MSDCRT4	Traffic Aggregation Standalone Router Type 27

Under the AVPN Managed Service Bundles option, the Router is owned by AT&T and made available to Customer solely for use as part of AT&T VPN Managed Service Bundles.

Upon termination of the Service or de-installation of any Site, Customer shall make the AT&T CPE at such Site available for removal by AT&T or third party designated by AT&T and return it in the same condition as originally installed, ordinary wear or tear excepted, or Customer shall pay for restoration of the AT&T CPE to such condition.

Customer is solely responsible for the loss or destruction of AT&T-owned CPE. If AT&T CPE is lost or destroyed or not able to be returned to AT&T, Customer shall be responsible for replacement value of the equipment (as per Paragraph 74 of the CALNET II Model Contract Language "Title to Equipment"), not to exceed the cost of new, equivalent replacement CPE based on existing State discount found in CALNET II. All costs and labor associated with equipment and software replacement due to manufacture discontinuation, repair, maintenance, and upgrade, is the responsibility of AT&T.

AT&T Network Based IP VPN Remote Access (ANIRA)

The AT&T Network Based IP VPN Remote Access (ANIRA) introduces a standard set of capabilities to access AVPN. This service will provide remote access/SOHO capabilities to AVPN. Customers using ANIRA can connect to a private VPN via any of the following options as 'access':

- AT&T Dial (analog or ISDN)
- Extended access analog or Wi-Fi
- AT&T DSL
- AT&T Internet Service
- Third-party access (i.e., access circuit is not ordered or managed by AT&T) broadband or ISP.

ANIRA is a global feature, integrated with global egress services.

Following is a summary of the key ANIRA features:

- IP service
- Single user (AT&T or third-party software client) and multi-user access (select SOHO VPN devices, including NetGates and Cisco)
- Access via AT&T Dial, DSL, or other Internet access
- Integration with the following egress services: frame relay, ATM, IPFR and EVPN
- AT&T and customer-managed authentication (e.g., SecureID, RADIUS, SafeWord)
- Dual access (access to the network-based VPN and Internet)
- Support for registered and unregistered IP addresses
- IPSec and L2TP support for dial users
- No requirement for specialized CPE at the customer premises
- Usage-based and fixed rate price plans for dial users
- Global service

ANIRA supports IPSec tunnels from a VPN device (e.g., AT&T Global Network Client, or SOHO device like NetGate or Cisco 831) to the virtual interface gateway (VIG) in the network. The VIG would then terminate the IPSec tunnel and map the traffic to the appropriate data or IP VPN egress (MPLS or frame-based VPN). For dial analog or ISDN access, packets travel through the dial network by tunneling in L2TP or IPSec with the destination of the packets to a VIG, which is transparent to the customer.

The local interface gateway (LIG) provides the following network functionality:

- Dynamically assigns the user an IP address for the current session only.

- The AT&T Global Network client or the customer's logon script updates the end user's TCP/IP software configuration with the dynamically assigned IP address.
- Checks the source address of every packet to ensure it is unchanged; if a change is detected, the LIG discards the packet.
- It then checks the destination address of every packet to verify the user ID's authorization to that destination address. If authorized, the LIG allows the packet to pass. If not, the LIG discards the packet.
- The LIG checks the source address of all packets bound for the dial user. If the source address is in the user's access list, the LIG delivers the packet. If not, the LIG discards the packet.

ANIRA Service and Features

Feature Name	Identifier	Feature Description
ANIRA -IPSec Hourly Analog	6971	Local analog secure dial access to AVPN via the AT&T network, per hour of usage.
ANIRA - IPSec Hourly ISDN	6982	Local ISDN secure dial access to AVPN via the AT&T network, per hour of usage. Charge for each B-channel used.
ANIRA - IPSec Toll-Free	6994	Secure dial-up access, hourly surcharge for toll-free access when local dial is not available.
ANIRA - IPSec Monthly Analog	17563	Local analog secure dial access to AVPN via the AT&T network, per month. Up to 150 hours per month.
ANIRA IPSec - Monthly Excess	17564	Local analog secure dial access to AVPN via the AT&T network. Hourly charge for more than 150 hours.
ANIRA – Third Party Access	16940	Monthly management fee for remote access users with third-party Internet access.
ANIRA – Bandwidth Connection Charge (Type II)	17573-17604	Connection to support aggregate bandwidth between gateway (VIG) and VPN. Available in various speeds (see Attachment 4); Monthly charge for redundant virtual connection from gateway to VPN. Sized for aggregate peak usage of fixed and dial-up connections per VPN.
ANIRA - Managed Broadband Multi-User Service	17644-17650	Secure access for multi-user sites using AT&T DSL with AT&T Netgate and the AT&T Global Network Client. Available in various speeds (see exhibit 7); The feature provides business customers with a broadband solution from a remote access SOHO multi-user LAN to corporate LANs, intranets, and extranet(s), over AT&T DSL service and the AT&T SOHO VPN device using IPSec.

Feature Name	Identifier	Feature Description
ANIRA -Managed Broadband Single User Service (ADSL and IDSL)	17650a	Secure access for single-user sites using AT&T DSL with AT&T Global Network Client. Available in various speeds (see exhibit 7); The feature provides business customers with a broadband solution from a remote access single-user to corporate LANs, intranets, and extranet(s), over AT&T DSL service and the AT&T Global network client.
Managed Broadband Multi-User VPN Device	17643	Secure access device for multi-user sites using AT&T DSL or 3rd party access; ANIRA users who require broadband access will use one of these devices: AT&T NetGate 4100, AT&T NetGate 7100, or Cisco 831/836/837.
ANIRA - Extended Access and Wi-Fi/Wired Ethernet	15172	Secure Wi-Fi access using AT&T Global Network Client.; Wi-Fi support is added as a feature extension to ANIRA which has the following features: provides the ability to roam across multiple Wi-Fi networks with a consistent user login experience using the AT&T Global Network (AGN) Client and one set of login credentials for dial, broadband and Wi-Fi
ANIRA – Wi-Fi Access	17164	Secure Wi-Fi access using AT&T Global Network Client; Wi-Fi support is added as a feature extension to ANIRA which has the following features: provides the ability to roam across multiple Wi-Fi networks with a consistent user login experience using the AT&T Global Network (AGN) client and one set of login credentials for dial, broadband and Wi-Fi.

Managed Security Service (MSS) – Network Based Firewall (NBFW)

MSS-Network Based Firewall enforces traffic separation among Customers by enabling Virtual Local Area Network (VLAN) tagging. For Customers who wish to make use of the AT&T MSS-Network Based Firewall service, AT&T will establish a Private Virtual Circuit (PVC) from a Customer location to the service in order to filter the traffic coming in or going to the Internet. The type of PVC will vary based on the Customer's WAN architecture. Traffic separation is designed to occur without tunneling or encryption. This is enabled through a combination of Border Gateway Protocol (BGP), Multi-Protocol Label Switching (MPLS), and Internet Protocol (IP) address resolution as described below.

BGP is a routing information distribution protocol that is designed to define who can talk to whom using multi-protocol extensions and community attributes. Virtual Private Network (VPN) membership depends upon logical ports entering the VPN, where BGP assigns a unique route distinguisher. In an MPLS-enabled VPN, BGP distributes forwarding information base tables about VPNs to members of the same VPN. This is designed to permit users to participate on an Intranet and Extranet only if they reside on the correct physical or logical port and have the proper route distinguisher.

A packet received by the network backbone is associated with a particular VPN. A forwarding table associated with the particular VPN is used, along the originating IP address, to determine a set of possible egress interfaces and the packet's IP destination address.

For Customers with NBFW on Managed Internet Service (MIS), a Generic Routing Encapsulation (GRE) tunnel is established between AT&T's Security Data Center and Customer's MIS Plus router located on Customer's premises. Customer's traffic is separated from other Customers' traffic and the defined security policy/firewall configuration applied on the uniquely identified traffic flowing into the Network Based Firewall platform through the appropriate GRE tunnels.

Overall security and the selection and use of security facilities provided by AT&T is a Customer and User responsibility. AT&T does not guarantee that use of the security features that AT&T provides will prevent unauthorized access to Customer systems or data.

Service and Features

MSS Network Based Customers select the Feature Level for their service. This selection pre-determines basic service offering, including number of custom rules and number of included monthly changes (MACD).

Feature Name	Identifier	Feature Description	Additional Information
MSS-Network Based Firewall is available in five service levels ranging from simple outbound only security policy to extensive bi-directional policy with many optional features.			
Service Level 1	20423	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound Only • Reports via AT&T Business	One Size Fits all customers (at this level) Security Policy. Available for all Security Data Centers (SDC). **Note:** SMTP Mail

Feature Name	Identifier	Feature Description	Additional Information
		Direct • Customer is given a single public IP address (or PAT – Port Address Translation address). • Choice of up to 8 ports/protocols: HTTP (80); HTTPS (443); HTTP ALT (8080); HTTPS ALT (8443); FTP_CTRL (21); ICMP ECHO; DNS UDP/TCP (53); TELNET (23); SSH/SFTP (22).	Relay is not allowed at this Service Level as this assumes inbound as well as outbound mail traffic.
Service Level 2	20424	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound Only • Custom Security Policy (up to 10 rules) • Additional SecNets may be added • Customer is given a single public IP address (or PAT – Port Address Translation address). If more public IP addresses are required for NAT these can be bought.	Outbound only Security Policy but allowing additional rules, egress points (SDC locations), SecNets, etc. **Note:** SMTP Mail Relay is not allowed at this Service Level as this assumes inbound as well as outbound mail traffic.
Service Level 3	20425	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound and Inbound traffic • Custom Security Policy (up to 30 rules) • /28 public IP address range allocated giving 16 addresses in total. One address reserved for PAT leaving 15 spare.	Outbound and Inbound Security Policy. In addition to Level 2 options, allows more rules and larger range of public IP addresses as standard.
Service Level 4	20426	• All components are high Availability with dual redundant access links to the Internet and	Outbound and Inbound Security Policy. In addition to Level 3 options, has a larger

Feature Name	Identifier	Feature Description	Additional Information
		private side • Custom Security Policy (up to 50 rules) • /27 public IP address range allocated giving 32 addresses in total. One address reserved for PAT leaving 31 spare.	range of public IP addresses as standard and support for higher bandwidths.
Service Level 5	20427	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound and Inbound traffic • Custom Security Policy (up to 99 rules) • Support for existing alternate ISP (failover) and/or advertising the Customer IP address space is included (minimum /24 of customer's own ARIN, APNIC, RIPE or other ICANN entity registered space)	Outbound and Inbound Security Policy. In addition to Level 4 options, has support for other ISP, engineering support, etc.
Connection Bandwidth Options	20490 to 20514	Bandwidths ranging from 1.5 Mbps up to 135 Mbps. Over 135Mbps by ICB.	Available on Service Levels 1-5. San Jose SDC

For each of the Levels, AT&T MSS-Network Based provides connectivity and security monitoring (both inbound and outbound) that:

- Enables Customers to browse the Internet, logon to remote Hosts (Telnet) and complete file transfers using FTP at high speeds from around the world.
- Restricts access from the Internet into the Customer's corporate network.
- Reduces security risks by employing AT&T network security design.
- Provides a variety of access and utilization reports to help monitor Internet usage.

AT&T MSS-Network Based leverages existing AT&T private networks by:

- Installing security features directly into AT&T's network. Customer Internet access takes place via a "hub and spoke" arrangement within the AT&T packet network. Once Internet-bound traffic reaches the packet network, it is allowed access to the Internet based upon the Customer's specific Security Policy.

Standard Components:

For all levels of AT&T's MSS-Network Based Service Offer Features:

Security Monitoring:

- 7x24 monitoring of traffic into the network Firewall. This keeps inbound attacks outside of the MSS-Network Based infrastructure at the high-throughput circuits, well away from individual Customer components or services.
- Stateful Inspection of allowed IP traffic via Firewall.
- Open Systems Interconnection (OSI) Layer 2 isolation. All PVC traffic remains isolated through the MSS-Network Based Service infrastructure and the Security Policy.

Network:

- Bandwidth subscriptions from 1.544Mbps to 135Mbps (higher available as ICB) on a Secnet basis
- Support for customer source networks, using static route definitions within the firewall
- Static Network Address Translation (NAT) for customer servers (DNS, SMTP, etc.)
- Many-to-one outbound Network address translation of customer IP address space, with customer route isolation. This utilizes the Port Address Translation (PAT) facility of MSS-NB
- Resilient connections to AT&T VPN (AVPN) service.

DNS

MSS-NB service includes Domain Naming System (DNS) caching.

- A DNS service can be provided by AT&T-Enhanced Network Services (AENS) or customers can use their own DNS authority.
- The DNS caching service provided by MSS-NB gives customers name resolution and protection services. All customer DNS queries will be sent to the MSS-NB DNS caching servers from the customers' specified internal primary DNS servers.
- MSS-NB expects that customers have implemented some form of split DNS where internal resolution is done on a customer DNS server. These internal DNS servers are maintained and administered by the customer. External DNS queries will be sent from these servers to MSS-NB caching DNS servers for resolution.
- MSS-NB does not support internal customer DNS resolution. This must be provided by the customer.
- Customers will need to configure their DNS to use "forwarding" to the MSS-NB caching DNS servers for unknown domains. This prevents non-recursive attempts at resolution. Most new versions of BIND on all platforms support a global "forwarders" statement.

User Authentication

- If User Authentication is requested to be supported, Customers will be able to set policy controls over User level access to the Internet. After certain criteria is met (as determined by AT&T) and needed components are setup in the customer network, the MSS-NB platform will interface with a Customer's hosted and managed User Authentication service (RADIUS, LDAP, or Active Directory) to authenticate User activity to the Internet.. (Note: MSS-Network Based will not provision, administer, support or troubleshoot the Customer's User Authentication solution).
- User Authentication is not available for NBFW on MIS service.

Intrusion-Detection System (IDS) Logging only

- MSS-Network Based has implemented a set of certain basic IDS features, which includes limited scanning of Customer traffic for a small number of exploits, attacks and other malicious activities.
- IDS logging only is available for NBFW on MIS service.

Reporting

- MSS-Network Based provides a standard set of reports via the Business Direct portal. Content and format of the reports are subject to change without notice. AT&T maintains a Customer accessible website where reports may be obtained.

Offer Limitations:

- This Service provides Support for up to 10 total authorized Customer contacts (applies to all levels).
- Six (6) MACD service requests per month are allowed with each service level. Additional requests are subject to additional charges (applies to Service Levels 2-5 and Network Based Firewall on MIS).
- One (1) MACD service request per month is allowed for Service Level 1. Additional requests are subject to additional charges.
- No SNMP traffic is allowed to traverse the firewall (applies to all service levels).
- Only Critical ICMP (ping) traffic is allowed (troubleshooting or periodic checks)

Customers are encouraged to aggregate their Rules' source and destination addresses into networks rather than to specific Hosts. Source and destination networks should be subnetted up to the largest/most inclusive range. AT&T recommends that source or destination Rules apply to all users ("ANY"), which is usually especially for the common services needed by all users such as HTTP, HTTPS, or FTP.

If a Customer insists on specific granular source addresses, additional MSS-NB address packages can be purchased.

Optional Features

The following table describes the optional features available as a part of this service, and the Levels that apply to each:

Feature Name	Identifier	Feature Description	Additional Information
URL Filtering	20766 to 20771	Allows internet traffic to be filtered based on web site content. This option is licensed on the number of concurrent users (e.g. 100, 500, 1000, 3000, 5000, above). This option has the following features available: • Over 80 pre-defined url categories (e.g. religion, sports, etc) which are selected to be allowed or denied • The Whitelist / Blacklist function allows browsing to specific URL's to be permitted or denied. This function overrides any URL filtering options. • It is possible to block web searches based on keywords • URL blocking can also be done by IP address rather than URL name	Available on Service Levels 1-5.
Active IDS/IPS - Basic	20782	Service includes IDS/IPS initial technical consultation and applies AT&T's best practices policy. Also includes IDS policy customization and addition of a limited set of custom IDS signatures to the profile as well as proactive investigational analysis for critical events and enablement of a limited set of automated IPS capabilities. Not available with Network Based Firewall on MIS.	Available on Service Levels 1-5.
Active IDS/IPS – Advanced	20784	Provides a more customized service level and alert thresholds to meet more specific IDS requirements including a higher degree of profiling and tuning of IDS policy to strip out "noise" and provide notification on critical events.	Available on Service Levels 1-5.

Feature Name	Identifier	Feature Description	Additional Information
		Additionally, AT&T Security Analyst provides live investigational analysis for all IDS events assisting with recommended mitigation actions, and making firewall policy changes to eliminate a threat if warranted. Not available with Network Based Firewall on MIS.	
Additional SDC Egress (or Multiple Outbound Access Point)	20465 to 20489, 20440 to 20464	Allows outbound access from more than one SDC. For each additional SDC the pricing will be based on the bandwidth required for each connection (Secnet) Each extra SDC includes a /30 range of public IP addresses. Each /30 block gives 4 usable IP addresses	Available on Service Levels 1 and 2. Mesa SDC or Secaucus SDC.
Additional Site Egress & Ingress	20465 to 20489; 20440 to 20464	This option allows the customer to have inbound and/or outbound access through more than one SDC. They can select multiple SDCs. For each additional SDC there will be the following elements: • A /30 range of public IP addresses, this includes the PAT (overload) address. Each /30 block gives 4 usable IP addresses. • Two additional ePVCs for each extra SDC. • Policy setup and support for each SDC. Additional Site Egress & Ingress is not available with NBFW on MIS.	Available on Service Levels 3-5. Mesa SDC or Secaucus SDC.
Additional Secure Networks (SecNets)	20490 to 20514; 20465 to 20489; 20440 to	Based on customer definition/design, configure NBFW policies for each network segment needed, then joining that network and injecting default or host routes. Note that the chosen Service Level	Available on Service Levels 2-5. Customer can use San Jose, Mesa or Secaucus SDC.

Feature Name	Identifier	Feature Description	Additional Information
	20464	determines the number of rules, so the total of all rules under a solution needs to be within those bounds. A DMZ or other isolated MPLS network is considered to be another Network. Additional Networks are not available with NBFW on MIS.	
Application Filtering	20791	Provides inline scanning of HTTP and FTP content for common virus, spyware, and malware threats and vulnerabilities. Also provides the ability for inline scanning of Instant Messaging protocols (ICQ, MSN, Yahoo, and AIM). Not available with Network Based Firewall on MIS. Reporting functionality is not available at this time.	Available on Service Levels 1-5.
Advanced Logging	20786	Deliver hourly syslog formatted log feeds to a customer hosted FTP server if requested.	Available on Service Levels 1-5.
Additional Firewall Rules	20777	This option allows the customer to choose extra Firewall rules in addition to those provided at the Service Level. The rules can be bought in blocks of five.	Available on Service Levels 2-5.
Additional MACDs	20779	One (1) MACD service request per month is allowed for Service Level 1. For Service Levels 2-5 and Network Based Firewall on MIS, six (6) MACD service requests per month are allowed. Additional requests are subject to additional charges.	
Additional Public IP Addresses	20773, 20775	If the customer needs more than the allocated number of IP addresses for that Service Level, they can buy extra IP addresses. This benefit of	Available on Service Levels 2-5.

Feature Name	Identifier	Feature Description	Additional Information
		this option is additional NAT functionality. The IP addresses can be bought as listed below: • Multiple blocks of /30 IP addresses – up to 32. Each /30 block gives 4 usable IP addresses. A single /30 IP address range must stay with each SDC (no individual IP addresses can be spread from a single /30 to multiple sites) • Multiple blocks of /24 IP addresses – up to 10. Each /24 block gives 256 usable IP addresses. A single /24 IP address range cannot be broken into less than 32 IP addresses (i.e. a /27 subnet) for a single SDC. Additional Public IP Address are not available with NBFW on MIS.	
Cross Connect	20794, 20796	Provides connections between the NBFW instance in a Data Center location and the customer's cage in the same Internet Data Center. Cross Connect options supported are where the equipment in the cage is • managed by MSS Operations, • the equipment is managed by the customer, or • the equipment is managed by Managed Hosting Operations. Cross Connect is not available with NBFW on MIS.	Available on Service Levels 1-5.
Site Failover	20741-20765	This option allows the customer to have a single alternate SDC in the same geographical region to receive "failover traffic". A 3rd ePVC is provisioned from the alternate site to the customer's	Available on Service Levels 2-5.

Feature Name	Identifier	Feature Description	Additional Information
		MPLS network. A duplicate security policy is maintained on the alternate SDC for a specified SecNet. If a customer has multiple SecNets, they must purchase Site Failover for a specific number of SecNets. Special requirements apply for Network Based Firewall Failover which have to be followed for proper operations and which would be considered during the design phase. Site Failover is not available with NBFW on MIS.	

Customer Responsibilities

Customers are responsible for:

- Designating a person who will be the technical focal point to work with AT&T to help promote a successful implementation.
- Providing a list of desired IP protocols to deploy during the implementation including source addresses, destination addresses, ports, TCP and/or UDP and a description of the Service to be implemented.
- Providing AT&T with user workstation counts and traffic estimates if URL Filtering features or options are selected.
- Providing the necessary network information to allow AT&T to provision ingress virtual circuits into the network firewall.
- Identifying a suitable test location during enablement and implementation to properly test desired Security Policies prior to deploying all sites on the MSS-NB Service.
- Utilizing internal Hosts and servers that are properly maintained to include the latest available security patches and are not infected with any worm, trojan or virus or similar security threat. AT&T is not responsible for patching or removing security threats on Customer maintained equipment.
- Ensuring that Customer systems and networks (including outsourced and educational environments) that connect with those belonging to MSS-NB, or that use common services network features, have appropriately implemented security controls. These controls should be designed to prevent loss, disclosure, unauthorized access or service disruption, by restricting AT&T network access and use to authorized Customer personnel only. Use of the AT&T network and its facilities is intended for the contracting Customer only and not for those who may be interconnected with the

Customer's systems. The administration of individual IP addresses on a Customer's LAN, including maintaining distinct, unique and non-overlapping private IP address space.

- Customer needs to notify AT&T about any changes to a Customers configuration(s). If changes to security configurations are necessary at a given location based upon Customer notification, AT&T will review these new requirements and make recommendations as necessary.

Service Availability

The MSS-Network Based Service is designed to provide single site redundancy and optional failover to other Security Data Centers in the event of catastrophic failure. Optional failover is not available with NBFW on MIS. AT&T incorporates many automatic redundancy and diversity features designed to quickly handle failures in network components. Additionally, equipment within the AT&T backbone network and AT&T packet services networks are generally connected to other equipment with multiple routes across the global backbone or packet services network infrastructures.

The AT&T MSS-Network Based Service is available 7 X 24, except for possible outages during scheduled maintenance. AT&T utilizes the scheduled maintenance windows to upgrade equipment, software, and facilities which may add capacity, new features, resiliency and which may provide fixes to known problems to help ensure high network performance. The scheduled maintenance windows are typically used to maintain many sites, including the global backbone, packet services, AT&T enhanced network services IDC's and MSS-NB networks.
In addition, AT&T may perform extended maintenance up to four times per year, and AT&T may need to schedule planned maintenance at other times due to, for example, government inspections or power maintenance. AT&T will use reasonable efforts to give Customers at least 30 days' notice of such scheduled or extended maintenance. However, AT&T reserves the right to perform maintenance at any time in order to maintain the service and/or network.

Support

AT&T provides the following support for Managed Security Service – Network Based:

Initial Consultation for a Customer's Security Enablement

- Review of the inbound and outbound Security Policies provided to AT&T to recommend a proposed migration configuration of the MSS-NB Service.
- Review of the network topology to determine general access requirements.
- Recommendation of Security Policies to meet the current and forecasted needs specified by the Customer, consequent with AT&T's need to manage, maintain, operate and provide measurement reports based upon them.
- Recommendation of additional security management options to meet the specified Customer support needs.

Assistance

- Communicating with the Customer's technical contact(s) for installations, moves, adds or changes.
- Communicating with various AT&T work centers for packet services or Managed Router or other data or IP services.

Installation Support

- Connection and test of MSS-NB access circuits(s) to the network access point.
- ePVC ordering, provisioning, configuration, and associated testing.
- Configuration of AT&T MSS-NB network infrastructure.
- Registration of Customer information and security configuration in AT&T's databases.

Network Monitoring and Management

- Proactive 7x24 monitoring of the Customer's MSS-NB connection (including access) from AT&T's network management center of all the components supplied by AT&T.
- Help desk support for connection problems related to the MSS-NB service.
- Change management. If changes to security configurations are necessary at a given location based upon Customer notification, AT&T will review these new requirements and make recommendations as necessary. AT&T will also manage any resulting changes to the platform that AT&T deems necessary, which may result in a conversion charge for affected AT&T MSS-NB provided Services.
- Scheduled software and hardware maintenance upgrades to help ensure AT&T's hardware and software are appropriately configured for transmission of traffic.
- Problem management; logging, tracking and escalation of reported problems based on AT&T specified severity levels.

Problem Severity Code Definitions

The Customer defines the severity of a problem when the call is placed. The following definitions are provided as guidance to assist the Customer to appropriately assign the severity of a problem.

Severity	Description
1	AT&T's highest level of severity, a severity 1 Trouble Ticket is defined as a Trouble Ticket generated by AT&T in the event that AT&T detects a Firewall Service Outage. By way of illustration, without any limitation of the description, such incidents include a Firewall Service Component interface(s) being unavailable, any failures of Firewall Equipment and the inability of a Customer sanctioned IP protocol from working through the Firewall

Severity	Description
	Equipment denotes a severity 1 ticket.
2	A severity 2 Trouble Ticket is defined as a Trouble Ticket generated by AT&T in the event that AT&T detects an attack against a Customer's Firewall Equipment. The types of incidents which will generate Severity 2 incidents are: a) unexplained root logins or access attempts to the Firewall, b) unexplained Firewall server file transfers or c) failed or interrupted Firewall processes.
3	Severity 3 Trouble Tickets are defined as a Trouble Ticket generated by AT&T in the event that AT&T detects certain system health problems with the Firewall Equipment. The types of incidents which will generate Severity 3 alerts are: a) backup problems, such as backup failures or missing backup files, or b) an audit which reveals missing files; or c) Trouble Tickets generated when AT&T has specific and accurate information about a specific Customer Trouble.
4	Severity 4 Trouble Tickets are most often used for Moves, Adds and Changes, and Deletes (MACDs). Severity 4 tickets are also generated when AT&T needs additional specific information about a Customer Trouble.
5	Severity 5 Trouble Tickets are reserved for changes associated with out-of-band testing.

Customer Premises Equipment (CPE) and Services

AT&T offers a variety of CPE and pre-implementation, implementation and post-implementation services for CPE in support of all WAN access services.

See Required CPE and Other Equipment for descriptions of additional equipment and services offered.

6.1.3.2.6 Service Identifier: Multi Protocol Label Switching (MPLS) Services

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Port and Access Service Bundle					
AVPN DS0 Port/Access - 56 Kbps	17972	$ 500.00	$ 155.82	Port + Access	$ 500.00
AVPN DS1 Port/Access - 128 Kbps	17974	$ 500.00	$ 239.05	Port + Access	$ 500.00
AVPN DS1 Port/Access - 256 Kbps	17976	$ 500.00	$ 268.95	Port + Access	$ 500.00
AVPN DS1 Port/Access - 384 Kbps	17978	$ 500.00	$ 309.25	Port + Access	$ 500.00
AVPN DS1 Port/Access - 512 Kbps	17980	$ 500.00	$ 355.40	Port + Access	$ 500.00
AVPN DS1 Port/Access - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	17982	$ 500.00	$ 419.40	Port + Access	$ 500.00
AVPN DS1 Port/Access - 768 Kbps	17984	$ 500.00	$ 396.34	Port + Access	$ 500.00
AVPN DS1 Port/Access - 1024 Kbps	17985	$ 500.00	$ 398.95	Port + Access	$ 500.00
AVPN DS1 Port/Access - 1.544 Mbps	17986	$ 500.00	$ 416.84	Port + Access	$ 500.00
AVPN NxDS1 Port/Access 3.088 Mbps	17990	$ 500.00	$ 866.60	Port + Access	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN NxDS1 Port/Access 4.632 Mbps	17992	$ 500.00	$ 1,067.80	Port + Access	$ 500.00
AVPN DS3 Port/Access 5 Mbps	17995	$ 500.00	$ 1,328.52	Port + Access	$ 500.00
AVPN NxDS1 Port/Access 6.176 Mbps	17994	$ 500.00	$ 1,157.60	Port + Access	$ 500.00
AVPN NxDS1 Port/Access 7.720 Mbps	17996	$ 500.00	$ 1,244.02	Port + Access	$ 500.00
AVPN NxDS1 Port/Access 9.264 Mbps	17998	$ 500.00	$ 1,342.77	Port + Access	$ 500.00
AVPN DS3 Port/Access 10 Mbps	17999	$ 500.00	$ 1,829.30	Port + Access	$ 500.00
AVPN NxDS1 Port/Access 12.352 Mbps	18003	$ 500.00	$ 1,624.90	Port + Access	$ 500.00
AVPN DS3 Port/Access 15 Mbps	18005	$ 500.00	$ 2,158.20	Port + Access	$ 500.00
AVPN DS3 Port/Access 20 Mbps	18007	$ 500.00	$ 2,227.23	Port + Access	$ 500.00
AVPN DS3 Port/Access 25 Mbps	18008	$ 500.00	$ 2,427.00	Port + Access	$ 500.00
AVPN DS3 Port/Access 30 Mbps	18009	$ 500.00	$ 2,772.40	Port + Access	$ 500.00
AVPN DS3 Port/Access 45 Mbps	18013	$ 500.00	$ 3,391.89	Port + Access	$ 500.00
AVPN Port Only					
AVPN DS0 Port – 56 Kbps	17972P	$ 500.00	$ 116.82	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN DS1 Port – 128 Kbps	17974P	$ 500.00	$ 154.05	Port	$ 500.00
AVPN DS1 Port - 256 Kbps	17976P	$ 500.00	$ 183.95	Port	$ 500.00
AVPN DS1 Port - 384 Kbps	17978P	$ 500.00	$ 224.25	Port	$ 500.00
AVPN DS1 Port - 512 Kbps	17980P	$ 500.00	$ 270.40	Port	$ 500.00
AVPN DS1 Port - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	17982P	$ 500.00	$ 334.40	Port	$ 500.00
AVPN DS1 Port - 768 Kbps	17984P	$ 500.00	$ 311.35	Port	$ 500.00
AVPN DS1 Port – 1024 Kbps	17985P	$ 500.00	$ 313.95	Port	$ 500.00
AVPN DS1 Port – 1.544 Mbps	17986P	$ 500.00	$ 331.84	Port	$ 500.00
AVPN NxDS1 Port – 3.088 Mbps	17990P	$ 500.00	$ 696.60	Port	$ 500.00
AVPN NxDS1 Port – 4.632 Mbps	17992P	$ 500.00	$ 812.80	Port	$ 500.00
AVPN NxDS1 Port - 6.176 Mbps	17994P	$ 500.00	$ 817.60	Port	$ 500.00
AVPN NxDS1 Port - 7.720 Mbps	17996P	$ 500.00	$ 819.02	Port	$ 500.00
AVPN NxDS1 Port 9.264 Mbps	17998P	$ 500.00	$ 832.77	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN DS3 Port - 10 Mbps	17999P	$ 500.00	$ 839.30	Port	$ 500.00
AVPN DS3 Port – 10.808 Mbps	18001P	$ 500.00	$ 875.05	Port	$ 500.00
AVPN NxDS1 Port - 12.352 Mbps	18003P	$ 500.00	$ 944.90	Port	$ 500.00
AVPN DS3 Port - 15 Mbps	18005P	$ 500.00	$ 1,168.20	Port	$ 500.00
AVPN DS3 Port - 20 Mbps	18007P	$ 500.00	$ 1,237.23	Port	$ 500.00
AVPN – DS3 Port - 25 Mbps	18008P	$ 500.00	$ 1,437.00	Port	$ 500.00
AVPN DS3 Port - 30 Mbps	18009P	$ 500.00	$ 1,782.40	Port	$ 500.00
AVPN DS3 Port - 45 Mbps	18013P	$ 500.00	$ 2,401.89	Port	$ 500.00
AVPN OC3 Port - 50 Mbps	18010	$ 500.00	$ 2,768.28	Port	$ 500.00
AVPN OC3 Port - 75 Mbps	18011	$ 500.00	$ 3,866.80	Port	$ 500.00
AVPN OC3 Port - 100 Mbps	18014	$ 500.00	$ 4,761.97	Port	$ 500.00
AVPN OC3 Port - 155 Mbps	18015	$ 500.00	$ 6,373.76	Port	$ 500.00
AVPN OC12 Port - 200 Mbps	18016	$ 500.00	$ 8,609.50	Port	$ 500.00
AVPN OC12 Port - 300 Mbps	18017	$ 500.00	$ 10,656.64	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN OC12 Port - 400 Mbps	18018	$ 500.00	$ 12,617.60	Port	$ 500.00
AVPN OC12 Port - 622 Mbps	18021	$ 500.00	$ 16,928.00	Port	$ 500.00
AVPN Gigabit Ethernet Port 1 Mbps	19616	$ 500.00	$ 270.48	Port	$ 500.00
AVPN Gigabit Ethernet Port 2 Mbps	19617	$ 500.00	$ 336.96	Port	$ 500.00
AVPN Gigabit Ethernet Port 3 Mbps	19618	$ 500.00	$ 406.08	Port	$ 500.00
AVPN Gigabit Ethernet Port 4 Mbps	19619	$ 500.00	$ 473.58	Port	$ 500.00
AVPN Gigabit Ethernet Port 5 Mbps	17995	$ 500.00	$ 338.52	Port	$ 500.00
AVPN Gigabit Ethernet Port 6 Mbps	19620	$ 500.00	$ 636.90	Port	$ 500.00
AVPN Gigabit Ethernet Port 7 Mbps	19621	$ 500.00	$ 685.85	Port	$ 500.00
AVPN Gigabit Ethernet Port 8 Mbps	19622	$ 500.00	$ 741.95	Port	$ 500.00
AVPN Gigabit Ethernet Port 9 Mbps	19623	$ 500.00	$ 783.54	Port	$ 500.00
AVPN Gigabit Ethernet Port 10Mbps	17999	$ 500.00	$ 839.30	Port	$ 500.00
AVPN Gigabit Ethernet Port 20Mbps	18007	$ 500.00	$ 1,237.23	Port	$ 500.00
AVPN Gigabit Ethernet Port 30Mbps	18009	$ 500.00	$ 1,782.40	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Gigabit Ethernet Port 40 Mbps	19624	$ 500.00	$ 2,150.40	Port	$ 500.00
AVPN Gigabit Ethernet Port 50 Mbps	18010	$ 500.00	$ 2,768.28	Port	$ 500.00
AVPN Gigabit Ethernet Port 60 Mbps	19625	$ 500.00	$ 3,184.44	Port	$ 500.00
AVPN Gigabit Ethernet Port 70 Mbps	19626	$ 500.00	$ 3,663.90	Port	$ 500.00
AVPN Gigabit Ethernet Port 80 Mbps	19627	$ 500.00	$ 4,059.07	Port	$ 500.00
AVPN Gigabit Ethernet Port 90 Mbps	19628	$ 500.00	$ 4,426.14	Port	$ 500.00
AVPN Gigabit Ethernet Port 100 Mbps	18014	$ 500.00	$ 4,761.97	Port	$ 500.00
AVPN Gigabit Ethernet Port 150 Mbps	19629	$ 500.00	$ 6,228.48	Port	$ 500.00
AVPN Gigabit Ethernet Port 200 Mbps	18016	$ 500.00	$ 8,609.50	Port	$ 500.00
AVPN Gigabit Ethernet Port 250 Mbps	20410	$ 500.00	$ 9,826.70	Port	$ 500.00
AVPN Gigabit Ethernet Port 300 Mbps	18017	$ 500.00	$ 10,656.64	Port	$ 500.00
AVPN Gigabit Ethernet Port 400 Mbps	18018	$ 500.00	$ 12,617.60	Port	$ 500.00
AVPN Gigabit Ethernet Port 450 Mbps	20401	$ 500.00	$ 13,598.08	Port	$ 500.00
AVPN Gigabit Ethernet Port 500 Mbps	18019	$ 500.00	$ 14,578.56	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Gigabit Ethernet Port 600 Mbps	18020	$ 500.00	$ 16,537.60	Port	$ 500.00
AVPN Gigabit Ethernet Port 700 Mbps	18022	$ 500.00	$ 21,172.45	Port	$ 500.00
AVPN Gigabit Ethernet Port 800 Mbps	18023	$ 500.00	$ 23,114.65	Port	$ 500.00
AVPN Gigabit Ethernet Port 900 Mbps	18024	$ 500.00	$ 25,153.05	Port	$ 500.00
AVPN Gigabit Ethernet Port 1 Gbps	18025	$ 500.00	$ 27,175.20	Port	$ 500.00
AVPN Gigabit Ethernet Port 2 Gbps	21943	$ 500.00	$ 51,211.55	Port	$ 500.00
AVPN Gigabit Ethernet Port 2.5 Gbps	21944	$ 500.00	$ 61,232.60	Port	$ 500.00
AVPN Gigabit Ethernet Port 3 Gbps	21945	$ 500.00	$ 70,953.35	Port	$ 500.00
AVPN Gigabit Ethernet Port 3.5 Gbps	21946	$ 500.00	$ 80,365.35	Port	$ 500.00
AVPN Gigabit Ethernet Port 4 Gbps	21947	$ 500.00	$ 89,522.55	Port	$ 500.00
AVPN Gigabit Ethernet Port 4.5 Gbps	21948	$ 500.00	$ 98,461.35	Port	$ 500.00
AVPN Gigabit Ethernet Port 5 Gbps	21949	$ 500.00	$ 107,212.95	Port	$ 500.00
AVPN Gigabit Ethernet Port 5.5 Gbps	21950	$ 500.00	$ 115,796.20	Port	$ 500.00
AVPN Gigabit Ethernet Port 6 Gbps	21951	$ 500.00	$ 124,231.25	Port	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Gigabit Ethernet Port 6.5 Gbps	21952	$ 500.00	$ 132,531.75	Port	$ 500.00
AVPN Gigabit Ethernet Port 7 Gbps	21953	$ 500.00	$ 140,712.00	Port	$ 500.00
AVPN Gigabit Ethernet Port 7.5 Gbps	21954	$ 500.00	$ 148,779.80	Port	$ 500.00
AVPN Gigabit Ethernet Port 8 Gbps	21955	$ 500.00	$ 156,744.25	Port	$ 500.00
AVPN Gigabit Ethernet Port 8.5 Gbps	21956	$ 500.00	$ 164,615.75	Port	$ 500.00
AVPN Gigabit Ethernet Port 9 Gbps	21957	$ 500.00	$ 172,396.90	Port	$ 500.00
AVPN Gigabit Ethernet Port 9.5 Gbps	21958	$ 500.00	$ 180,096.15	Port	$ 500.00
AVPN Gigabit Ethernet Port 10 Gbps	21959	$ 500.00	$ 187,717.40	Port	$ 500.00
Note: The AVPN VLAN Product features below are no longer available. Existing customers will continue to be supported.					
AVPN VLAN					
AVPN VLAN (Ethernet) 5Mbps	AVVVL5	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 10Mbps	AVVVL10	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 20Mbps	AVVVL20	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 30Mbps	AVVVL30	ICB	ICB	Port	ICB

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN VLAN (Ethernet) 50Mbps	AVVVL50	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 100Mbps	AVVVL100	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 200Mbps	AVVVL200	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 300Mbps	AVVVL300	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 400Mbps	AVVVL400	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 500Mbps	AVVVL500	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 600Mbps	AVVVL600	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 700Mbps	AVVVL700	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 800Mbps	AVVVL800	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 900Mbps	AVVVL900	ICB	ICB	Port	ICB
AVPN VLAN (Ethernet) 1000Mbps	AVVVL1000	ICB	ICB	Port	ICB
AVPN Service Diversity					
MPLS Port SDO - 56 Kbps	18032	N/C	$ 2.20	Port	$ 100.00
MPLS Port SDO - 64Kbps **Note: This Product is no longer available. Existing**	18033	N/C	$ 3.08	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
customers will continue to be supported.					
MPLS Port SDO - 128 Kbps	18034	N/C	$ 4.56	Port	$ 100.00
MPLS Port SDO - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18035	N/C	$ 5.88	Port	$ 100.00
MPLS Port SDO - 256 Kbps	18036	N/C	$ 7.84	Port	$ 100.00
MPLS Port SDO - 320 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18037	N/C	$ 8.68	Port	$ 100.00
MPLS Port SDO - 384 Kbps	18038	N/C	$ 9.52	Port	$ 100.00
MPLS Port SDO - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18039	N/C	$ 10.50	Port	$ 100.00
MPLS Port SDO - 512 Kbps	18040	N/C	$ 11.34	Port	$ 100.00
MPLS Port SDO - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18041	N/C	$ 11.90	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port SDO - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18042	N/C	$ 12.32	Port	$ 100.00
MPLS Port SDO - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18043	N/C	$ 12.74	Port	$ 100.00
MPLS Port SDO - 768 Kbps	18044	N/C	$ 12.96	Port	$ 100.00
MPLS Port SDO - 1024 Kbps	18045	N/C	$ 13.20	Port	$ 100.00
MPLS Port SDO - 1.544 Mbps	18046	N/C	$ 13.44	Port	$ 100.00
MPLS Port SDO - 3.088 Mbps	18050	N/C	$ 21.06	Port	$ 100.00
MPLS Port SDO - 4.632 Mbps	18052	N/C	$ 27.54	Port	$ 100.00
MPLS Port SDO - 5 Mbps	18055	N/C	$ 29.70	Port	$ 100.00
MPLS Port SDO - 6.176 Mbps	18054	N/C	$ 31.86	Port	$ 100.00
MPLS Port SDO - 7.720 Mbps	18056	N/C	$ 36.30	Port	$ 100.00
MPLS Port SDO - 9.264 Mbps	18058	N/C	$ 40.15	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port SDO - 10 Mbps	18059	N/C	$ 41.80	Port	$ 100.00
MPLS Port SDO - 10.808 Mbps	18061	N/C	$ 43.20	Port	$ 100.00
MPLS Port SDO - 12.352 Mbps	18063	N/C	$ 47.30	Port	$ 100.00
MPLS Port SDO - 15 Mbps	18065	N/C	$ 48.06	Port	$ 100.00
MPLS Port SDO - 20 Mbps	18067	N/C	$ 61.02	Port	$ 100.00
MPLS Port SDO - 25 Mbps	18068	N/C	$ 78.40	Port	$ 100.00
MPLS Port SDO - 30 Mbps	18069	N/C	$ 89.10	Port	$ 100.00
MPLS Port SDO - 45 Mbps	18073	N/C	$ 110.70	Port	$ 100.00
MPLS Port SDO - 50 Mbps	18070	N/C	$ 136.62	Port	$ 100.00
MPLS Port SDO - 75 Mbps	18071	N/C	$ 191.70	Port	$ 100.00
MPLS Port SDO - 100 Mbps	18074	N/C	$ 234.90	Port	$ 100.00
MPLS Port SDO - 155 Mbps	18075	N/C	$ 313.74	Port	$ 100.00
MPLS Port SDO - 200 Mbps	18076	N/C	$ 427.68	Port	$ 100.00
MPLS Port SDO - 300 Mbps	18077	N/C	$ 524.34	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port SDO - 400 Mbps	18078	N/C	$ 621.00	Port	$ 100.00
MPLS Port SDO - 622 Mbps	18081	N/C	$ 833.22	Port	$ 100.00
AVPN POP Diversity					
MPLS Port POP Diversity - 56 Kbps	18093	N/C	$ 4.60	Port	$ 100.00
MPLS Port POP Diversity - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18094	N/C	$ 6.02	Port	$ 100.00
MPLS Port POP Diversity - 128 Kbps	18095	N/C	$ 8.88	Port	$ 100.00
MPLS Port POP Diversity - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18096	N/C	$ 11.76	Port	$ 100.00
MPLS Port POP Diversity - 256 Kbps	18097	N/C	$ 15.40	Port	$ 100.00
MPLS Port POP Diversity - 320 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18098	N/C	$ 17.22	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port POP Diversity - 384 Kbps	18099	N/C	$ 18.90	Port	$ 100.00
MPLS Port POP Diversity - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18100	N/C	$ 21.00	Port	$ 100.00
MPLS Port POP Diversity - 512 Kbps	18101	N/C	$ 22.68	Port	$ 100.00
MPLS Port POP Diversity - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18102	N/C	$ 23.80	Port	$ 100.00
MPLS Port POP Diversity - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18103	N/C	$ 24.64	Port	$ 100.00
MPLS Port POP Diversity - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18104	N/C	$ 25.48	Port	$ 100.00
MPLS Port POP Diversity - 768 Kbps	18105	N/C	$ 25.92	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port POP Diversity – 1 Mbps	19644	N/C	$ 25.92	Port	$ 100.00
MPLS Port POP Diversity - 1024 Kbps	18106	N/C	$ 26.40	Port	$ 100.00
MPLS Port POP Diversity - 1.544 Mbps	18107	N/C	$ 26.46	Port	$ 100.00
MPLS Port POP Diversity - 2 Mbps	19645	N/C	$ 33.48	Port	$ 100.00
MPLS Port POP Diversity - 3 Mbps	19646	N/C	$ 40.50	Port	$ 100.00
MPLS Port POP Diversity - 3.088 Mbps	18111	N/C	$ 42.35	Port	$ 100.00
MPLS Port POP Diversity - 4 Mbps	19647	N/C	$ 48.40	Port	$ 100.00
MPLS Port POP Diversity - 4.632 Mbps	18113	N/C	$ 55.08	Port	$ 100.00
MPLS Port POP Diversity - 5 Mbps	18116	N/C	$ 59.95	Port	$ 100.00
MPLS Port POP Diversity – 6 Mbps	19648	N/C	$ 62.64	Port	$ 100.00
MPLS Port POP Diversity - 6.176 Mbps	18115	N/C	$ 63.18	Port	$ 100.00
MPLS Port POP Diversity - 7 Mbps	19649	N/C	$ 67.50	Port	$ 100.00
MPLS Port POP Diversity - 7.720 Mbps	18117	N/C	$ 72.60	Port	$ 100.00
MPLS Port POP Diversity - 8 Mbps	19650	N/C	$ 74.25	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port POP Diversity - 9 Mbps	19651	N/C	$ 79.75	Port	$ 100.00
MPLS Port POP Diversity - 9.264 Mbps	18119	N/C	$ 80.30	Port	$ 100.00
MPLS Port POP Diversity - 10 Mbps	18120	N/C	$ 82.62	Port	$ 100.00
MPLS Port POP Diversity - 10.808 Mbps	18122	N/C	$ 87.45	Port	$ 100.00
MPLS Port POP Diversity - 12.352 Mbps	18124	N/C	$ 92.88	Port	$ 100.00
MPLS Port POP Diversity - 15 Mbps	18126	N/C	$ 97.35	Port	$ 100.00
MPLS Port POP Diversity - 20 Mbps	18128	N/C	$ 122.04	Port	$ 100.00
MPLS Port POP Diversity - 25 Mbps	18129	N/C	$ 153.45	Port	$ 100.00
MPLS Port POP Diversity - 30 Mbps	18130	N/C	$ 178.75	Port	$ 100.00
MPLS Port POP Diversity - 40 Mbps	19652	N/C	$ 211.68	Port	$ 100.00
MPLS Port POP Diversity - 45 Mbps	18134	N/C	$ 221.40	Port	$ 100.00
MPLS Port POP Diversity - 50 Mbps	18131	N/C	$ 273.24	Port	$ 100.00
MPLS Port POP Diversity - 60 Mbps	19653	N/C	$ 316.98	Port	$ 100.00
MPLS Port POP Diversity - 70 Mbps	19654	N/C	$ 361.26	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port POP Diversity - 75 Mbps	18132	N/C	$ 382.86	Port	$ 100.00
MPLS Port POP Diversity - 80 Mbps	19655	N/C	$ 400.68	Port	$ 100.00
MPLS Port POP Diversity - 90 Mbps	19656	N/C	$ 435.24	Port	$ 100.00
MPLS Port POP Diversity - 100 Mbps	18135	N/C	$ 470.34	Port	$ 100.00
MPLS Port POP Diversity - 150 Mbps	19657	N/C	$ 612.90	Port	$ 100.00
MPLS Port POP Diversity - 155 Mbps	18136	N/C	$ 639.10	Port	$ 100.00
MPLS Port POP Diversity - 200 Mbps	18137	N/C	$ 855.90	Port	$ 100.00
MPLS Port POP Diversity - 250 Mbps	20412	N/C	$ 952.56	Port	$ 100.00
MPLS Port POP Diversity - 300 Mbps	18138	N/C	$ 1,049.22	Port	$ 100.00
MPLS Port POP Diversity - 400 Mbps	18139	N/C	$ 1,242.00	Port	$ 100.00
MPLS Port POP Diversity - 450 Mbps	20403	N/C	$ 1,363.45	Port	$ 100.00
MPLS Port POP Diversity - 500 Mbps	18140	N/C	$ 1,461.90	Port	$ 100.00
MPLS Port POP Diversity - 600 Mbps	18141	N/C	$ 1,658.25	Port	$ 100.00
MPLS Port POP Diversity - 622 Mbps	18142	N/C	$ 1,697.30	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Port POP Diversity - 700 Mbps	18143	N/C	$ 2,143.90	Port	$ 100.00
MPLS Port POP Diversity - 800 Mbps	18144	N/C	$ 2,340.25	Port	$ 100.00
MPLS Port POP Diversity - 900 Mbps	18145	N/C	$ 2,546.50	Port	$ 100.00
MPLS Port POP Diversity - 1 Gbps	18146	N/C	$ 2,751.65	Port	$ 100.00
Note: The AVPN Product features below are no longer available. Existing customers will continue to be supported.					
AVPN Layer 2 PVCs					
MPLS PVC 4K	18152	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 8K	18153	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 16K	18154	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 32K	18155	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 48K	18156	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 56K	18157	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 64K	18158	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 128K	18159	$ 25.00	$ -	PVC	$ 25.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS PVC 192K	18160	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 256K	18161	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 320K	18162	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 384K	18163	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 448K	18164	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 512K	18165	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 576K	18166	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 640K	18167	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 704K	18168	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 768K	18169	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 832K	18170	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 896K	18171	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 960K	18172	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 1024K	18173	$ 25.00	$ -	PVC	$ 25.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS PVC 1536K	18174	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 2M	18175	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 3M	18176	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 4M	18177	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 5M	18178	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 6M	18179	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 7M	18180	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 8M	18181	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 9M	18182	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 10M	18183	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 15M	18184	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 20M	18185	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 25M	18186	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 30M	18187	$ 25.00	$ -	PVC	$ 25.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS PVC 35M	18188	$ 25.00	$ -	PVC	$ 25.00
MPLS PVC 40M	18189	$ 25.00	$ -	PVC	$ 25.00
AVPN Class of Service					
Multimedia High Svc					
CoS Package Multimedia High Svc- 56 Kbps	18193	N/C	$ 8.96	Port	$ 100.00
CoS Package Multimedia High Svc - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18194	N/C	$ 12.04	Port	$ 100.00
CoS Package Multimedia High Svc - 128 Kbps	18195	N/C	$ 18.15	Port	$ 100.00
CoS Package Multimedia High Svc - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18196	N/C	$ 23.38	Port	$ 100.00
CoS Package Multimedia High Svc - 256 Kbps	18197	N/C	$ 30.80	Port	$ 100.00
CoS Package Multimedia High Svc - 320 Kbps **Note: This Product is no longer available. Existing**	18198	N/C	$ 34.58	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
customers will continue to be supported.					
CoS Package Multimedia High Svc - 384 Kbps	18199	N/C	$ 37.92	Port	$ 100.00
CoS Package Multimedia High Svc - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18200	N/C	$ 41.86	Port	$ 100.00
CoS Package Multimedia High Svc - 512 Kbps	18201	N/C	$ 45.24	Port	$ 100.00
CoS Package Multimedia High Svc - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18202	N/C	$ 47.60	Port	$ 100.00
CoS Package Multimedia High Svc - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18203	N/C	$ 49.28	Port	$ 100.00
CoS Package Multimedia High Svc - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18204	N/C	$ 50.96	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia High Svc - 768 Kbps	18205	N/C	$ 52.26	Port	$ 100.00
CoS Package Multimedia High Svc - 1 Mbps	19672	N/C	$ 53.04	Port	$ 100.00
CoS Package Multimedia High Svc - 1024 Kbps	18206	N/C	$ 53.04	Port	$ 100.00
CoS Package Multimedia High Svc - 1.544 Mbps	18207	N/C	$ 53.72	Port	$ 100.00
CoS Package Multimedia High Svc - 2 Mbps	19673	N/C	$ 68.73	Port	$ 100.00
CoS Package Multimedia High Svc - 3 Mbps	19674	N/C	$ 82.95	Port	$ 100.00
CoS Package Multimedia High Svc - 3.088 Mbps	18211	N/C	$ 84.24	Port	$ 100.00
CoS Package Multimedia High Svc - 4 Mbps	19675	N/C	$ 95.94	Port	$ 100.00
CoS Package Multimedia High Svc - 4.632Mbps	18213	N/C	$ 110.76	Port	$ 100.00
CoS Package Multimedia High Svc - 5 Mbps	18216	N/C	$ 119.34	Port	$ 100.00
CoS Package Multimedia High Svc - 6 Mbps	19676	N/C	$ 126.36	Port	$ 100.00
CoS Package Multimedia High Svc - 6.176 Mbps	18215	N/C	$ 127.92	Port	$ 100.00
CoS Package Multimedia High Svc - 7 Mbps	19677	N/C	$ 136.50	Port	$ 100.00
CoS Package Multimedia High Svc - 7.720 Mbps	18217	N/C	$ 144.30	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia High Svc - 8 Mbps	19678	N/C	$ 147.42	Port	$ 100.00
CoS Package Multimedia High Svc - 9 Mbps	19679	N/C	$ 158.34	Port	$ 100.00
CoS Package Multimedia High Svc - 9.246 Mbps	18219	N/C	$ 159.90	Port	$ 100.00
CoS Package Multimedia High Svc - 10 Mbps	18220	N/C	$ 166.92	Port	$ 100.00
CoS Package Multimedia High Svc - 10.808 Mbps	18222	N/C	$ 173.94	Port	$ 100.00
CoS Package Multimedia High Svc - 12.352 Mbps	18224	N/C	$ 187.98	Port	$ 100.00
CoS Package Multimedia High Svc - 15 Mbps	18226	N/C	$ 193.44	Port	$ 100.00
CoS Package Multimedia High Svc - 20 Mbps	18228	N/C	$ 246.96	Port	$ 100.00
CoS Package Multimedia High Svc - 25 Mbps	18229	N/C	$ 304.85	Port	$ 100.00
CoS Package Multimedia High Svc - 30 Mbps	18230	N/C	$ 354.90	Port	$ 100.00
CoS Package Multimedia High Svc - 40 Mbps	19680	N/C	$ 427.70	Port	$ 100.00
CoS Package Multimedia High Svc - 45 Mbps	18234	N/C	$ 448.04	Port	$ 100.00
CoS Package Multimedia High Svc - 50 Mbps	18231	N/C	$ 550.76	Port	$ 100.00
CoS Package Multimedia High Svc - 60 Mbps	19681	N/C	$ 642.88	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia High Svc - 70 Mbps	19682	N/C	$ 728.14	Port	$ 100.00
CoS Package Multimedia High Svc - 75 Mbps	18232	N/C	$ 773.00	Port	$ 100.00
CoS Package Multimedia High Svc - 80 Mbps	19683	N/C	$ 800.00	Port	$ 100.00
CoS Package Multimedia High Svc - 90 Mbps	19684	N/C	$ 873.00	Port	$ 100.00
CoS Package Multimedia High Svc - 100 Mbps	18235	N/C	$ 939.00	Port	$ 100.00
CoS Package Multimedia High Svc - 150 Mbps	19685	N/C	$ 1,198.56	Port	$ 100.00
CoS Package Multimedia High Svc - 155 Mbps	18236	N/C	$ 1,268.54	Port	$ 100.00
CoS Package Multimedia High Svc - 200 Mbps	18237	N/C	$ 1,727.04	Port	$ 100.00
CoS Package Multimedia High Svc - 250 Mbps	20414	N/C	$ 1,989.98	Port	$ 100.00
CoS Package Multimedia High Svc - 300 Mbps	18238	N/C	$ 2,121.21	Port	$ 100.00
CoS Package Multimedia High Svc - 400 Mbps	18239	N/C	$ 2,511.60	Port	$ 100.00
CoS Package Multimedia High Svc - 450 Mbps	20405	N/C	$ 2,707.25	Port	$ 100.00
CoS Package Multimedia High Svc - 500 Mbps	18240	N/C	$ 2,901.99	Port	$ 100.00
CoS Package Multimedia High Svc - 600 Mbps	18241	N/C	$ 3,292.38	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia High Svc - 622 Mbps	18242	N/C	$ 3,369.73	Port	$ 100.00
CoS Package Multimedia High Svc - 700 Mbps	18243	N/C	$ 4,286.40	Port	$ 100.00
CoS Package Multimedia High Svc - 800 Mbps	18244	N/C	$ 4,680.26	Port	$ 100.00
CoS Package Multimedia High Svc - 900 Mbps	18245	N/C	$ 5,092.92	Port	$ 100.00
CoS Package Multimedia High Svc - 1 Gbps	18246	N/C	$ 5,501.82	Port	$ 100.00
CoS Package Multimedia High Svc - 2 Gbps	21977	N/C	$ 10,368.20	Port	$ 100.00
CoS Package Multimedia High Svc - 2.5 Gbps	21978	N/C	$ 12,397.66	Port	$ 100.00
CoS Package Multimedia High Svc - 3 Gbps	21979	N/C	$ 14,365.08	Port	$ 100.00
CoS Package Multimedia High Svc – 3.5 Gbps	21980	N/C	$ 16,270.46	Port	$ 100.00
CoS Package Multimedia High Svc – 4 Gbps	21981	N/C	$ 18,125.08	Port	$ 100.00
CoS Package Multimedia High Svc – 4.5 Gbps	21982	N/C	$ 19,934.58	Port	$ 100.00
CoS Package Multimedia High Svc - 5 Gbps	21983	N/C	$ 21,706.48	Port	$ 100.00
CoS Package Multimedia High Svc – 5.5 Gbps	21984	N/C	$ 23,444.54	Port	$ 100.00
CoS Package Multimedia High Svc - 6 Gbps	21985	N/C	$ 25,152.52	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia High Svc – 6.5 Gbps	21986	N/C	$ 26,832.30	Port	$ 100.00
CoS Package Multimedia High Svc - 7 Gbps	21987	N/C	$ 28,488.58	Port	$ 100.00
CoS Package Multimedia High Svc – 7.5 Gbps	21988	N/C	$ 30,122.30	Port	$ 100.00
CoS Package Multimedia High Svc - 8 Gbps	21989	N/C	$ 31,734.40	Port	$ 100.00
CoS Package Multimedia High Svc – 8.5 Gbps	21990	N/C	$ 33,328.64	Port	$ 100.00
CoS Package Multimedia High Svc - 9 Gbps	21991	N/C	$ 34,904.08	Port	$ 100.00
CoS Package Multimedia High Svc – 9.5 Gbps	21992	N/C	$ 36,462.60	Port	$ 100.00
CoS Package Multimedia High Svc - 10 Gbps	21993	N/C	$ 38,005.14	Port	$ 100.00
Multimedia Standard Svc					
CoS Package Multimedia Standard Svc- 56 Kbps	18251	N/C	$ 8.96	Port	$ 100.00
CoS Package Multimedia Standard Svc - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18252	N/C	$ 12.04	Port	$ 100.00
CoS Package Multimedia Standard Svc - 128 Kbps	18253	N/C	$ 18.15	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18254	N/C	$ 23.38	Port	$ 100.00
CoS Package Multimedia Standard Svc-256 Kbps	18255	N/C	$ 30.80	Port	$ 100.00
CoS Package Multimedia Standard Svc-320 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18256	N/C	$ 34.58	Port	$ 100.00
CoS Package Multimedia Standard Svc - 384 Kbps	18257	N/C	$ 37.92	Port	$ 100.00
CoS Package Multimedia Standard Svc - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18258	N/C	$ 41.86	Port	$ 100.00
CoS Package Multimedia Standard Svc - 512 Kbps	18259	N/C	$ 45.24	Port	$ 100.00
CoS Package Multimedia Standard Svc - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18260	N/C	$ 47.60	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18261	N/C	$ 49.28	Port	$ 100.00
CoS Package Multimedia Standard Svc - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18262	N/C	$ 50.96	Port	$ 100.00
CoS Package Multimedia Standard Svc - 768 Kbps	18263	N/C	$ 52.26	Port	$ 100.00
CoS Package Multimedia Standard Svc - 1 Mbps	19686	N/C	$ 53.04	Port	$ 100.00
CoS Package Multimedia Standard Svc - 1024 Kbps	18264	N/C	$ 53.04	Port	$ 100.00
CoS Package Multimedia Standard Svc - 1.544Mbps	18265	N/C	$ 53.72	Port	$ 100.00
CoS Package Multimedia Standard Svc - 2 Mbps	19687	N/C	$ 68.73	Port	$ 100.00
CoS Package Multimedia Standard Svc - 3 Mbps	19688	N/C	$ 82.95	Port	$ 100.00
CoS Package Multimedia Standard Svc - 3.088 Mbps	18269	N/C	$ 84.24	Port	$ 100.00
CoS Package Multimedia Standard Svc - 4 Mbps	19689	N/C	$ 95.94	Port	$ 100.00
CoS Package Multimedia Standard Svc - 4.632Mbps	18271	N/C	$ 110.76	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc - 5 Mbps	18274	N/C	$ 119.34	Port	$ 100.00
CoS Package Multimedia Standard Svc - 6 Mbps	19690	N/C	$ 126.36	Port	$ 100.00
CoS Package Multimedia Standard Svc - 6.176 Mbps	18273	N/C	$ 127.92	Port	$ 100.00
CoS Package Multimedia Standard Svc – 7 Mbps	19691	N/C	$ 136.50	Port	$ 100.00
CoS Package Multimedia Standard Svc - 7.720Mbps	18275	N/C	$ 144.30	Port	$ 100.00
CoS Package Multimedia Standard Svc – 8 Mbps	19692	N/C	$ 147.42	Port	$ 100.00
CoS Package Multimedia Standard Svc – 9 Mbps	19693	N/C	$ 158.34	Port	$ 100.00
CoS Package Multimedia Standard Svc - 9.246 Mbps	18277	N/C	$ 159.90	Port	$ 100.00
CoS Package Multimedia Standard Svc - 10 Mbps	18278	N/C	$ 166.92	Port	$ 100.00
CoS Package Multimedia Standard Svc - 10.808M	18280	N/C	$ 173.94	Port	$ 100.00
CoS Package Multimedia Standard Svc - 12.352M	18282	N/C	$ 187.98	Port	$ 100.00
CoS Package Multimedia Standard Svc - 15 Mbps	18284	N/C	$ 193.44	Port	$ 100.00
CoS Package Multimedia Standard Svc - 20 Mbps	18286	N/C	$ 246.96	Port	$ 100.00
CoS Package Multimedia Standard Svc - 25 Mbps	18287	N/C	$ 304.85	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc - 30 Mbps	18288	N/C	$ 354.90	Port	$ 100.00
CoS Package Multimedia Standard Svc - 40 Mbps	19694	N/C	$ 427.70	Port	$ 100.00
CoS Package Multimedia Standard Svc - 45 Mbps	18292	N/C	$ 448.04	Port	$ 100.00
CoS Package Multimedia Standard Svc - 50 Mbps	18289	N/C	$ 550.76	Port	$ 100.00
CoS Package Multimedia Standard Svc - 60 Mbps	19695	N/C	$ 642.88	Port	$ 100.00
CoS Package Multimedia Standard Svc - 70 Mbps	19696	N/C	$ 728.14	Port	$ 100.00
CoS Package Multimedia Standard Svc - 75 Mbps	18290	N/C	$ 773.00	Port	$ 100.00
CoS Package Multimedia Standard Svc - 80 Mbps	19697	N/C	$ 800.00	Port	$ 100.00
CoS Package Multimedia Standard Svc - 90 Mbps	19698	N/C	$ 873.00	Port	$ 100.00
CoS Package Multimedia Standard Svc - 100 Mbps	18293	N/C	$ 939.00	Port	$ 100.00
CoS Package Multimedia Standard Svc - 150 Mbps	19699	N/C	$ 1,198.56	Port	$ 100.00
CoS Package Multimedia Standard Svc - 155 Mbps	18294	N/C	$ 1,268.54	Port	$ 100.00
CoS Package Multimedia Standard Svc - 200 Mbps	18295	N/C	$ 1,727.04	Port	$ 100.00
CoS Package Multimedia Standard Svc - 250 Mbps	20415	N/C	$ 1,989.98	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc - 300 Mbps	18296	N/C	$ 2,121.21	Port	$ 100.00
CoS Package Multimedia Standard Svc - 400 Mbps	18297	N/C	$ 2,511.60	Port	$ 100.00
CoS Package Multimedia Standard Svc - 450 Mbps	20406	N/C	$ 2,707.25	Port	$ 100.00
CoS Package Multimedia Standard Svc - 500 Mbps	18298	N/C	$ 2,901.99	Port	$ 100.00
CoS Package Multimedia Standard Svc - 600 Mbps	18299	N/C	$ 3,292.38	Port	$ 100.00
CoS Package Multimedia Standard Svc - 622 Mbps	18300	N/C	$ 3,369.73	Port	$ 100.00
CoS Package Multimedia Standard Svc - 700 Mbps	18301	N/C	$ 4,286.40	Port	$ 100.00
CoS Package Multimedia Standard Svc - 800 Mbps	18302	N/C	$ 4,680.26	Port	$ 100.00
CoS Package Multimedia Standard Svc - 900 Mbps	18303	N/C	$ 5,092.92	Port	$ 100.00
CoS Package Multimedia Standard Svc - 1 Gbps	18304	N/C	$ 5,501.82	Port	$ 100.00
CoS Package Multimedia Standard Svc - 2 Gbps	21994	N/C	$ 10,368.20	Port	$ 100.00
CoS Package Multimedia Standard Svc - 2.5 Gbps	21995	N/C	$ 12,397.66	Port	$ 100.00
CoS Package Multimedia Standard Svc - 3 Gbps	21996	N/C	$ 14,365.08	Port	$ 100.00
CoS Package Multimedia Standard Svc – 3.5 Gbps	21997	N/C	$ 16,270.46	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Multimedia Standard Svc – 4 Gbps	21998	N/C	$ 18,125.08	Port	$ 100.00
CoS Package Multimedia Standard Svc – 4.5 Gbps	21999	N/C	$ 19,934.58	Port	$ 100.00
CoS Package Multimedia Standard Svc - 5 Gbps	22000	N/C	$ 21,706.48	Port	$ 100.00
CoS Package Multimedia Standard Svc – 5.5 Gbps	22001	N/C	$ 23,444.54	Port	$ 100.00
CoS Package Multimedia Standard Svc - 6 Gbps	22002	N/C	$ 25,152.52	Port	$ 100.00
CoS Package Multimedia Standard Svc – 6.5 Gbps	22003	N/C	$ 26,832.30	Port	$ 100.00
CoS Package Multimedia Standard Svc - 7 Gbps	22004	N/C	$ 28,488.58	Port	$ 100.00
CoS Package Multimedia Standard Svc – 7.5 Gbps	22005	N/C	$ 30,122.30	Port	$ 100.00
CoS Package Multimedia Standard Svc - 8 Gbps	22006	N/C	$ 31,734.40	Port	$ 100.00
CoS Package Multimedia Standard Svc – 8.5 Gbps	22007	N/C	$ 33,328.64	Port	$ 100.00
CoS Package Multimedia Standard Svc - 9 Gbps	22008	N/C	$ 34,904.08	Port	$ 100.00
CoS Package Multimedia Standard Svc – 9.5 Gbps	22009	N/C	$ 36,462.60	Port	$ 100.00
CoS Package Multimedia Standard Svc - 10 Gbps	22010	N/C	$ 38,005.14	Port	$ 100.00
Critical Data Svc					

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc- 56 Kbps	18309	N/C	$ 4.62	Port	$ 100.00
CoS Package Critical Data Svc - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18310	N/C	$ 6.02	Port	$ 100.00
CoS Package Critical Data Svc - 128 Kbps	18311	N/C	$ 9.01	Port	$ 100.00
CoS Package Critical Data Svc - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18312	N/C	$ 11.76	Port	$ 100.00
CoS Package Critical Data Svc - 256 Kbps	18313	N/C	$ 15.40	Port	$ 100.00
CoS Package Critical Data Svc - 320 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18314	N/C	$ 17.22	Port	$ 100.00
CoS Package Critical Data Svc - 384 Kbps	18315	N/C	$ 18.96	Port	$ 100.00
CoS Package Critical Data Svc - 448 Kbps **Note: This Product is no longer available. Existing**	18316	N/C	$ 21.00	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
customers will continue to be supported.					
CoS Package Critical Data Svc - 512 Kbps	18317	N/C	$ 22.91	Port	$ 100.00
CoS Package Critical Data Svc - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18318	N/C	$ 23.80	Port	$ 100.00
CoS Package Critical Data Svc - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18319	N/C	$ 24.64	Port	$ 100.00
CoS Package Critical Data Svc - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18320	N/C	$ 25.48	Port	$ 100.00
CoS Package Critical Data Svc - 768 Kbps	18321	N/C	$ 26.18	Port	$ 100.00
CoS Package Critical Data Svc - 1 Mbps	19700	N/C	$ 26.52	Port	$ 100.00
CoS Package Critical Data Svc - 1024 Kbps	18322	N/C	$ 26.52	Port	$ 100.00
CoS Package Critical Data Svc - 1.544 Mbps	18323	N/C	$ 26.86	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc - 2 Mbps	19701	N/C	$ 34.76	Port	$ 100.00
CoS Package Critical Data Svc - 3 Mbps	19702	N/C	$ 41.87	Port	$ 100.00
CoS Package Critical Data Svc - 3.088 Mbps	18327	N/C	$ 42.12	Port	$ 100.00
CoS Package Critical Data Svc – 4 Mbps	19703	N/C	$ 47.58	Port	$ 100.00
CoS Package Critical Data Svc - 4.632 Mbps	18329	N/C	$ 55.38	Port	$ 100.00
CoS Package Critical Data Svc - 5 Mbps	18332	N/C	$ 60.04	Port	$ 100.00
CoS Package Critical Data Svc - 6 Mbps	19704	N/C	$ 63.18	Port	$ 100.00
CoS Package Critical Data Svc - 6.176 Mbps	18331	N/C	$ 63.96	Port	$ 100.00
CoS Package Critical Data Svc – 7 Mbps	19705	N/C	$ 67.86	Port	$ 100.00
CoS Package Critical Data Svc - 7.720 Mbps	18333	N/C	$ 71.76	Port	$ 100.00
CoS Package Critical Data Svc - 8 Mbps	19706	N/C	$ 73.32	Port	$ 100.00
CoS Package Critical Data Svc - 9 Mbps	19707	N/C	$ 79.56	Port	$ 100.00
CoS Package Critical Data Svc - 9.246 Mbps	18335	N/C	$ 79.56	Port	$ 100.00
CoS Package Critical Data Svc - 10 Mbps	18336	N/C	$ 83.46	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc - 10.808 Mbps	18338	N/C	$ 86.58	Port	$ 100.00
CoS Package Critical Data Svc - 12.352 Mbps	18340	N/C	$ 93.60	Port	$ 100.00
CoS Package Critical Data Svc - 15 Mbps	18342	N/C	$ 96.72	Port	$ 100.00
CoS Package Critical Data Svc - 20 Mbps	18344	N/C	$ 123.48	Port	$ 100.00
CoS Package Critical Data Svc - 25 Mbps	18345	N/C	$ 152.88	Port	$ 100.00
CoS Package Critical Data Svc - 30 Mbps	18346	N/C	$ 177.45	Port	$ 100.00
CoS Package Critical Data Svc - 40 Mbps	19708	N/C	$ 213.85	Port	$ 100.00
CoS Package Critical Data Svc - 45 Mbps	18350	N/C	$ 224.48	Port	$ 100.00
CoS Package Critical Data Svc - 50 Mbps	18347	N/C	$ 278.19	Port	$ 100.00
CoS Package Critical Data Svc - 60 Mbps	19709	N/C	$ 321.44	Port	$ 100.00
CoS Package Critical Data Svc - 70 Mbps	19710	N/C	$ 364.56	Port	$ 100.00
CoS Package Critical Data Svc - 75 Mbps	18348	N/C	$ 387.00	Port	$ 100.00
CoS Package Critical Data Svc - 80 Mbps	19711	N/C	$ 400.00	Port	$ 100.00
CoS Package Critical Data Svc - 90 Mbps	19712	N/C	$ 436.00	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc - 100 Mbps	18351	N/C	$ 469.00	Port	$ 100.00
CoS Package Critical Data Svc - 150 Mbps	19713	N/C	$ 667.38	Port	$ 100.00
CoS Package Critical Data Svc - 155 Mbps	18352	N/C	$ 634.27	Port	$ 100.00
CoS Package Critical Data Svc - 200 Mbps	18353	N/C	$ 864.00	Port	$ 100.00
CoS Package Critical Data Svc - 250 Mbps	20416	N/C	$ 994.52	Port	$ 100.00
CoS Package Critical Data Svc - 300 Mbps	18354	N/C	$ 1,061.06	Port	$ 100.00
CoS Package Critical Data Svc - 400 Mbps	18355	N/C	$ 1,255.80	Port	$ 100.00
CoS Package Critical Data Svc - 450 Mbps	20407	N/C	$ 1,353.17	Port	$ 100.00
CoS Package Critical Data Svc - 500 Mbps	18356	N/C	$ 1,451.45	Port	$ 100.00
CoS Package Critical Data Svc - 600 Mbps	18357	N/C	$ 1,646.19	Port	$ 100.00
CoS Package Critical Data Svc - 622 Mbps	18358	N/C	$ 1,685.32	Port	$ 100.00
CoS Package Critical Data Svc - 700 Mbps	18359	N/C	$ 2,143.20	Port	$ 100.00
CoS Package Critical Data Svc - 800 Mbps	18360	N/C	$ 2,339.66	Port	$ 100.00
CoS Package Critical Data Svc - 900 Mbps	18361	N/C	$ 2,546.46	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc - 1 Gbps	18362	N/C	$ 2,751.38	Port	$ 100.00
CoS Package Critical Data Svc – 2 Gbps	22011	N/C	$ 5,184.10	Port	$ 100.00
CoS Package Critical Data Svc – 2.5 Gbps	22012	N/C	$ 6,198.36	Port	$ 100.00
CoS Package Critical Data Svc – 3 Gbps	22013	N/C	$ 7,182.54	Port	$ 100.00
CoS Package Critical Data Svc – 3.5 Gbps	22014	N/C	$ 8,135.70	Port	$ 100.00
CoS Package Critical Data Svc – 4 Gbps	22015	N/C	$ 9,062.54	Port	$ 100.00
CoS Package Critical Data Svc – 4.5 Gbps	22016	N/C	$ 9,967.76	Port	$ 100.00
CoS Package Critical Data Svc – 5 Gbps	22017	N/C	$ 10,853.24	Port	$ 100.00
CoS Package Critical Data Svc – 5.5 Gbps	22018	N/C	$ 11,721.80	Port	$ 100.00
CoS Package Critical Data Svc – 6 Gbps	22019	N/C	$ 12,576.26	Port	$ 100.00
CoS Package Critical Data Svc – 6.5 Gbps	22020	N/C	$ 13,416.62	Port	$ 100.00
CoS Package Critical Data Svc – 7 Gbps	22021	N/C	$ 14,244.76	Port	$ 100.00
CoS Package Critical Data Svc – 7.5 Gbps	22022	N/C	$ 15,060.68	Port	$ 100.00
CoS Package Critical Data Svc – 8 Gbps	22023	N/C	$ 15,867.20	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Critical Data Svc – 8.5 Gbps	22024	N/C	$ 16,664.32	Port	$ 100.00
CoS Package Critical Data Svc – 9 Gbps	22025	N/C	$ 17,452.04	Port	$ 100.00
CoS Package Critical Data Svc – 9.5 Gbps	22026	N/C	$ 18,231.30	Port	$ 100.00
CoS Package Critical Data Svc – 10 Gbps	22027	N/C	$ 19,003.04	Port	$ 100.00
Business Data Svc					
CoS Package Business Data Svc- 56 Kbps	18367	N/C	$ 4.62	Port	$ 100.00
CoS Package Business Data Svc - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18368	N/C	$ 6.02	Port	$ 100.00
CoS Package Business Data Svc - 128 Kbps	18369	N/C	$ 9.01	Port	$ 100.00
CoS Package Business Data Svc - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18370	N/C	$ 11.76	Port	$ 100.00
CoS Package Business Data Svc - 256 Kbps	18371	N/C	$ 15.40	Port	$ 100.00
CoS Package Business Data Svc - 320 Kbps	18372	N/C	$ 17.22	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Note: This Product is no longer available. Existing customers will continue to be supported.					
CoS Package Business Data Svc - 384 Kbps	18373	N/C	$ 18.96	Port	$ 100.00
CoS Package Business Data Svc - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18374	N/C	$ 21.00	Port	$ 100.00
CoS Package Business Data Svc - 512 Kbps	18375	N/C	$ 21.33	Port	$ 100.00
CoS Package Business Data Svc - 576 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18376	N/C	$ 23.80	Port	$ 100.00
CoS Package Business Data Svc - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18377	N/C	$ 24.64	Port	$ 100.00
CoS Package Business Data Svc - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to**	18378	N/C	$ 25.48	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
be supported.					
CoS Package Business Data Svc - 768 Kbps	18379	N/C	$ 26.18	Port	$ 100.00
CoS Package Business Data Svc - 1 Mbps	19714	N/C	$ 26.52	Port	$ 100.00
CoS Package Business Data Svc - 1024 Kbps	18380	N/C	$ 26.52	Port	$ 100.00
CoS Package Business Data Svc - 1.544 Mbps	18381	N/C	$ 26.86	Port	$ 100.00
CoS Package Business Data Svc - 2 Mbps	19715	N/C	$ 34.76	Port	$ 100.00
CoS Package Business Data Svc - 3 Mbps	19716	N/C	$ 41.87	Port	$ 100.00
CoS Package Business Data Svc - 3.088 Mbps	18385	N/C	$ 42.12	Port	$ 100.00
CoS Package Business Data Svc - 4 Mbps	19717	N/C	$ 47.58	Port	$ 100.00
CoS Package Business Data Svc - 4.632Mbps	18387	N/C	$ 55.38	Port	$ 100.00
CoS Package Business Data Svc - 5 Mbps	18390	N/C	$ 60.04	Port	$ 100.00
CoS Package Business Data Svc - 6 Mbps	19718	N/C	$ 63.18	Port	$ 100.00
CoS Package Business Data Svc - 6.176 Mbps	18389	N/C	$ 63.96	Port	$ 100.00
CoS Package Business Data Svc – 7 Mbps	19719	N/C	$ 67.86	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Business Data Svc - 7.720 Mbps	18391	N/C	$ 71.76	Port	$ 100.00
CoS Package Business Data Svc - 8 Mbps	19720	N/C	$ 73.32	Port	$ 100.00
CoS Package Business Data Svc - 9 Mbps	19721	N/C	$ 79.56	Port	$ 100.00
CoS Package Business Data Svc - 9.246 Mbps	18393	N/C	$ 79.56	Port	$ 100.00
CoS Package Business Data Svc - 10 Mbps	18394	N/C	$ 83.46	Port	$ 100.00
CoS Package Business Data Svc - 10.808 Mbps	18396	N/C	$ 86.58	Port	$ 100.00
CoS Package Business Data Svc - 12.352 Mbps	18398	N/C	$ 93.60	Port	$ 100.00
CoS Package Business Data Svc - 15 Mbps	18400	N/C	$ 96.72	Port	$ 100.00
CoS Package Business Data Svc - 20 Mbps	18402	N/C	$ 123.48	Port	$ 100.00
CoS Package Business Data Svc - 25 Mbps	18403	N/C	$ 152.88	Port	$ 100.00
CoS Package Business Data Svc - 30 Mbps	18404	N/C	$ 177.45	Port	$ 100.00
CoS Package Business Data Svc - 40 Mbps	19722	N/C	$ 213.85	Port	$ 100.00
CoS Package Business Data Svc - 45 Mbps	18408	N/C	$ 224.48	Port	$ 100.00
CoS Package Business Data Svc - 50 Mbps	18405	N/C	$ 278.19	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package Business Data Svc - 60 Mbps	19723	N/C	$ 321.44	Port	$ 100.00
CoS Package Business Data Svc - 70 Mbps	19724	N/C	$ 364.56	Port	$ 100.00
CoS Package Business Data Svc - 75 Mbps	18406	N/C	$ 387.00	Port	$ 100.00
CoS Package Business Data Svc - 80 Mbps	19725	N/C	$ 400.00	Port	$ 100.00
CoS Package Business Data Svc - 90 Mbps	19726	N/C	$ 436.00	Port	$ 100.00
CoS Package Business Data Svc - 100 Mbps	18409	N/C	$ 469.00	Port	$ 100.00
CoS Package Business Data Svc - 150 Mbps	19727	N/C	$ 667.38	Port	$ 100.00
CoS Package Business Data Svc - 155 Mbps	18410	N/C	$ 634.27	Port	$ 100.00
CoS Package Business Data Svc - 200 Mbps	18411	N/C	$ 864.00	Port	$ 100.00
CoS Package Business Data Svc - 250 Mbps	20417	N/C	$ 994.52	Port	$ 100.00
CoS Package Business Data Svc - 300 Mbps	18412	N/C	$ 1,061.06	Port	$ 100.00
CoS Package Business Data Svc - 400 Mbps	18413	N/C	$ 1,255.80	Port	$ 100.00
CoS Package Business Data Svc - 450 Mbps	20408	N/C	$ 1,353.17	Port	$ 100.00
CoS Package business Data Svc - 500 Mbps	18414	N/C	$ 1,451.45	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package business Data Svc - 600 Mbps	18415	N/C	$ 1,646.19	Port	$ 100.00
CoS Package business Data Svc - 622 Mbps	18416	N/C	$ 1,685.32	Port	$ 100.00
CoS Package business Data Svc - 700 Mbps	18417	N/C	$ 2,143.20	Port	$ 100.00
CoS Package business Data Svc - 800 Mbps	18418	N/C	$ 2,339.66	Port	$ 100.00
CoS Package business Data Svc - 900 Mbps	18419	N/C	$ 2,546.46	Port	$ 100.00
CoS Package business Data Svc - 1 Gbps	18420	N/C	$ 2,751.38	Port	$ 100.00
CoS Package business Data Svc – 2 Gbps	22028	N/C	$ 5,184.10	Port	$ 100.00
CoS Package business Data Svc – 2.5 Gbps	22029	N/C	$ 6,198.36	Port	$ 100.00
CoS Package business Data Svc – 3 Gbps	22030	N/C	$ 7,182.54	Port	$ 100.00
CoS Package business Data Svc – 3.5 Gbps	22031	N/C	$ 8,135.70	Port	$ 100.00
CoS Package business Data Svc – 4 Gbps	22032	N/C	$ 9,062.54	Port	$ 100.00
CoS Package business Data Svc – 4.5 Gbps	22033	N/C	$ 9,967.76	Port	$ 100.00
CoS Package business Data Svc – 5 Gbps	22034	N/C	$ 10,853.24	Port	$ 100.00
CoS Package business Data Svc – 5.5 Gbps	22035	N/C	$ 11,721.80	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
CoS Package business Data Svc – 6 Gbps	22036	N/C	$ 12,576.26	Port	$ 100.00
CoS Package business Data Svc – 6.5 Gbps	22037	N/C	$ 13,416.62	Port	$ 100.00
CoS Package business Data Svc – 7 Gbps	22038	N/C	$ 14,244.76	Port	$ 100.00
CoS Package business Data Svc – 7.5 Gbps	22039	N/C	$ 15,060.68	Port	$ 100.00
CoS Package business Data Svc – 8 Gbps	22040	N/C	$ 15,867.20	Port	$ 100.00
CoS Package business Data Svc – 8.5 Gbps	22041	N/C	$ 16,664.32	Port	$ 100.00
CoS Package business Data Svc – 9 Gbps	22042	N/C	$ 17,452.04	Port	$ 100.00
CoS Package business Data Svc – 9.5 Gbps	22043	N/C	$ 18,231.30	Port	$ 100.00
CoS Package business Data Svc – 10 Gbps	22044	N/C	$ 19,003.04	Port	$ 100.00
AVPN Unilink					
MPLS Unilink Charge - 56 Kbps	18428	N/C	$ 4.60	Port	$ 100.00
MPLS Unilink Charge - 64 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18429	N/C	$ 6.02	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Unilink Charge - 128 Kbps	18430	N/C	$ 8.88	Port	$ 100.00
MPLS Unilink Charge - 192 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18431	N/C	$ 11.76	Port	$ 100.00
MPLS Unilink Charge - 256 Kbps	18432	N/C	$ 15.40	Port	$ 100.00
MPLS Unilink Charge - 320 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18433	N/C	$ 17.22	Port	$ 100.00
MPLS Unilink Charge - 384 Kbps	18434	N/C	$ 18.90	Port	$ 100.00
MPLS Unilink Charge - 448 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18435	N/C	$ 21.00	Port	$ 100.00
MPLS Unilink Charge - 512 Kbps	18436	N/C	$ 22.68	Port	$ 100.00
MPLS Unilink Charge - 576 Kbps **Note: This Product is no longer available. Existing**	18437	N/C	$ 23.80	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
customers will continue to be supported.					
MPLS Unilink Charge - 640 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18438	N/C	$ 24.64	Port	$ 100.00
MPLS Unilink Charge - 704 Kbps **Note: This Product is no longer available. Existing customers will continue to be supported.**	18439	N/C	$ 25.48	Port	$ 100.00
MPLS Unilink Charge - 768 Kbps	18440	N/C	$ 25.92	Port	$ 100.00
MPLS Unilink Charge - 1 Mbps	19658	N/C	$ 26.40	Port	$ 100.00
MPLS Unilink Charge -1024 Kbps	18441	N/C	$ 26.40	Port	$ 100.00
MPLS Unilink Charge - 1.544 Mbps	18442	N/C	$ 26.46	Port	$ 100.00
MPLS Unilink Charge - 2 Mbps	19659	N/C	$ 33.48	Port	$ 100.00
MPLS Unilink Charge - 3 Mbps	19660	N/C	$ 40.50	Port	$ 100.00
MPLS Unilink Charge - 3.088 Mbps	18446	N/C	$ 42.35	Port	$ 100.00
MPLS Unilink Charge - 4 Mbps	19661	N/C	$ 48.40	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Unilink Charge - 4.632 Mbps	18448	N/C	$ 55.08	Port	$ 100.00
MPLS Unilink Charge - 5 Mbps	18451	N/C	$ 59.95	Port	$ 100.00
MPLS Unilink Charge - 6 Mbps	19662	N/C	$ 63.80	Port	$ 100.00
MPLS Unilink Charge - 6.176 Mbps	18450	N/C	$ 63.18	Port	$ 100.00
MPLS Unilink Charge - 7 Mbps	19663	N/C	$ 68.75	Port	$ 100.00
MPLS Unilink Charge - 7.720 Mbps	18452	N/C	$ 72.60	Port	$ 100.00
MPLS Unilink Charge - 8 Mbps	19664	N/C	$ 74.25	Port	$ 100.00
MPLS Unilink Charge - 9 Mbps	19665	N/C	$ 79.75	Port	$ 100.00
MPLS Unilink Charge - 9.264 Mbps	18454	N/C	$ 80.30	Port	$ 100.00
MPLS Unilink Charge - 10 Mbps	18455	N/C	$ 82.62	Port	$ 100.00
MPLS Unilink Charge - 10.808 Mbps	18457	N/C	$ 87.45	Port	$ 100.00
MPLS Unilink Charge - 12.352 Mbps	18459	N/C	$ 92.88	Port	$ 100.00
MPLS Unilink Charge - 15 Mbps	18461	N/C	$ 97.35	Port	$ 100.00
MPLS Unilink Charge - 20 Mbps	18463	N/C	$ 123.90	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Unilink Charge - 25 Mbps	18464	N/C	$ 153.60	Port	$ 100.00
MPLS Unilink Charge - 30 Mbps	18465	N/C	$ 178.56	Port	$ 100.00
MPLS Unilink Charge - 40 Mbps	19666	N/C	$ 215.04	Port	$ 100.00
MPLS Unilink Charge - 45 Mbps	18469	N/C	$ 222.72	Port	$ 100.00
MPLS Unilink Charge - 50 Mbps	18466	N/C	$ 276.69	Port	$ 100.00
MPLS Unilink Charge - 60 Mbps	19667	N/C	$ 322.92	Port	$ 100.00
MPLS Unilink Charge - 70 Mbps	19668	N/C	$ 366.39	Port	$ 100.00
MPLS Unilink Charge - 75 Mbps	18467	N/C	$ 386.40	Port	$ 100.00
MPLS Unilink Charge - 80 Mbps	19669	N/C	$ 400.40	Port	$ 100.00
MPLS Unilink Charge - 90 Mbps	19670	N/C	$ 436.10	Port	$ 100.00
MPLS Unilink Charge - 100 Mbps	18470	N/C	$ 476.41	Port	$ 100.00
MPLS Unilink Charge - 150 Mbps	19671	N/C	$ 583.80	Port	$ 100.00
MPLS Unilink Charge - 155 Mbps	18471	N/C	$ 637.44	Port	$ 100.00
MPLS Unilink Charge - 200 Mbps	18472	N/C	$ 860.95	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Unilink Charge - 250 Mbps	20413	N/C	$ 967.68	Port	$ 100.00
MPLS Unilink Charge - 300 Mbps	18473	N/C	$ 1,065.60	Port	$ 100.00
MPLS Unilink Charge - 400 Mbps	18474	N/C	$ 1,262.08	Port	$ 100.00
MPLS Unilink Charge - 450 Mbps	20404	N/C	$ 1,360.00	Port	$ 100.00
MPLS Unilink Charge - 500 Mbps	18475	N/C	$ 1,457.92	Port	$ 100.00
MPLS Unilink Charge - 600 Mbps	18476	N/C	$ 1,653.76	Port	$ 100.00
MPLS Unilink Charge - 622 Mbps	18477	N/C	$ 1,692.80	Port	$ 100.00
MPLS Unilink Charge - 700 Mbps	18478	N/C	$ 2,084.48	Port	$ 100.00
MPLS Unilink Charge – 800 Mbps	18479	N/C	$ 2,275.84	Port	$ 100.00
MPLS Unilink Charge - 900 Mbps	18480	N/C	$ 2,476.80	Port	$ 100.00
MPLS Unilink Charge – 1 Gbps	18481	N/C	$ 2,675.84	Port	$ 100.00
MPLS Unilink Charge – 2 Gbps	21960	N/C	$ 5,042.56	Port	$ 100.00
MPLS Unilink Charge – 2.5 Gbps	21961	N/C	$ 6,028.80	Port	$ 100.00
MPLS Unilink Charge – 3 Gbps	21962	N/C	$ 6,986.24	Port	$ 100.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
MPLS Unilink Charge – 3.5 Gbps	21963	N/C	$ 7,912.96	Port	$ 100.00
MPLS Unilink Charge – 4 Gbps	21964	N/C	$ 8,814.72	Port	$ 100.00
MPLS Unilink Charge – 4.5 Gbps	21965	N/C	$ 9,694.72	Port	$ 100.00
MPLS Unilink Charge – 5 Gbps	21966	N/C	$ 10,556.16	Port	$ 100.00
MPLS Unilink Charge – 5.5 Gbps	21967	N/C	$ 11,401.60	Port	$ 100.00
MPLS Unilink Charge – 6 Gbps	21968	N/C	$ 12,232.32	Port	$ 100.00
MPLS Unilink Charge – 6.5 Gbps	21969	N/C	$ 13,049.60	Port	$ 100.00
MPLS Unilink Charge – 7 Gbps	21970	N/C	$ 13,854.72	Port	$ 100.00
MPLS Unilink Charge – 7.5 Gbps	21971	N/C	$ 14,648.96	Port	$ 100.00
MPLS Unilink Charge – 8 Gbps	21972	N/C	$ 15,433.60	Port	$ 100.00
MPLS Unilink Charge – 8.5 Gbps	21973	N/C	$ 16,208.64	Port	$ 100.00
MPLS Unilink Charge – 9 Gbps	21974	N/C	$ 16,974.72	Port	$ 100.00
MPLS Unilink Charge – 9.5 Gbps	21975	N/C	$ 17,732.48	Port	$ 100.00
MPLS Unilink Charge – 10 Gbps	21976	N/C	$ 18,483.20	Port	$ 100.00

AVPN Managed Router Features and Options

*** *Note: Non-Recurring Charge applies per physical dispatch.*

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Router (AT&T Owned)					
AVPN Managed Router (AT&T Owned) – Basic	18495	N/C	$ 138.65	Router	N/C
AVPN Managed Router (AT&T Owned) – Small	18496	N/C	$ 148.05	Router	N/C
AVPN Managed Router (AT&T Owned) – Medium	18497	N/C	$ 183.30	Router	N/C
AVPN Managed Router (AT&T Owned) – Large	18498	N/C	$ 347.80	Router	N/C
AVPN Managed Router (AT&T Owned) – XLarge	18499	N/C	$ 437.10	Router	N/C
AVPN Managed Router (AT&T Owned) – XLarge +	18500	N/C	$ 907.10	Router	N/C
AVPN Managed Router (AT&T Owned) – XXLarge	19205	N/C	$ 1,113.90	Router	N/C
Lost Equipment Charge for AT&T Owned CPE	N/A	Residual Value of Lost CPE	N/A	N/A	N/A
Customer-Owned/AT&T-Managed Option					
AVPN Managed Router (Customer Owned) – Basic	18522	N/C	$ 103.40	Router	N/C
AVPN Managed Router (Customer Owned) – Small	18523	N/C	$ 108.10	Router	N/C
AVPN Managed Router (Customer Owned) – Medium	18524	N/C	$ 143.35	Router	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Router (Customer Owned) – Large	18525	N/C	$ 227.95	Router	N/C
AVPN Managed Router (Customer Owned) – XLarge	18526	N/C	$ 265.55	Router	N/C
AVPN Managed Router (Customer Owned) – XLarge +	18527	N/C	$ 498.20	Router	N/C
AVPN Managed Router (Customer Owned) – XXLarge	19204	N/C	$ 582.80	Router	N/C
AVPN Managed Internal CSU (AT&T Owned)					
AVPN Managed Internal CSU (AT&T Owned) – 56/64Kbps	18487	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – T1	18488	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – T3/DS3	18489	N/C	$ 75.05	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) –IMA	19925	N/C	$ 20.70	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – MLPPP	19926	N/C	$ 20.70	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – T3/DS3 ATM	19927	N/C	$ 25.60	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – T3/DS3 PPP	19928	N/C	$ 75.05	CSU	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – Low End	21797	N/C	$ 28.20	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet – High End	21798	N/C	$ 164.50	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – Gig Ethernet Combo	21799	N/C	$ 282.00	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – OC3/STM1 ATM	21903	N/C	$ 300.80	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – OC3/ STM1 PPP	21904	N/C	$ 136.30	CSU	N/C
AVPN Managed Internal CSU (AT&T Owned) – OC3/STM4 PPP	20905	N/C	$ 648.60	CSU	N/C
AVPN Managed Internal CSU (Customer Owned)					
AVPN Managed Internal CSU (Customer Owned) – 56/64Kbps	22852	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – T1	22853	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – T3 /DS3	21919	N/C	$ 30.55	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – IMA	22854	N/C	$ 21.15	CSU	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Internal CSU (Customer Owned) – MLPPP	22855	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – T3/DS3 ATM protocol	22856	N/C	$ 30.55	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – T3/DS3 PPP protocol	22857	N/C	$ 30.55	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – Low End	21927	N/C	$ 21.15	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – High End	21928	N/C	$ 30.55	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – Gig Ethernet – Combo	21929	N/C	$ 91.65	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 ATM	21910	N/C	$ 61.10	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – OC3/STM1 PPP	21911	N/C	$ 23.50	CSU	N/C
AVPN Managed Internal CSU (Customer Owned) – OC12/STM4 PPP	21912	N/C	$ 91.65	CSU	N/C
AT&T Owned and Managed External CSU					
AVPN Managed External CSU – 56 Kbps	19932	N/C	$ 211.20	CSU	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
Note: This Product is no longer available. Existing customers will continue to be supported.					
AVPN Managed External CSU/DSU - T1/E1	19933	N/C	$ 63.92	CSU	N/C
AVPN Managed External In-line Probe - NXT1/NXE1 PPP	19935	N/C	$ 372.24	Probe	N/C
AVPN Managed External Probe T3/E3 FR	19937	N/C	$ 748.24	Probe	N/C
AVPN Managed External Probe T3/E3 ATM	19936	N/C	$ 748.24	Probe	N/C
AVPN Managed External Probe T3/E3 PPP	19938	N/C	$ 748.24	Probe	N/C
AVPN Managed External Probe OC3 ATM/PPP	19939	N/C	$ 1,255.84	Probe	N/C
AVPN Managed External Probe 10/100 Mbps Ethernet	22663	N/C	$ 101.05	Probe	N/C
AVPN Managed External Probe 1 Gbps Ethernet	22664	N/C	$ 815.45	Probe	N/C
Reports					
AVPN Managed Enhanced Reports	19947	N/C	$ 31.96	Per External CSU/DSU or Probe	N/C
AVPN Managed (AT&T Owned) Additional Router Features:					
AVPN Managed (AT&T Owned) (AT&T Owned) Router - Additional Protocol	18502	N/C	$ 23.50	Protocol	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
Support					
AVPN Managed (AT&T Owned) Router - Additional Serial Port	18517	N/C	$ 21.15	Port	N/C
AVPN Managed (AT&T Owned) Router - Additional LAN Port	18518	N/C	$ 84.60	Port	N/C
AVPN Managed (AT&T Owned) Router - Additional Memory up to XL	18516	N/C	$ 108.10	Memory Upgrade	N/C
AVPN Managed (AT&T Owned) Router – Additional Memory XL+	21906	N/C	$ 272.60	Memory Upgrade	N/C
AT&T Managed (AT&T Owned) Router – Dual Power XL+	21908	N/C	$ 108.10	Dual Power	N/C
AT&T Managed (AT&T Owned) Router – Dual Power XXL	21909	N/C	$ 131.60	Dual Power	N/C
AVPN Managed (AT&T Owned) Router- ISDN Backup BRI	19728	N/C	$ 23.50	Port	N/C
AVPN Managed (AT&T Owned) Router-ISDN Backup PRI	19729	N/C	$ 112.80	Port	N/C
AT&T Managed (AT&T Owned) Router – Multicast	22698	N/C	$ .94	Mulicast	N/C
AVPN Managed (Customer Owned) Additional Router Features:					
AVPN Managed (Customer	21917	N/C	$ 32.90	Protocol	N/C

Feature Name	Identifier	Non-Recurring Charge ***	Recurring Charge	Unit of measure	Change Charge
Owned) Router - Additional Protocol Support					
AVPN Managed (Customer Owned) Router - Additional Serial Port	21924	N/C	$ 21.15	Port	N/C
AVPN Managed (Customer Owned) Router - Additional LAN Port	21925	N/C	$ 23.50	Port	N/C
AVPN Managed (Customer Owned) Router - Additional Memory up to XL	21923	N/C	$ 28.20	Memory Upgrade	N/C
AVPN Managed (Customer Owned) Router – Additional Memory XL+	21913	N/C	$ 51.70	Memory Upgrade	N/C
AT&T Managed (Customer Owned) Router – Dual Power XL+	21915	N/C	$ 23.50	Dual Power	N/C
AT&T Managed (Customer Owned) Router – Dual Power XXL	21916	N/C	$ 23.50	Dual Power	N/C
AVPN Managed (Customer Owned) Router- ISDN Backup BRI	21920	N/C	$ 21.15	Port	N/C
AVPN Managed (Customer Owned) Router- ISDN Backup PRI	21921	N/C	$ 21.15	Port	N/C
AT&T Managed (Customer Owned) Router – Multicast	22698	N/C	$ .94	Mulicast	N/C

AVPN Managed Service Bundles

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Service Bundles w/ Standard Features					
AVPN Managed Service Bundle DS0 - 56 Kbps w / Type 17A Router	AVMS56A	$ 643.00	$ 410.40	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 128 Kbps w / Type 1A Router T1	AVMS128A	$ 643.00	$ 468.80	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 128 Kbps w / Type 2A Router MLPPP	AVMS128B	$ 643.00	$ 660.36	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 256 Kbps w / Type 1A Router T1	AVMS256A	$ 643.00	$ 498.70	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 256 Kbps w / Type 2A Router MLPPP	AVMS256B	$ 643.00	$ 690.26	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 384 Kbps w / Type 1A Router T1	AVMS384A	$ 643.00	$ 539.00	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 384 Kbps w / Type 2A Router MLPPP	AVMS384B	$ 643.00	$ 730.56	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 512 Kbps w / Type 1A Router T1	AVMS512A	$ 643.00	$ 585.15	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 512 Kbps w / Type 2A Router MLPPP	AVMS512B	$ 643.00	$ 776.71	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Service Bundle DS1 - 768 Kbps w / Type 1A Router T1	AVMS768A	$ 643.00	$ 626.10	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 768 Kbps w / Type 2A Router MLPPP	AVMS768B	$ 643.00	$ 817.66	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 1024 Kbps w / Type 1A Router T1	AVMS1024A	$ 643.00	$ 628.70	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 1024 Kbps w / Type 2A Router MLPPP	AVMS1024B	$ 643.00	$ 820.26	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 1.544 Mbps w/ Type 1A Router T1	AVMS1544A	$ 643.00	$ 646.59	Bundle	$ 500.00
AVPN Managed Service Bundle DS1 - 1.544 Mbps w / Type 2A Router MLPPP	AVMS1544B	$ 643.00	$ 838.15	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 2 Mbps w / Type 7A Router Ethernet	AVMS2A	$ 643.00	$ 1,088.41	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 2 Mbps w / Type 22A Router Ethernet	AVMS2B	$ 643.00	$ 1,346.80	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 2 Mbps w / Type 7A Router Ethernet	AVMS2C	$ 643.00	$ 1,088.41	Bundle	$ 500.00
AVPN Managed Service	AVMS2D	$ 643.00	$ 1,346.80	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Bundle Ethernet- Silver - 2 Mbps w / Type 22A Router Ethernet					
AVPN Managed Service Bundle NxDS1 - 3.088 Mbps w / Type 2A Router MLPPP	AVMS3088A	$ 643.00	$ 1,287.91	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 4 Mbps w / Type 7A Router Ethernet	AVMS4A	$ 643.00	$ 1,254.46	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 4 Mbps w / Type 22A Router Ethernet	AVMS4B	$ 643.00	$ 1,512.85	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 4 Mbps w / Type 7A Router Ethernet	AVMS4C	$ 643.00	$ 1,541.43	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 4 Mbps w / Type 22A Router Ethernet	AVMS4D	$ 643.00	$ 1,512.85	Bundle	$ 500.00
AVPN Managed Service Bundle NxDS1 - 4.632 Mbps w / Type 3A Router MLPPP	AVMS4632A	$ 643.00	$ 1,541.43	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 5 Mbps w / Type 7A Router Ethernet	AVMS5A	$ 643.00	$ 1,133.14	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 5	AVMS5B	$ 643.00	$ 1,391.53	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Mbps w / Type 22A Router Ethernet					
AVPN Managed Service Bundle Ethernet- Silver - 5 Mbps w / Type 7A Router Ethernet	AVMS5C	$ 643.00	$ 1,133.14	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 5 Mbps w / Type 22A Router Ethernet	AVMS5D	$ 643.00	$ 1,391.53	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 – 5A Mbps w / Type 5 Router PPP	AVMS5E	$ 643.00	$ 2,178.25	Bundle	$ 500.00
AVPN Managed Service Bundle NxDS1 – 6.176 Mbps w / Type 4A Router MLPPP	AVMS6176A	$ 643.00	$ 1,631.23	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 8 Mbps w / Type 7A Router Ethernet	AVMS8A	$ 643.00	$ 1,591.50	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 8 Mbps w / Type 22A Router Ethernet	AVMS8B	$ 643.00	$ 1,849.89	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 8 Mbps w / Type 7A Router Ethernet	AVMS8C	$ 643.00	$ 1,591.50	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 8 Mbps w / Type 22A Router	AVMS8D	$ 643.00	$ 1,849.89	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Ethernet					
AVPN Managed Service Bundle Ethernet- Bronze - 10 Mbps w / Type 7A Router Ethernet	AVMS10A	$ 643.00	$ 1,836.96	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 10 Mbps w / Type 22A Router Ethernet	AVMS10B	$ 643.00	$ 2,095.35	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 10 Mbps w / Type 7A Router Ethernet	AVMS10C	$ 643.00	$ 1,900.72	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 10 Mbps w / Type 22A Router Ethernet	AVMS10D	$ 643.00	$ 2,159.11	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 10 Mbps w / Type 5A Router PPP	AVMS10E	$ 643.00	$ 2,679.03	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 15 Mbps w / Type 5A Router PPP	AVMS15A	$ 643.00	$ 3,007.98	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 20 Mbps w / Type 7A Router Ethernet	AVMS20A	$ 643.00	$ 2,357.50	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 20 Mbps w / Type 22A Router Ethernet	AVMS20B	$ 643.00	$ 2,615.89	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN Managed Service Bundle Ethernet- Silver - 20 Mbps w / Type 7A Router Ethernet	AVMS20C	$ 643.00	$ 2,433.03	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 20 Mbps w / Type 22A Router Ethernet	AVMS20D	$ 643.00	$ 2,691.42	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 20 Mbps w / Type 5A Router PPP	AVMS20E	$ 643.00	$ 3,076.96	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 25 Mbps w / Type Type 5A Router MLPPP	AVMS25A	$ 643.00	$ 3,276.73	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 30 Mbps w / Type 5A Router PPP	AVMS30A	$ 643.00	$ 3,622.13	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 40 Mbps w / Type 5A Router PPP	AVMS40A	$ 643.00	$ 3,990.13	Bundle	$ 500.00
AVPN Managed Service Bundle DS3 - 45 Mbps w / Type 5A Router PPP	AVMS45A	$ 643.00	$ 4,241.62	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 50 Mbps w / Type 22A Router Ethernet	AVMS50A	$ 643.00	$ 4,241.11	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 50 Mbps w / Type 10A Router	AVMS50B	$ 643.00	$ 4,357.66	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Ethernet					
AVPN Managed Service Bundle Ethernet- Silver - 50 Mbps w / Type 22A Router Ethernet	AVMS50C	$ 643.00	$ 4,326.45	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 50 Mbps w / Type 10A Router Ethernet	AVMS50D	$ 643.00	$ 4,443.00	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 100 Mbps w / Type 10A Router Ethernet	AVMS100A	$ 643.00	$ 6,445.52	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 100 Mbps w / Type 10A Router Ethernet	AVMS100B	$ 643.00	$ 6,540.66	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 150 Mbps w / Type 11A Router Ethernet	AVMS150A	$ 643.00	$ 8,062.12	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 150 Mbps w / Type 26 Router Ethernet	AVMS150B	$ 643.00	$ 8,447.44	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 150 Mbps w / Type 11A Router Ethernet	AVMS150C	$ 643.00	$ 8,160.21	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 150	AVMS150D	$ 643.00	$ 8,545.53	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Mbps w / Type 26 Router Ethernet					
AVPN Managed Service Bundle Ethernet- Bronze - 250 Mbps w / Type 26 Router Ethernet	AVMS250A	$ 643.00	$ 12,241.84	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 250 Mbps w / Type 27 Router Ethernet	AVMS250B	$ 643.00	$ 12,663.28	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 250 Mbps w / Type 26 Router Ethernet	AVMS250C	$ 643.00	$ 12,438.02	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 250 Mbps w / Type 27 Router Ethernet	AVMS250D	$ 643.00	$ 12,859.46	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 500 Mbps w / Type 27 Router Ethernet	AVMS500A	$ 643.00	$ 17,513.23	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 500 Mbps w / Type 27 Router Ethernet	AVMS500B	$ 643.00	$ 17,709.41	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Bronze - 600 Mbps w / Type 27 Router Ethernet	AVMS600A	$ 643.00	$ 19,521.32	Bundle	$ 500.00
AVPN Managed Service	AVMS600B	$ 643.00	$ 19,692.97	Bundle	$ 500.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Bundle Ethernet- Silver - 600 Mbps w / Type 27 Router Ethernet					
AVPN Managed Service Bundle Ethernet- Bronze - 1000 Mbps w / Type 27 Router Ethernet	AVMS1000A	$ 643.00	$ 30,202.07	Bundle	$ 500.00
AVPN Managed Service Bundle Ethernet- Silver - 1000 Mbps w / Type 27 Router Ethernet	AVMS1000B	$ 643.00	$ 30,348.23	Bundle	$ 500.00
AVPN Managed Service Bundles Life Cycle Features and Services					
Moves, Adds, Changes and Deletes					
Move Router Site (Inside) - Low Complexity	13092L	$ 600.00	N/A	Router	N/A
Move Router Site (Inside) - Medium Complexity	13092M	$ 720.00	N/A	Router	N/A
Move Router Site (Inside) - High Complexity	13092H	$ 850.00	N/A	Router	N/A
Move Router Site (Outside) - Low Complexity	13093L	$ 1,200.00	N/A	Router	N/A
Move Router Site (Outside) - Medium Complexity	13093M	$ 1,440.00	N/A	Router	N/A
Move Router Site (Outside) - High Complexity	13093H	$ 1,700.00	N/A	Router	N/A
Router Site Add - Low Complexity	13118L	$ 1,500.00	N/A	Router	N/A
Router Site Add - Medium	13118M	$ 1,620.00	N/A	Router	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Complexity					
Router Site Add - High Complexity	13118H	$ 1,750.00	N/A	Router	N/A
Add/Delete Router Boards – Low Complexity	13127L	$ 300.00	N/A	Router	N/A
Add/Delete Router Boards – Medium Complexity	13127M	$ 360.00	N/A	Router	N/A
Add/Delete Router Boards – High Complexity	13127H	$ 425.00	N/A	Router	N/A
Site Delete for AT&T Provided Equipment	13119	$ 0.00	N/A	Router	N/A
Site Insufficiently Prepared to Receive On-Site Services / Vendor Turn-Away	14570	$ 200.00	N/A	Router	N/A
Cancellation to Receive on Site Services with Less Than Five Business Days notice to AT&T	13109A	$ 200.00	N/A	Router	N/A
Supplementary Professional, Engineering and Technical Services					
Standard Hours (8AM – 5PM local time) First Hour	13109B	N/A	$ 360.00	Hour	N/A
Standard Hours (8AM – 5PM local time) Subsequent Hours	13109C	N/A	$ 180.00	Hour	N/A
Non-Standard Hours First Hour	13109D	N/A	$ 460.00	Hour	N/A
Non-Standard Hours Subsequent Hours	13109E	N/A	$ 230.00	Hour	N/A
Lost Equipment Charge for AT&T Owned CPE	13054	Residual Value of Lost CPE	N/A	N/A	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
Configuration Changes	14158	$ 150.00	N/A	Router	N/A
AVPN Managed Service Bundles Optional Up lift Features and Services					
Router Protocol, Memory and Misc Managed Router Feature Upgrades					
Enterprise Services IOS w/o encryption for 18XX series managed router feature upgrade	MSB1000	$590.00	N/A	Router	$150.00* *Applies to Upgrade to existing router.
Enterprise Services IOS w/o encryption for 28XX series managed router feature upgrade	MSB1001	$826.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Enterprise Services IOS w/o encryption for 38XX series managed router feature upgrade	MSB1002	$1,180.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 18XX series managed router feature upgrade	MSB1003	$1,062.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 28XX series managed router feature upgrade	MSB1004	$1,416.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Advanced Enterprise Services IOS w encryption for 38XX series managed	MSB1005	$2,065.00	N/A	Router	$150.00* *Applies to Upgrade to

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
router feature upgrade					existing router
Advanced Enterprise Services IOS w encryption for 72XX series managed router feature upgrade	MSB1006	$3,835.00	N/A	Router	$150.00* *Applies to Upgrade to existing router
Extra Memory for Enterprise and Advanced Enterprise IOS for 18XX series managed router feature upgrade	MSB1007	$295.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port Card for 18XX, 28XX and 38XX series managed router feature upgrade	MSB1008	$236.00	N/A	Port	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 Port Serial Port Adapter Card for 72XX and 73XX series managed router feature upgrade	MSB1009	$2,655.00	N/A	Port	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port Fast Ethernet 100Base TX Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1010	$2,242.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port Ethernet 10BaseT Port Adapter fro 72XX and 73XX managed router feature upgrade	MSB1011	$2,655.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
1-Port Gigabit Ethernet Port Adapter for 72XX and 73XX series managed router feature upgrade	MSB1012	$3,540.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX Short Wavelength GBIC (Multimode only) for 72XX and 73XX series managed router feature upgrade	MSB1013	$295.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX Short Wavelength GBIC (Copper) for 72XX and 73XX series managed router feature upgrade	MSB1014	$295.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra 4 port 10/100 Ethernet switch interface card for 28XX and 38XX series managed router feature upgrade	MSB1015	$250.75	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
10/100 routed port HWIC Card for 28XX and 38XX series managed router feature upgrade	MSB1016	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector LX/LH transceiver for 38XX series managed router feature upgrade	MSB1017	$587.05	N/A	Connector	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX SFP (DOM)	MSB1018	$324.50	N/A	Connector	*See Professional

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
for 38XX series managed router feature upgrade					Engineering and Technical Services Charges for on-site upgrade to existing router.
7304 Carrier Card for 7200 Series Port Adapters managed router feature upgrade	MSB1019	$737.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Serial Cable managed router feature upgrade	MSB1020	$59.00	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Console Port to CAS cable managed router feature upgrade	MSB1021	$20.05	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Fiber Cable managed router feature upgrade	MSB1022	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Rack Mount Kit managed router feature upgrade	MSB1023	$59.00	N/A	Kit	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Extra Serial Port for ASR1000 series managed	MSB1024	$324.50	N/A	Card	*See Professional Engineering and

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
router feature upgrade					Technical Services Charges for on-site upgrade to existing router.
Extra Serial Cable for ASR1000 series managed router feature upgrade	MSB1025	$259.60	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Copper SFP - SX Cisco 2-Port Gigabit Ethernet Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1026	$6,277.60	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2 port 100M Ethernet Cisco 4-Port Fast Ethernet (TX) Shared Port Adapter for ASR1000 series managed router feature upgrade	MSB1027	$5,022.08	N/A	Adapter	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Adv Ent IOS for DLSw and IPSEC Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1028	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cisco ASR 1000 Series RP1 managed router feature upgrade	MSB1029	$6,277.60	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
G2 Series Routers 19xx, 29xx, 39xx managed router feature upgrades					

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
GE SFP, LC connector LX/LH transceiver managed router feature upgrade	MSB1030	$587.05	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GE SFP, LC connector SX transceiver managed router feature upgrade	MSB1031	$295.00	N/A	Transceiver	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-T SFP managed router feature upgrade	MSB1032	$233.05	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-port 10/100 Routed Port HWIC managed router feature upgrade	MSB1033	$531.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
GigE high speed WIC managed router feature upgrade	MSB1034	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port Serial WAN Interface Card managed router feature upgrade	MSB1035	$236.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
4-Port 10/100 Ethernet	MSB1036	$250.75	N/A	Card	*See Professional

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
switch interface card managed router feature upgrade					Engineering and Technical Services Charges for on-site upgrade to existing router.
1000BASE-SX SFP (DOM) managed router feature upgrade	MSB1037	$324.50	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
1-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1038	$767.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
2-Port 2nd Gen Multiflex Trunk Voice/WAN Int. Card - T1/E1 managed router feature upgrade	MSB1039	$1,180.00	N/A	Card	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 19XX Series managed router feature upgrade	MSB1040	$354.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 19XX Series managed router feature upgrade	MSB1041	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 29XX Series managed router feature	MSB1042	$413.00	N/A	Router	*See Professional Engineering and

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
upgrade					Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 29XX Series managed router feature upgrade	MSB1043	$708.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Data IOS for Cisco 39XX Series managed router feature upgrade	MSB1044	$590.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Security IOS for Cisco 39XX Series managed router feature upgrade	MSB1045	$1,180.00	N/A	Router	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
COS device 4 port COS switch managed router feature upgrade	MSB1046	$432.47	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: OOB modem to: COS/4 managed router feature upgrade	MSB1047	$17.70	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Cable from: CO to: Router's Console Port (DB25M-RJ45, 10ft.) managed router feature	MSB1048	$11.83	N/A	Cable	*See Professional Engineering and Technical Services

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
upgrade					Charges for on-site upgrade to existing router.
AIM Module 1800/2800/3800 managed router feature upgrade	MSB1049	$1,475.00	N/A	Module	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
SC type to SC type MMF 62.5 micron 15' for WS-G5484 modules managed router feature upgrade	MSB1050	$45.89	N/A	Cable	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
12 port COS Switch managed router feature upgrade	MSB1051	$6,590.60	N/A	Switch	*See Professional Engineering and Technical Services Charges for on-site upgrade to existing router.
Optional Architectural Validation Professional Services	13096	N/A	$350.00	Hour	N/A
Dial Backup					
Analog (POTS) Dial Backup Management	13060A	N/A	$10.00	Router	N/A
ISDN Basic Rate Interface (BRI) Dial Backup Management	13060B	N/A	$10.00	Router	N/A
ISDN Primary Rate Interface (PRI) Dial Backup Management	13060C	N/A	$25.00	Router	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
TACACS (Terminal Access Controller Access Control System) Read Only Access					
TACACS Read Only Access – Router Enablement	TACACSRE	$40.00	N/A	Router	$150.00
TACACS Read Only Access - Support	TACACSRS	N/A	$18.00	Router	N/A
TACACS Read Only Access – Enablement 1-6 Enabled Employees	TACACS1	$0.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 7-12 Enabled Employees	TACACS2	$250.00	N/A	Enabled Employee	$150.00
TACACS Read Only Access – Enablement 13 to 25 Enabled Employees	TACACS3	$750.00	N/A	Enabled Employee	$150.00
AVPN Managed Services Data Center Stand Alone Routers					
Legacy Protocol (SNA, DLSw and IPX) Standalone router Type 20	MSDCRT1	$0.00	$1,324.00	Router	$0.00
IPSEC Standalone router Type 24	MSDCRT2	$0.00	$1,084.34	Router	$0.00
Traffic Aggregation Standalone router Type 25	MSDCRT3	$0.00	$3,355.44	Router	$0.00
Traffic Aggregation Standalone router Type 27	MSDCRT4	$0.00	$1,340.07	Router	$0.00

ANIRA

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA -IPSec Hourly Analog	6970	$ -	$ 0.49	hourly	$ -
ANIRA - IPSec Hourly ISDN	6982	$ -	$ 0.49	b-chan/hour	$ -
ANIRA - IPSec Toll-Free	6994	$ -	$ 0.49	hourly	$ -
ANIRA - IPSec Monthly Analog	17563	$ -	$ 14.38	monthly	$ -
ANIRA IPSec - Monthly Excess	17564	$ -	$ 1.00	hourly	$ -
ANIRA – Third Party Access	16940	$ -	$ 4.00	user/month	$ -
ANIRA – Bandwidth Connection Charge (Type II) 64Kbps	17573	$ -	$ 46.80	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 128Kbps	17574	$ -	$ 84.48	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 192Kbps	17575	$ -	$ 121.80	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 256Kbps	17576	$ -	$ 157.68	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 320Kbps	17577	$ -	$ 198.00	connection	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 384Kbps	17578	$ -	$ 235.40	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 448Kbps	17579	$ -	$ 269.64	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 512Kbps	17580	$ -	$ 302.40	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 576Kbps	17581	$ -	$ 317.72	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 640Kbps	17582	$ -	$ 333.12	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 704Kbps	17583	$ -	$ 344.96	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 768Kbps	17584	$ -	$ 355.00	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 832Kbps	17585	$ -	$ 362.10	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 896Kbps	17586	$ -	$ 370.24	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 960Kbps	17587	$ -	$ 379.48	connection	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 1024Kbps	17588	$ -	$ 394.90	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 1536Kbps	17589	$ -	$ 557.70	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 2Mbps	17590	$ -	$ 686.40	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 3Mbps	17591	$ -	$ 723.80	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 4Mbps	17592	$ -	$ 965.80	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 5Mbps	17593	$ -	$ 1,206.70	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 6Mbps	17594	$ -	$ 1,447.60	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 7Mbps	17595	$ -	$ 1,688.50	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 8Mbps	17596	$ -	$ 1,929.40	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 9Mbps	17597	$ -	$ 2,170.30	connection	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 10Mbps	17598	$ -	$ 2,411.20	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 15Mbps	17599	$ -	$ 3,481.50	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 20Mbps	17600	$ -	$ 4,640.90	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 25Mbps	17601	$ -	$ 5,801.40	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 30Mbps	17602	$ -	$ 6,957.50	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 35Mbps	17603	$ -	$ 8,121.30	connection	$ -
ANIRA – Bandwidth Connection Charge (Type II) 40Mbps	17604	$ -	$ 9,281.80	connection	$ -
ANIRA - Managed Broadband Multi-User Service 144Kbps	17644	$ 600.00	$ 170.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 192Kbps	17645	$ 600.00	$ 170.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 384Kbps	17646	$ 600.00	$ 191.96	monthly	$ 300.00

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA - Managed Broadband Multi-User Service 768Kbps	17648	$ 600.00	$ 247.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 1.1Mbps	17649	$ 600.00	$ 175.48	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 1.5Mbps	17650	$ 600.00	$ 197.98	monthly	$ 300.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL) 768/128Kbps	17650a	$ 300.00	$ 55.96	monthly	$ 150.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL) 1.5M/384Kbps	17650b	$ 300.00	$ 51.96	monthly	$ 150.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL)144/144Kbps	17643	$ 600.00	$ 111.96	monthly	$ 300.00
Managed Broadband Multi-User VPN Device	17650c	$ -	$ 36.90	monthly	$ -
ANIRA - Extended Access and WI-FI/Wired Ethernet	15172		$ 5.95	hourly	$ -
ANIRA – WiFi Access	17164		$ 6.25	hourly	$ -

Managed Security Service – Network Based Firewall (NBFW)

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
Service Level					
1	20423	N/A	$ 315.00	Per firewall	N/A
2	20424	N/A	$ 490.00	Per firewall	N/A
3	20425	N/A	$ 962.50	Per firewall	N/A
4	20426	N/A	$ 1,610.00	Per firewall	N/A
5	20427	N/A	$ 3,010.00	Per firewall	N/A
Bandwidth (San Jose SDC) – may also be used for Additional SecNets					
1.55 Mbps	20490	N/A	$ 420.00	Per connection	N/A
2 Mbps	20491	N/A	$ 490.00	Per connection	N/A
3 Mbps	20492	N/A	$ 805.00	Per connection	N/A
4 Mbps	20493	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20494	N/A	$ 1,260.00	Per connection	N/A
6 Mbps	20495	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20496	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20497	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20498	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20499	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20500	N/A	$ 2,695.00	Per connection	N/A
20 Mbps	20501	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20502	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20503	N/A	$ 4,830.00	Per connection	N/A
35 Mbps	20504	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20505	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20506	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20507	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20508	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20509	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20510	N/A	$ 12,705.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
90 Mbps	20511	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20512	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20513	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20514	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
URL Filtering					
100 Users	20766	N/A	$ 105.00	Per firewall	N/A
500 Users	20767	N/A	$ 420.00	Per firewall	N/A
1000 Users	20768	N/A	$ 665.00	Per firewall	N/A
3000 Users	20769	N/A	$ 1,575.00	Per firewall	N/A
5000+ Users	20770	N/A	$ 2,415.00	Per firewall	N/A
IDS/IPS					
Active IDS/IPS - Basic	20782	N/A	$ 245.00	Per firewall	N/A
Active IDS/IPS - Advanced	20784	N/A	$ 350.00	Per firewall	N/A
NOTE: The Bandwidth items below for Mesa SDC and Secaucus SDC apply to the following features: • Additional SDC Egress (for Multiple Outbound Access Point); • Additional Site Egress and Ingress; and • Additional Secure Networks (SecNets)					
Bandwidth (Mesa SDC)					
1.55 Mbps	20465	N/A	$ 420.00	Per connection	N/A
2 Mbps	20466	N/A	$ 490.00	Per connection	N/A
3 Mbps	20467	N/A	$ 805.00	Per connection	N/A
4 Mbps	20468	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20469	N/A	$ 1,260.00	Per connection	N/A
6 Mbps	20470	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20471	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20472	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20473	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20474	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20475	N/A	$ 2,695.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
20 Mbps	20476	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20477	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20478	N/A	$ 4,830.00	Per connection	N/A
35 Mbps	20479	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20480	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20481	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20482	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20483	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20484	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20485	N/A	$ 12,705.00	Per connection	N/A
90 Mbps	20486	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20487	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20488	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20489	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
Bandwidth (Secaucus SDC)					
1.55 Mbps	20440	N/A	$ 420.00	Per connection	N/A
2 Mbps	20441	N/A	$ 490.00	Per connection	N/A
3 Mbps	20442	N/A	$ 805.00	Per connection	N/A
4 Mbps	20443	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20444	N/A	$ 1,260.00	Per connection	N/A
6 Mbps	20445	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20446	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20447	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20448	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20449	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20450	N/A	$ 2,695.00	Per connection	N/A
20 Mbps	20451	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20452	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20453	N/A	$ 4,830.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
35 Mbps	20454	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20455	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20456	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20457	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20458	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20459	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20460	N/A	$ 12,705.00	Per connection	N/A
90 Mbps	20461	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20462	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20463	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20464	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
Application Filtering	20791	N/A	$ 262.50	Per firewall	N/A
Advanced Logging	20786	N/A	$ 70.00	Per firewall	N/A
Additional Firewall Rules – Each block of 5 – up to 10 blocks	20777	N/A	$ 140.00	Per firewall	N/A
Additional MACDs (Two MACDs per package	20779	N/A	$ 70.00	Per package	N/A
Additional Public IP Addresses					
Block of 4 (Up to 32 Blocks)	20773	N/A	$ 35.00	Block of 4	N/A
Block of 256 (Up to 10 Class C's (/24))	20775	N/A	$ 875.00	Block of 256	N/A
Cross Connect					
Cross Connect – under 100 Mbps	20794	N/A	$ 175.00	Per connection	N/A
Cross Connect – equal to or over 100 Mbps	20796	N/A	$ 350.00	Per connection	N/A
Site Fail-Over					
1.55 Mbps	20741	N/A	$ 385.00	Per connection	N/A
2 Mbps	20742	N/A	$ 455.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
3 Mbps	20743	N/A	$ 595.00	Per connection	N/A
4 Mbps	20744	N/A	$ 735.00	Per connection	N/A
5 Mbps	20745	N/A	$ 910.00	Per connection	N/A
6 Mbps	20746	N/A	$ 1,050.00	Per connection	N/A
7 Mbps	20747	N/A	$ 1,190.00	Per connection	N/A
8 Mbps	20748	N/A	$ 1,365.00	Per connection	N/A
9 Mbps	20749	N/A	$ 1,505.00	Per connection	N/A
10 Mbps	20750	N/A	$ 1,645.00	Per connection	N/A
15 Mbps	20751	N/A	$ 2,415.00	Per connection	N/A
20 Mbps	20752	N/A	$ 3,185.00	Per connection	N/A
25 Mbps	20753	N/A	$ 3,955.00	Per connection	N/A
30 Mbps	20754	N/A	$ 4,690.00	Per connection	N/A
35 Mbps	20755	N/A	$ 5,460.00	Per connection	N/A
40 Mbps	20756	N/A	$ 6,230.00	Per connection	N/A
45 Mbps	20757	N/A	$ 6,965.00	Per connection	N/A
50 Mbps	20758	N/A	$ 7,735.00	Per connection	N/A
60 Mbps	20759	N/A	$ 9,275.00	Per connection	N/A
75 Mbps	20760	N/A	$11,550.00	Per connection	N/A
80 Mbps	20761	N/A	$12,320.00	Per connection	N/A
90 Mbps	20762	N/A	$13,825.00	Per connection	N/A
100 Mbps	20763	N/A	$15,330.00	Per connection	N/A
125 Mbps	20764	N/A	$19,145.00	Per connection	N/A
135 Mbps	20765	N/A	$20,685.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	

See Required CPE and Other Equipment for descriptions of additional equipment and service offered.

6.1.3.9 Service Identifier: DSL Virtual Private Network

Description of Service

DSL access to AT&T's Virtual Private Network (AVPN) combines DSL access with a secure VPN network. The inherent security of the MPLS VPN meets the requirements for connecting multiple sites with DSL access.

Two types of DSL access:

- Symmetric DSL (SDSL) Port Access Bundle (includes dedicated loop, port, connection and CPE) - does not require a POTS line.

  AVPN MPLS SDSL Access Connection includes an MPLS Port that allows a Customer Site to connect to the AT&T Network, bundled with a DSL access line between the MPLS Port and the Customer Site. AT&T also provides and installs an AT&T DSL modem (either a DSL DSU or a DSL Router) at the Customer Site, with default configuration settings, including basic inside wiring from the LEC minimum point of entry (not to exceed two hours of inside wiring work). AVPN MPLS SDSL Access Connections are available at speeds of 128K, 256K, 384K, 768K, 1M, 1.5M.

- Asymmetric DSL (ADSL) Port Access Bundle (includes port and connection only)

  AVPN MPLS ADSL Line Shared Connection includes an MPLS Port that allows a Customer Site to connect to the AT&T Network, bundled with an Asymmetric DSL (ADSL) access line between the AT&T VPN MPLS Port and the Customer Site. ADSL access lines are provisioned over a Customer provided POTS line that is provided by the Local Exchange Carrier ("LEC"). ADSL will provide asymmetric bandwidth to the Customer Site up to the quoted speed. Customer eligibility for ADSL speeds may depend upon the distance the Customer Site is from the LEC provider central office. The Service demarcation point for AT&T VPN ADSL Line Shared Connections is the LEC minimum point of entry at the Customer Site. AVPN MPLS ADSL Line Shared Connections are available up to the following speeds (downstream/upstream): 384K/384K, 1.5M/384K, 3M/384K, 3M/768K and 6M/768K. The Unilink feature is not available on MPLS ADSL Line Shared Connections. An MPLS ADSL Line Shared Connection does not include an ADSL Router or the installation of an ADSL Router at the Customer Site. Customer shall provide, install and configure the ADSL Router at the Customer Site. It does not include the POTS line, passive filters or inside wiring. Customer shall provide and is responsible for installation of the POTS line and any necessary filters and inside wiring.

DSL VPN is a subset of the MPLS service. In this section, DSL is the only access option used.

MPLS complies with industry definitions and standards as set by the IETF and provides the features requested by the State:

- Firewall Features—The network-based firewall provides comprehensive firewall functionality and services within the network, providing a secure gateway between the

VPN and outside sources, typically the Internet. Also, firewall features are integral to both the software and CPE clients for ANIRA.

- Encryption—Encryption is typically used when accessing the VPN from a source outside of the VPN, typically the Internet. The AT&T Network Based IP VPN Remote Access (ANIRA) fully supports standards-based encryption for remote access. A full description for ANIRA appears below. CPE-based IPSec compatible with AVPN provides encryption required between VPN users. The required CPE is available as an unsolicited feature.
- Non-IP Traffic—As a standards-based MPLS network, AVPN supports IP tunneling to support non-IP traffic.
- Authentication—Authentication is typically used when accessing the VPN from a source outside of the VPN, typically the Internet. The AT&T Network Based IP VPN Remote Access (ANIRA) fully supports standards-based authentication for remote access. A full description for ANIRA appears below.

AT&T Network Based IP VPN Remote Access (ANIRA)

The AT&T Network Based IP VPN Remote Access (ANIRA) introduces a standard set of capabilities to access AVPN. This service will provide remote access/SOHO capabilities to AVPN. Customers using ANIRA can connect to a private VPN via any of the following options as 'access':

- AT&T Dial (analog or ISDN)
- Extended access analog or Wi-Fi
- AT&T DSL
- AT&T Internet Service
- Third-party Access (i.e., access circuit is not ordered or managed by AT&T) broadband or ISP.

ANIRA is a global feature, integrated with global egress services.

Summary of the key ANIRA features:

- IP service
- Single user (AT&T or third-party software client) and multiuser access (e.g., select SOHO VPN devices, including NetGates and Cisco)
- Access via AT&T Dial, DSL, Internet access
- Integration with the following egress services: frame relay, ATM, IPFR and EVPN
- AT&T and customer-managed authentication (e.g., SecureID, RADIUS, SafeWord)
- Dual access (access to the network-based VPN and Internet)
- Support for registered and unregistered IP addresses
- IPSec and L2TP support for dial users
- No requirement for specialized CPE at the customer premises
- Usage-based and fixed-rate price plans for dial users
- Global service

ANIRA supports IPSec tunnels from a VPN device (i.e., AT&T Global Network Client, or SOHO device (e.g., NetGate or Cisco 831) to the virtual interface gateway (VIG) in the network. The VIG would terminate the IPSec tunnel and maps the traffic to the appropriate data or IP VPN egress (MPLS or frame-based VPN). For dial analog or ISDN access, packets

transport through the dial network by tunneling them in L2TP or IPSec with the destination of the packets to a virtual interface gateway (VIG)—all of which is transparent to the customer. The local interface gateway (LIG) provides the following functionality in the network:

- Dynamically assigns the user an IP address for the current session only.
- The AT&T Global Network client or the customer's logon script updates the end user's TCP/IP software configuration with the dynamically assigned IP address.
- Checks the source address of every packet to ensure it is unchanged; if a change is detected, the LIG discards the packet.
- It then checks the destination address of every packet to verify the user ID's authorization to that destination address. If authorized, the LIG allows the packet to pass. If not, the LIG discards the packet.
- The LIG checks the source address of all packets bound for the dial user. If the source address is in the user's access list, the LIG delivers the packet. If not, the LIG discards the packet.

DSL VPN Service and Features

Feature Name	Identifier	Feature Description
DSL VPN site-to-site connectivity solutions (non-Internet traversing)		End-to-end DSL virtual connection; Remote access and firewall features are separate.
DSL VPN Expedite option	AVDLEXP	Installation intervals to be negotiated.
DSL VPN Change Charge	18579	DSL VPN Change Charge
DSL VPN Disconnect Charge	18581	DSL VPN Disconnect Charge
AVPN MPLS SDSL 128K	18571	DSL Access to AVPN Service 128K; MPLS SDSL connection at 128 Kbps.
AVPN MPLS SDSL 256K	18572	DSL Access to AVPN Service 256K; MPLS SDSL connection at 256 Kbps.
AVPN MPLS SDSL 384K	18573	DSL Access to AVPN Service 384K; MPLS SDSL connection at 384 Kbps.
AVPN MPLS SDSL 768K	18574	DSL Access to AVPN Service 768K; MPLS SDSL connection at 768 Kbps.
AVPN MPLS SDSL 1M	18575	DSL Access to AVPN Service1M; MPLS SDSL connection at 1 Mbps.
AVPN MPLS SDSL 1.5M	18576	DSL Access to AVPN Service 1.5Mbps; MPLS SDSL connection at 1.5Mbps.
AVPN MPLS ADSL Line Shared Connection 384K/384K	19837	ADSL lined shared connection AVPN Service at 384 Kbps downstream by 384 Kbps upstream
AVPN MPLS ADSL Line Shared Connection 1.5M/384K	18577	ADSL lined shared connection to AVPN Service at 1.5 Mbps downstream by 384 Kbps upstream

Feature Name	Identifier	Feature Description
AVPN MPLS ADSL Line Shared Connection 3.072M/384K	19838	ADSL lined shared connection to AVPN Service at 3.072 Mbps downstream by 384 Kbps upstream
AVPN MPLS ADSL Line Shared Connection 3.072M/768K	19839	ADSL lined shared connection to AVPN Service at 3.072 Mbps downstream by 768 Kbps upstream
AVPN MPLS ADSL Line Shared Connection 6.144M/768K	19840	ADSL lined shared connection to AVPN Service at 6.144 Mbps downstream by 768 Kbps upstream
ANIRA -IPSec Hourly Analog	6970	Local analog secure dial access to AVPN via AT&T network, per hour of usage.
ANIRA - IPSec Hourly ISDN	6982	Local ISDN secure dial access to AVPN via AT&T network, per hour of usage. Charge for each B-channel in use.
ANIRA - IPSec Toll-Free	6994	Hourly Toll-Free dial-up access surcharge; Secure dial-up access, hourly surcharge for toll-free access when local dial is not available.
ANIRA - IPSec Monthly Analog	17563	Local analog secure dial access to AVPN via AT&T network, per month. Up to 150 hours per month.
ANIRA IPSec - Monthly Excess	17564	Local analog secure dial access to AVPN via AT&T network. Hourly charge for more than 150 hours.
ANIRA – Third Party Access	16940	Monthly management fee for remote access users with third-party Internet access.
ANIRA – Bandwidth Connection Charge (Type II)	175** 1760*	Connection to support aggregate bandwidth between gateway (VIG) and VPN. Available in various speeds (see Attachment 4). Monthly charge for redundant virtual connection from gateway to VPN. Sized for aggregate peak usage of fixed and dial-up connections per VPN.
ANIRA - Managed Broadband Multi-User Service	176**	Secure access for multi-user sites using AT&T DSL with AT&T Netgate and the AT&T Global Network Client. Available in various speeds (see exhibit 7). The feature provides business customers with a broadband solution from a remote access SOHO multiuser LAN to corporate LANs, intranets, and extranet(s), via AT&T DSL service and the AT&T SOHO VPN device using IPSec.
ANIRA -Managed Broadband Single User Service (ADSL and IDSL)	176**	Secure access for single-user sites using AT&T DSL with AT&T Global Network Client. Available in various speeds (see exhibit 7). The feature provides business customers with a

Feature Name	Identifier	Feature Description
		broadband solution from a remote access single-user to corporate LANs, intranets, and extranet(s), via AT&T DSL service and the AT&T Global Network client.
Managed Broadband Multi-User VPN Device	17650c	Secure access device for multi-user sites using AT&T DSL or third party access; ANIRA users who require broadband access will use one of these devices: AT&T NetGate 4100, AT&T NetGate 7100, or Cisco 831/836/837
ANIRA - Extended Access and Wi-Fi Wired Ethernet	15172	SecureWi-Fi access using AT&T Global Network Client; Wi-Fi support is added as a feature extension to ANIRA which has the following features: Provides the ability to roam across multiple Wi-Fi networks with a consistent user login experience using the AT&T Global Network (AGN) client and one set of log-in credentials for dial, broadband and Wi-Fi.
ANIRA – Wi-Fi Access	17164	SecureWi-Fi access using AT&T Global Network Client; Wi-Fi support is added as a feature extension to ANIRA which has the following features: Provides he ability to roam across multiple Wi-Fi networks with a consistent user login experience using the AT&T Global Network (AGN) client and one set of log-in credentials for dial, broadband and Wi-Fi.

Managed Security Service (MSS) – Network Based Firewall (NBFW)

MSS-Network Based Firewall enforces traffic separation among Customers by enabling Virtual Local Area Network (VLAN) tagging. For Customers who wish to make use of the AT&T MSS-Network Based Firewall service, AT&T will establish a Private Virtual Circuit (PVC) from a Customer location to the service in order to filter the traffic coming in or going to the Internet. The type of PVC will vary based on the Customer's WAN architecture. Traffic separation is designed to occur without tunneling or encryption. This is enabled through a combination of Border Gateway Protocol (BGP), Multi-Protocol Label Switching (MPLS), and Internet Protocol (IP) address resolution as described below.

BGP is a routing information distribution protocol that is designed to define who can talk to whom using multi-protocol extensions and community attributes. Virtual Private Network (VPN) membership depends upon logical ports entering the VPN, where BGP assigns a unique route distinguisher. In an MPLS-enabled VPN, BGP distributes forwarding information base tables about VPNs to members of the same VPN. This is designed to permit

users to participate on an Intranet and Extranet only if they reside on the correct physical or logical port and have the proper route distinguisher.

A packet received by the network backbone is associated with a particular VPN. A forwarding table associated with the particular VPN is used, along the originating IP address, to determine a set of possible egress interfaces and the packet's IP destination address.

For Customers with NBFW on Managed Internet Service (MIS), a Generic Routing Encapsulation (GRE) tunnel is established between AT&T's Security Data Center and Customer's MIS Plus router located on Customer's premises. Customer's traffic is separated from other Customers' traffic and the defined security policy/firewall configuration applied on the uniquely identified traffic flowing into the Network Based Firewall platform through the appropriate GRE tunnels.

Overall security and the selection and use of security facilities provided by AT&T is a Customer and User responsibility. AT&T does not guarantee that use of the security features that AT&T provides will prevent unauthorized access to Customer systems or data.

Service and Features

MSS Network Based Customers select the Feature Level for their service. This selection pre-determines basic service offering, including number of custom rules and number of included monthly changes (MACD).

Feature Name	Identifier	Feature Description	Additional Information
MSS-Network Based Firewall is available in five service levels ranging from simple outbound only security policy to extensive bi-directional policy with many optional features.			
Service Level 1	20423	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound Only • Reports via AT&T Business Direct • Customer is given a single public IP address (or PAT – Port Address Translation address). • Choice of up to 8 ports/protocols: HTTP (80); HTTPS (443); HTTP ALT	One Size Fits all customers (at this level) Security Policy. Available for all Security Data Centers (SDC). **Note:** SMTP Mail Relay is not allowed at this Service Level as this assumes inbound as well as outbound mail traffic.

Feature Name	Identifier	Feature Description	Additional Information
		(8080); HTTPS ALT (8443); FTP_CTRL (21); ICMP ECHO; DNS UDP/TCP (53); TELNET (23); SSH/SFTP (22).	
Service Level 2	20424	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound Only • Custom Security Policy (up to 10 rules) • Additional SecNets may be added • Customer is given a single public IP address (or PAT – Port Address Translation address). If more public IP addresses are required for NAT these can be bought.	Outbound only Security Policy but allowing additional rules, egress points (SDC locations), SecNets, etc. **Note:** SMTP Mail Relay is not allowed at this Service Level as this assumes inbound as well as outbound mail traffic.
Service Level 3	20425	• All components are high Availability with dual redundant access links to the Internet and private side • Outbound and Inbound traffic • Custom Security Policy (up to 30 rules) • /28 public IP address range allocated giving 16 addresses in total. One address reserved for PAT leaving 15 spare.	Outbound and Inbound Security Policy. In addition to Level 2 options, allows more rules and larger range of public IP addresses as standard.
Service Level 4	20426	• All components are high Availability with dual redundant access links to the Internet and private side • Custom Security Policy (up to 50 rules) • /27 public IP address range allocated giving 32 addresses in total. One address reserved for PAT leaving 31 spare.	Outbound and Inbound Security Policy. In addition to Level 3 options, has a larger range of public IP addresses as standard and support for higher bandwidths.
Service Level 5	20427	• All components are high	Outbound and Inbound

Feature Name	Identifier	Feature Description	Additional Information
		Availability with dual redundant access links to the Internet and private side • Outbound and Inbound traffic • Custom Security Policy (up to 99 rules) • Support for existing alternate ISP (failover) and/or advertising the Customer IP address space is included (minimum /24 of customer's own ARIN, APNIC, RIPE or other ICANN entity registered space)	Security Policy. In addition to Level 4 options, has support for other ISP, engineering support, etc.
Connection Bandwidth Options	20490 to 20514	Bandwidths ranging from 1.5 Mbps up to 135 Mbps. Over 135Mbps by ICB.	Available on Service Levels 1-5. San Jose SDC

For each of the Levels, AT&T MSS-Network Based provides connectivity and security monitoring (both inbound and outbound) that:

- Enables Customers to browse the Internet, logon to remote Hosts (Telnet) and complete file transfers using FTP at high speeds from around the world.
- Restricts access from the Internet into the Customer's corporate network.
- Reduces security risks by employing AT&T network security design.
- Provides a variety of access and utilization reports to help monitor Internet usage.

AT&T MSS-Network Based leverages existing AT&T private networks by:

- Installing security features directly into AT&T's network. Customer Internet access takes place via a "hub and spoke" arrangement within the AT&T packet network. Once Internet-bound traffic reaches the packet network, it is allowed access to the Internet based upon the Customer's specific Security Policy.

Standard Components:

For all levels of AT&T's MSS-Network Based Service Offer Features:

Security Monitoring:

- 7x24 monitoring of traffic into the network Firewall. This keeps inbound attacks outside of the MSS-Network Based infrastructure at the high-throughput circuits, well away from individual Customer components or services.
- Stateful Inspection of allowed IP traffic via Firewall.

- Open Systems Interconnection (OSI) Layer 2 isolation. All PVC traffic remains isolated through the MSS-Network Based Service infrastructure and the Security Policy.

Network:

- Bandwidth subscriptions from 1.544Mbps to 135Mbps (higher available as ICB) on a Secnet basis
- Support for customer source networks, using static route definitions within the firewall
- Static Network Address Translation (NAT) for customer servers (DNS, SMTP, etc.)
- Many-to-one outbound Network address translation of customer IP address space, with customer route isolation. This utilizes the Port Address Translation (PAT) facility of MSS-NB
- Resilient connections to AT&T VPN (AVPN) service.

DNS

MSS-NB service includes Domain Naming System (DNS) caching.

- A DNS service can be provided by AT&T-Enhanced Network Services (AENS) or customers can use their own DNS authority.
- The DNS caching service provided by MSS-NB gives customers name resolution and protection services. All customer DNS queries will be sent to the MSS-NB DNS caching servers from the customers' specified internal primary DNS servers.
- MSS-NB expects that customers have implemented some form of split DNS where internal resolution is done on a customer DNS server. These internal DNS servers are maintained and administered by the customer. External DNS queries will be sent from these servers to MSS-NB caching DNS servers for resolution.
- MSS-NB does not support internal customer DNS resolution. This must be provided by the customer.
- Customers will need to configure their DNS to use "forwarding" to the MSS-NB caching DNS servers for unknown domains. This prevents non-recursive attempts at resolution. Most new versions of BIND on all platforms support a global "forwarders" statement.

User Authentication

- If User Authentication is requested to be supported, Customers will be able to set policy controls over User level access to the Internet. After certain criteria is met (as determined by AT&T) and needed components are setup in the customer network, the MSS-NB platform will interface with a Customer's hosted and managed User Authentication service (RADIUS, LDAP, or Active Directory) to authenticate User activity to the Internet.. (Note: MSS-Network Based will not provision, administer, support or troubleshoot the Customer's User Authentication solution).
- User Authentication is not available for NBFW on MIS service.

Intrusion-Detection System (IDS) Logging only

- MSS-Network Based has implemented a set of certain basic IDS features, which includes limited scanning of Customer traffic for a small number of exploits, attacks and other malicious activities.
- IDS logging only is available for NBFW on MIS service.

Reporting

- MSS-Network Based provides a standard set of reports via the Business Direct portal. Content and format of the reports are subject to change without notice. AT&T maintains a Customer accessible website where reports may be obtained.

Offer Limitations:

- This Service provides Support for up to 10 total authorized Customer contacts (applies to all levels).
- Six (6) MACD service requests per month are allowed with each service level. Additional requests are subject to additional charges (applies to Service Levels 2-5 and Network Based Firewall on MIS).
- One (1) MACD service request per month is allowed for Service Level 1. Additional requests are subject to additional charges.
- No SNMP traffic is allowed to traverse the firewall (applies to all service levels).
- Only Critical ICMP (ping) traffic is allowed (troubleshooting or periodic checks)

Customers are encouraged to aggregate their Rules' source and destination addresses into networks rather than to specific Hosts. Source and destination networks should be subnetted up to the largest/most inclusive range. AT&T recommends that source or destination Rules apply to all users ("ANY"), which is usually especially for the common services needed by all users such as HTTP, HTTPS, or FTP.

If a Customer insists on specific granular source addresses, additional MSS-NB address packages can be purchased.

Optional Features

The following table describes the optional features available as a part of this service, and the Levels that apply to each:

Feature Name	Identifier	Feature Description	Additional Information
URL Filtering	20766 to 20771	Allows internet traffic to be filtered based on web site content. This option is licensed on the number of concurrent users (e.g. 100, 500, 1000, 3000, 5000, above). This option has the following features	Available on Service Levels 1-5.

Feature Name	Identifier	Feature Description	Additional Information
		available: • Over 80 pre-defined url categories (e.g. religion, sports, etc) which are selected to be allowed or denied • The Whitelist / Blacklist function allows browsing to specific URL's to be permitted or denied. This function overrides any URL filtering options. • It is possible to block web searches based on keywords • URL blocking can also be done by IP address rather than URL name	
Active IDS/IPS - Basic	20782	Service includes IDS/IPS initial technical consultation and applies AT&T's best practices policy. Also includes IDS policy customization and addition of a limited set of custom IDS signatures to the profile as well as proactive investigational analysis for critical events and enablement of a limited set of automated IPS capabilities. Not available with Network Based Firewall on MIS.	Available on Service Levels 1-5.
Active IDS/IPS – Advanced	20784	Provides a more customized service level and alert thresholds to meet more specific IDS requirements including a higher degree of profiling and tuning of IDS policy to strip out "noise" and provide notification on critical events. Additionally, AT&T Security Analyst provides live investigational analysis for all IDS events assisting with recommended mitigation actions, and making firewall policy changes to eliminate a threat if warranted.	Available on Service Levels 1-5.

Feature Name	Identifier	Feature Description	Additional Information
		Not available with Network Based Firewall on MIS.	
Additional SDC Egress (or Multiple Outbound Access Point)	20465 to 20489, 20440 to 20464	Allows outbound access from more than one SDC. For each additional SDC the pricing will be based on the bandwidth required for each connection (Secnet) Each extra SDC includes a /30 range of public IP addresses. Each /30 block gives 4 usable IP addresses	Available on Service Levels 1 and 2. Mesa SDC or Secaucus SDC.
Additional Site Egress & Ingress	20465 to 20489; 20440 to 20464	This option allows the customer to have inbound and/or outbound access through more than one SDC. They can select multiple SDCs. For each additional SDC there will be the following elements: • A /30 range of public IP addresses, this includes the PAT (overload) address. Each /30 block gives 4 usable IP addresses. • Two additional ePVCs for each extra SDC. • Policy setup and support for each SDC. Additional Site Egress & Ingress is not available with NBFW on MIS.	Available on Service Levels 3-5. Mesa SDC or Secaucus SDC.
Additional Secure Networks (SecNets)	20490 to 20514; 20465 to 20489; 20440 to 20464	Based on customer definition/design, configure NBFW policies for each network segment needed, then joining that network and injecting default or host routes. Note that the chosen Service Level determines the number of rules, so the total of all rules under a solution needs to be within those bounds. A DMZ or other isolated MPLS network is considered to be another Network. Additional Networks are not	Available on Service Levels 2-5. Customer can use San Jose, Mesa or Secaucus SDC.

Feature Name	Identifier	Feature Description	Additional Information
		available with NBFW on MIS.	
Application Filtering	20791	Provides inline scanning of HTTP and FTP content for common virus, spyware, and malware threats and vulnerabilities. Also provides the ability for inline scanning of Instant Messaging protocols (ICQ, MSN, Yahoo, and AIM). Not available with Network Based Firewall on MIS. Reporting functionality is not available at this time.	Available on Service Levels 1-5.
Advanced Logging	20786	Deliver hourly syslog formatted log feeds to a customer hosted FTP server if requested.	Available on Service Levels 1-5.
Additional Firewall Rules	20777	This option allows the customer to choose extra Firewall rules in addition to those provided at the Service Level. The rules can be bought in blocks of five.	Available on Service Levels 2-5.
Additional MACDs	20779	One (1) MACD service request per month is allowed for Service Level 1. For Service Levels 2-5 and Network Based Firewall on MIS, six (6) MACD service requests per month are allowed. Additional requests are subject to additional charges.	
Additional Public IP Addresses	20773, 20775	If the customer needs more than the allocated number of IP addresses for that Service Level, they can buy extra IP addresses. This benefit of this option is additional NAT functionality. The IP addresses can be bought as listed below: • Multiple blocks of /30 IP addresses – up to 32. Each /30 block gives 4 usable IP addresses. A single /30 IP address range must stay with each SDC (no individual IP	Available on Service Levels 2-5.

Feature Name	Identifier	Feature Description	Additional Information
		addresses can be spread from a single /30 to multiple sites) • Multiple blocks of /24 IP addresses – up to 10. Each /24 block gives 256 usable IP addresses. A single /24 IP address range cannot be broken into less than 32 IP addresses (i.e. a /27 subnet) for a single SDC. Additional Public IP Address are not available with NBFW on MIS.	
Cross Connect	20794, 20796	Provides connections between the NBFW instance in a Data Center location and the customer's cage in the same Internet Data Center. Cross Connect options supported are where the equipment in the cage is • managed by MSS Operations, • the equipment is managed by the customer, or • the equipment is managed by Managed Hosting Operations. Cross Connect is not available with NBFW on MIS.	Available on Service Levels 1-5.
Site Failover	20741-20765	This option allows the customer to have a single alternate SDC in the same geographical region to receive "failover traffic". A 3rd ePVC is provisioned from the alternate site to the customer's MPLS network. A duplicate security policy is maintained on the alternate SDC for a specified SecNet. If a customer has multiple SecNets, they must purchase Site Failover for a specific number of SecNets. Special requirements apply for Network Based Firewall Failover which have to be followed for	Available on Service Levels 2-5.

Feature Name	Identifier	Feature Description	Additional Information
		proper operations and which would be considered during the design phase. Site Failover is not available with NBFW on MIS.	

Customer Responsibilities

Customers are responsible for:

- Designating a person who will be the technical focal point to work with AT&T to help promote a successful implementation.
- Providing a list of desired IP protocols to deploy during the implementation including source addresses, destination addresses, ports, TCP and/or UDP and a description of the Service to be implemented.
- Providing AT&T with user workstation counts and traffic estimates if URL Filtering features or options are selected.
- Providing the necessary network information to allow AT&T to provision ingress virtual circuits into the network firewall.
- Identifying a suitable test location during enablement and implementation to properly test desired Security Policies prior to deploying all sites on the MSS-NB Service.
- Utilizing internal Hosts and servers that are properly maintained to include the latest available security patches and are not infected with any worm, trojan or virus or similar security threat. AT&T is not responsible for patching or removing security threats on Customer maintained equipment.
- Ensuring that Customer systems and networks (including outsourced and educational environments) that connect with those belonging to MSS-NB, or that use common services network features, have appropriately implemented security controls. These controls should be designed to prevent loss, disclosure, unauthorized access or service disruption, by restricting AT&T network access and use to authorized Customer personnel only. Use of the AT&T network and its facilities is intended for the contracting Customer only and not for those who may be interconnected with the Customer's systems. The administration of individual IP addresses on a Customer's LAN, including maintaining distinct, unique and non-overlapping private IP address space.
- Customer needs to notify AT&T about any changes to a Customers configuration(s). If changes to security configurations are necessary at a given location based upon Customer notification, AT&T will review these new requirements and make recommendations as necessary.

Service Availability

The MSS-Network Based Service is designed to provide single site redundancy and optional failover to other Security Data Centers in the event of catastrophic failure. Optional failover

is not available with NBFW on MIS. AT&T incorporates many automatic redundancy and diversity features designed to quickly handle failures in network components. Additionally, equipment within the AT&T backbone network and AT&T packet services networks are generally connected to other equipment with multiple routes across the global backbone or packet services network infrastructures.

The AT&T MSS-Network Based Service is available 7 X 24, except for possible outages during scheduled maintenance. AT&T utilizes the scheduled maintenance windows to upgrade equipment, software, and facilities which may add capacity, new features, resiliency and which may provide fixes to known problems to help ensure high network performance. The scheduled maintenance windows are typically used to maintain many sites, including the global backbone, packet services, AT&T enhanced network services IDC's and MSS-NB networks.
In addition, AT&T may perform extended maintenance up to four times per year, and AT&T may need to schedule planned maintenance at other times due to, for example, government inspections or power maintenance. AT&T will use reasonable efforts to give Customers at least 30 days' notice of such scheduled or extended maintenance. However, AT&T reserves the right to perform maintenance at any time in order to maintain the service and/or network.

Support

AT&T provides the following support for Managed Security Service – Network Based:

Initial Consultation for a Customer's Security Enablement

- Review of the inbound and outbound Security Policies provided to AT&T to recommend a proposed migration configuration of the MSS-NB Service.
- Review of the network topology to determine general access requirements.
- Recommendation of Security Policies to meet the current and forecasted needs specified by the Customer, consequent with AT&T's need to manage, maintain, operate and provide measurement reports based upon them.
- Recommendation of additional security management options to meet the specified Customer support needs.

Assistance

- Communicating with the Customer's technical contact(s) for installations, moves, adds or changes.
- Communicating with various AT&T work centers for packet services or Managed Router or other data or IP services.

Installation Support

- Connection and test of MSS-NB access circuits(s) to the network access point.
- ePVC ordering, provisioning, configuration, and associated testing.
- Configuration of AT&T MSS-NB network infrastructure.
- Registration of Customer information and security configuration in AT&T's databases.

Network Monitoring and Management

- Proactive 7x24 monitoring of the Customer's MSS-NB connection (including access) from AT&T's network management center of all the components supplied by AT&T.
- Help desk support for connection problems related to the MSS-NB service.
- Change management. If changes to security configurations are necessary at a given location based upon Customer notification, AT&T will review these new requirements and make recommendations as necessary. AT&T will also manage any resulting changes to the platform that AT&T deems necessary, which may result in a conversion charge for affected AT&T MSS-NB provided Services.
- Scheduled software and hardware maintenance upgrades to help ensure AT&T's hardware and software are appropriately configured for transmission of traffic.
- Problem management; logging, tracking and escalation of reported problems based on AT&T specified severity levels.

Problem Severity Code Definitions

The Customer defines the severity of a problem when the call is placed. The following definitions are provided as guidance to assist the Customer to appropriately assign the severity of a problem.

Severity	Description
1	AT&T's highest level of severity, a severity 1 Trouble Ticket is defined as a Trouble Ticket generated by AT&T in the event that AT&T detects a Firewall Service Outage. By way of illustration, without any limitation of the description, such incidents include a Firewall Service Component interface(s) being unavailable, any failures of Firewall Equipment and the inability of a Customer sanctioned IP protocol from working through the Firewall Equipment denotes a severity 1 ticket.
2	A severity 2 Trouble Ticket is defined as a Trouble Ticket generated by AT&T in the event that AT&T detects an attack against a Customer's Firewall Equipment. The types of incidents which will generate Severity 2 incidents are: a) unexplained root logins or access attempts to the Firewall, b) unexplained Firewall server file transfers or c) failed or interrupted Firewall processes.
3	Severity 3 Trouble Tickets are defined as a Trouble Ticket generated by AT&T in the event that AT&T detects certain system health problems with the Firewall Equipment. The types of incidents which will generate Severity 3 alerts are: a) backup problems, such as backup failures or missing backup files, or b) an audit which reveals

Severity	Description
	missing files; or c) Trouble Tickets generated when AT&T has specific and accurate information about a specific Customer Trouble.
4	Severity 4 Trouble Tickets are most often used for Moves, Adds and Changes, and Deletes (MACDs). Severity 4 tickets are also generated when AT&T needs additional specific information about a Customer Trouble.
5	Severity 5 Trouble Tickets are reserved for changes associated with out-of-band testing.

Customer Premises Equipment (CPE) and Services

AT&T offers a variety of CPE and pre-implementation, implementation and post-implementation services for CPE in support of all WAN access services.

See Required CPE and Other Equipment for descriptions of additional equipment and services offered.

6.1.3.9 Service Identifier: DSL Virtual Private Network

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
DSL VPN site-to-site connectivity solutions (non-Internet traversing)					
DSL VPN Expedite option	AVDLEXP	$ 500.00	N/A	occurrence	N/A
DSL VPN Change Charge	18579	$ 500.00	$ -	n/a	$ -
DSL VPN Disconnect Charge	18581	$ 500.00	$ -	n/a	$ -
AVPN MPLS SDSL 128K	18571	$ 600.00	$ 150.70	each	N/A
AVPN MPLS SDSL 256K	18572	$ 600.00	$ 177.10	each	$ -
AVPN MPLS SDSL 384K	18573	$ 600.00	$ 191.40	each	$ -
AVPN MPLS SDSL 768K	18574	$ 600.00	$ 267.30	each	$ -
AVPN MPLS SDSL 1M	18575	$ 600.00	$ 300.30	each	$ -
AVPN MPLS SDSL 1.5M	18576	$ 600.00	$ 341.20	each	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
AVPN MPLS ADSL Line Shared Connection 384K/384K	19837	$ 600.00	$ 183.92	each	$ -
AVPN MPLS ADSL Line Shared Connection 1.5M/384K	18577	$ 600.00	$ 229.90	each	$ -
AVPN MPLS ADSL Line Shared Connection 3.072M/384K	19838	$ 600.00	$ 265.98	each	$ -
AVPN MPLS ADSL Line Shared Connection 3.072M/768K	19839	$ 600.00	$ 280.06	each	$ -
AVPN MPLS ADSL Line Shared Connection 6.144M/768K	19840	$ 600.00	$ 377.08	each	$ -
ANIRA -IPSec Hourly Analog	6970	$ -	$ 0.49	hourly	$ -
ANIRA - IPSec Hourly ISDN	6982	$ -	$ 0.49	b-chan/hour	$ -
ANIRA - IPSec Toll-Free	6994	$ -	$ 0.49	hourly	$ -
ANIRA - IPSec Monthly Analog	17563	$ -	$ 14.38	monthly	$ -
ANIRA IPSec - Monthly Excess	17564	$ -	$ 1.00	hourly	$ -
ANIRA – Third Party Access	16940	$ -	$ 4.00	user/month	$ -
ANIRA – Bandwidth Connection Charge (Type II) 64Kbps	17573	$ -	$ 46.80	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 128Kbps	17574	$ -	$ 84.48	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 192Kbps	17575	$ -	$ 121.80	monthly	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 256Kbps	17576	$ -	$ 157.68	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 320Kbps	17577	$ -	$ 198.00	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 384Kbps	17578	$ -	$ 235.40	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 448Kbps	17579	$ -	$ 269.64	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 512Kbps	17580	$ -	$ 302.40	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 576Kbps	17581	$ -	$ 317.72	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 640Kbps	17582	$ -	$ 333.12	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 704Kbps	17583	$ -	$ 344.96	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 768Kbps	17584	$ -	$ 355.00	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 832Kbps	17585	$ -	$ 362.10	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 896Kbps	17586	$ -	$ 370.24	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 960Kbps	17587	$ -	$ 379.48	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 1024Kbps	17588	$ -	$ 394.90	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 1536Kbps	17589	$ -	$ 557.70	monthly	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 2Mbps	17590	$ -	$ 686.40	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 3Mbps	17591	$ -	$ 723.80	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 4Mbps	17592	$ -	$ 965.80	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 5Mbps	17593	$ -	$ 1,206.70	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 6Mbps	17594	$ -	$ 1,447.60	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 7Mbps	17595	$ -	$ 1,688.50	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 8Mbps	17596	$ -	$ 1,929.40	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 9Mbps	17597	$ -	$ 2,170.30	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 10Mbps	17598	$ -	$ 2,411.20	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 15Mbps	17599	$ -	$ 3,481.50	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 20Mbps	17600	$ -	$ 4,640.90	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 25Mbps	17601	$ -	$ 5,801.40	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 30Mbps	17602	$ -	$ 6,957.50	monthly	$ -
ANIRA – Bandwidth Connection Charge (Type II) 35Mbps	17603	$ -	$ 8,121.30	monthly	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – Bandwidth Connection Charge (Type II) 40Mbps	17604	$ -	$ 9,281.80	monthly	$ -
ANIRA - Managed Broadband Multi-User Service 144Kbps	17644	$ 600.00	$ 170.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 192Kbps	17645	$ 600.00	$ 170.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 384Kbps	17646	$ 600.00	$ 191.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 768Kbps	17648	$ 600.00	$ 247.96	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 1.1Mbps	17649	$ 600.00	$ 175.48	monthly	$ 300.00
ANIRA - Managed Broadband Multi-User Service 1.5Mbps	17650	$ 600.00	$ 197.98	monthly	$ 300.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL) 768/128Kbps	17650a	$ 300.00	$ 55.96	monthly	$ 150.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL) 1.5M/384Kbps	17650b	$ 300.00	$ 51.96	monthly	$ 150.00
ANIRA -Managed Broadband Single User Service (ADSL and IDSL)144/144Kbps	17643	$ 600.00	$ 111.96	monthly	$ 300.00
Managed Broadband Multi-User VPN Device	17650c	$ -	$ 36.90	monthly	$ -
ANIRA - Extended Access and WI-FI/Wired Ethernet	15172		$ 5.95	hourly	$ -

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of measure	Change Charge
ANIRA – WiFi Access	17164		$ 6.25	hourly	$ -

Managed Security Service (MSS) – Network Based Firewall (NBFW)

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
Service Level					
1	20423	N/A	$ 315.00	Per firewall	N/A
2	20424	N/A	$ 490.00	Per firewall	N/A
3	20425	N/A	$ 962.50	Per firewall	N/A
4	20426	N/A	$ 1,610.00	Per firewall	N/A
5	20427	N/A	$ 3,010.00	Per firewall	N/A
Bandwidth (San Jose SDC) – may also be used for Additional SecNets					
1.55 Mbps	20490	N/A	$ 420.00	Per connection	N/A
2 Mbps	20491	N/A	$ 490.00	Per connection	N/A
3 Mbps	20492	N/A	$ 805.00	Per connection	N/A
4 Mbps	20493	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20494	N/A	$ 1,260.00	Per connection	N/A
6 Mbps	20495	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20496	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20497	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20498	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20499	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20500	N/A	$ 2,695.00	Per connection	N/A
20 Mbps	20501	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20502	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20503	N/A	$ 4,830.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
35 Mbps	20504	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20505	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20506	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20507	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20508	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20509	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20510	N/A	$ 12,705.00	Per connection	N/A
90 Mbps	20511	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20512	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20513	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20514	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
URL Filtering					
100 Users	20766	N/A	$ 105.00	Per firewall	N/A
500 Users	20767	N/A	$ 420.00	Per firewall	N/A
1000 Users	20768	N/A	$ 665.00	Per firewall	N/A
3000 Users	20769	N/A	$ 1,575.00	Per firewall	N/A
5000+ Users	20770	N/A	$ 2,415.00	Per firewall	N/A
IDS/IPS					
Active IDS/IPS - Basic	20782	N/A	$ 245.00	Per firewall	N/A
Active IDS/IPS - Advanced	20784	N/A	$ 350.00	Per firewall	N/A
NOTE: The Bandwidth items below for Mesa SDC and Secaucus SDC apply to the following features: • Additional SDC Egress (for Multiple Outbound Access Point); • Additional Site Egress and Ingress; and • Additional Secure Networks (SecNets)					
Bandwidth (Mesa SDC)					
1.55 Mbps	20465	N/A	$ 420.00	Per connection	N/A
2 Mbps	20466	N/A	$ 490.00	Per connection	N/A
3 Mbps	20467	N/A	$ 805.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
4 Mbps	20468	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20469	N/A	$ 1,260.00	Per connection	N/A
6 Mbps	20470	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20471	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20472	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20473	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20474	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20475	N/A	$ 2,695.00	Per connection	N/A
20 Mbps	20476	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20477	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20478	N/A	$ 4,830.00	Per connection	N/A
35 Mbps	20479	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20480	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20481	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20482	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20483	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20484	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20485	N/A	$ 12,705.00	Per connection	N/A
90 Mbps	20486	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20487	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20488	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20489	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
Bandwidth (Secaucus SDC)					
1.55 Mbps	20440	N/A	$ 420.00	Per connection	N/A
2 Mbps	20441	N/A	$ 490.00	Per connection	N/A
3 Mbps	20442	N/A	$ 805.00	Per connection	N/A
4 Mbps	20443	N/A	$ 1,015.00	Per connection	N/A
5 Mbps	20444	N/A	$ 1,260.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
6 Mbps	20445	N/A	$ 1,470.00	Per connection	N/A
7 Mbps	20446	N/A	$ 1,680.00	Per connection	N/A
8 Mbps	20447	N/A	$ 1,925.00	Per connection	N/A
9 Mbps	20448	N/A	$ 2,135.00	Per connection	N/A
10 Mbps	20449	N/A	$ 2,345.00	Per connection	N/A
15 Mbps	20450	N/A	$ 2,695.00	Per connection	N/A
20 Mbps	20451	N/A	$ 3,255.00	Per connection	N/A
25 Mbps	20452	N/A	$ 4,060.00	Per connection	N/A
30 Mbps	20453	N/A	$ 4,830.00	Per connection	N/A
35 Mbps	20454	N/A	$ 5,635.00	Per connection	N/A
40 Mbps	20455	N/A	$ 6,405.00	Per connection	N/A
45 Mbps	20456	N/A	$ 7,210.00	Per connection	N/A
50 Mbps	20457	N/A	$ 7,980.00	Per connection	N/A
60 Mbps	20458	N/A	$ 9,555.00	Per connection	N/A
75 Mbps	20459	N/A	$ 11,935.00	Per connection	N/A
80 Mbps	20460	N/A	$ 12,705.00	Per connection	N/A
90 Mbps	20461	N/A	$ 14,280.00	Per connection	N/A
100 Mbps	20462	N/A	$ 15,855.00	Per connection	N/A
125 Mbps	20463	N/A	$ 19,810.00	Per connection	N/A
135 Mbps	20464	N/A	$ 21,385.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	
Application Filtering	20791	N/A	$ 262.50	Per firewall	N/A
Advanced Logging	20786	N/A	$ 70.00	Per firewall	N/A
Additional Firewall Rules – Each block of 5 – up to 10 blocks	20777	N/A	$ 140.00	Per firewall	N/A
Additional MACDs (Two MACDs per package	20779	N/A	$ 70.00	Per package	N/A
Additional Public IP Addresses					

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
Block of 4 (Up to 32 Blocks)	20773	N/A	$ 35.00	Block of 4	N/A
Block of 256 (Up to 10 Class C's (/24))	20775	N/A	$ 875.00	Block of 256	N/A
Cross Connect					
Cross Connect – under 100 Mbps	20794	N/A	$ 175.00	Per connection	N/A
Cross Connect – equal to or over 100 Mbps	20796	N/A	$ 350.00	Per connection	N/A
Site Fail-Over					
1.55 Mbps	20741	N/A	$ 385.00	Per connection	N/A
2 Mbps	20742	N/A	$ 455.00	Per connection	N/A
3 Mbps	20743	N/A	$ 595.00	Per connection	N/A
4 Mbps	20744	N/A	$ 735.00	Per connection	N/A
5 Mbps	20745	N/A	$ 910.00	Per connection	N/A
6 Mbps	20746	N/A	$ 1,050.00	Per connection	N/A
7 Mbps	20747	N/A	$ 1,190.00	Per connection	N/A
8 Mbps	20748	N/A	$ 1,365.00	Per connection	N/A
9 Mbps	20749	N/A	$ 1,505.00	Per connection	N/A
10 Mbps	20750	N/A	$ 1,645.00	Per connection	N/A
15 Mbps	20751	N/A	$ 2,415.00	Per connection	N/A
20 Mbps	20752	N/A	$ 3,185.00	Per connection	N/A
25 Mbps	20753	N/A	$ 3,955.00	Per connection	N/A
30 Mbps	20754	N/A	$ 4,690.00	Per connection	N/A
35 Mbps	20755	N/A	$ 5,460.00	Per connection	N/A
40 Mbps	20756	N/A	$ 6,230.00	Per connection	N/A
45 Mbps	20757	N/A	$ 6,965.00	Per connection	N/A
50 Mbps	20758	N/A	$ 7,735.00	Per connection	N/A
60 Mbps	20759	N/A	$ 9,275.00	Per connection	N/A
75 Mbps	20760	N/A	$11,550.00	Per connection	N/A
80 Mbps	20761	N/A	$12,320.00	Per connection	N/A

Feature Name	Identifier	Non-Recurring Charge	Recurring Charge	Unit of Measure	Change Charge
90 Mbps	20762	N/A	$13,825.00	Per connection	N/A
100 Mbps	20763	N/A	$15,330.00	Per connection	N/A
125 Mbps	20764	N/A	$19,145.00	Per connection	N/A
135 Mbps	20765	N/A	$20,685.00	Per connection	N/A
Above 135 Mbps		ICB	ICB	Per connection	

See Required CPE and Other Equipment for descriptions of additional equipment and service offered.

6.1.11.2.3.a Service Availability (M)

Services	Service Availability Percentage
Analog Asynchronous Transfer Mode (ATM) Carrier (DS0,DS1,DS3) Frame Relay Managed Frame Relay ISDN Primary Rate Interface (PRI) SONET (Ring and Point-to-Point) Switched 56 AVPN AVPN Managed Service Bundles FibreMAN MON Ring	**Definition** Scheduled uptime is based on 60 minutes x 24 hours x calendar days in the month. **Measurement Process** All outage durations applied to other SLAs, which result in a remedy, will be excluded from the monthly accumulative total. Monthly Network Availability (%) = 1– [(total minutes of connection outage per month)/(days in month x 24hours x 60mins)] x 100. **Objectives** Analog >99.2 percent DS0 >99.2 percent DS1 >99.5 percent DS3 >99.8 percent OCX >99.8 percent PRI ISDN > 99.5 percent FibreMAN >99.8 percent MON Ring >99.8 percent **Immediate Rights and Remedies** End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** First month to fail to meet the SLA objective shall result in a 15% rebate of the TMRC. Next consecutive month to fail to meet the SLA objective shall result in a 25% rebate of TMRC. Each additional consecutive month to fail to meet the SLA objective shall result in a 50 percent rebate of the TMRC.

6.1.11.2.3.a Service Availability (M)

Services	Ethernet Service Availability Percentage
GigaMAN AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN	**Definition** Scheduled uptime is based on 60 minutes x 24 hours x calendar days in the month. **Measurement Process** All outage durations applied to other SLAs, which result in a remedy, will be excluded from the monthly accumulative total. Monthly Network Availability (%) = 1– [(total minutes of connection outage per month)/(days in month x 24hours x 60mins)] x 100. **Objectives** 10/100 Mbps > 99.5 percent 1000 Mbps (1 Gbps) > 99.5 percent LAN-PHY (10.3 Gbps) > 99.5 percent WAN-PHY (9.95 Gbps) > 99.5 percent ASE (all speeds) > 99.99 percent **Immediate Rights and Remedies** End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** First month to fail to meet the SLA objective shall result in a 15% rebate of the TMRC. Next consecutive month to fail to meet the SLA objective shall result in a 25% rebate of TMRC. Each additional consecutive month to fail to meet the SLA objective shall result in a 50 percent rebate of the TMRC.

6.1.11.2.4 Catastrophic Outage 1 (M)

Services	Catastrophic Outage 1
Analog Asynchronous Transfer Mode (ATM) Business Access Lines Carrier (DS0,DS1,DS3) Central Office Exchange Basic Services Central Office Trunk Service Frame Relay Managed Frame Relay Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) ISDN Primary Rate Interface (PRI) GigaMAN SONET (Ring and Point-to Point) AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring Switched 56 Voice Mail	**Definition** The total loss of either the service or circuits, 25 or greater at the same address location, or any "protected" Service. **Measurement Process** The outage start shall be determined by the network alarm resulting from the outage-causing event or the opening of a trouble ticket by a Customer, whichever occurs first. The Contractor shall open a trouble ticket and compile a list for each circuit or service affected by the common cause. Each circuit or service is out of service from the first notification until the Contractor determines the circuit or service is restored. Any circuits or service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. (7X24) **Objectives** Less than 2 hours **Immediate Rights and Remedies** 100 percent of the TMRC for each circuit/service not meeting the per occurrence objective for a single Cat 1 fault End-User Escalation Process DTS/STND Escalation Process **Monthly Rights and Remedies** N/A

6.1.11.2.5 Catastrophic Outage 2 (M)

Services	Catastrophic Outage 2
Analog Asynchronous Transfer Mode (ATM) Business Access Lines Carrier (DS0,DS1,DS3) Central Office Exchange Basic Services Central Office Trunk Service Frame Relay Managed Frame Relay Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) ISDN Primary Rate Interface (PRI) Intra-LATA Calling GigaMAN SONET (Ring and Point-to-Point) AVPN* AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring Switched 56	**Definition** A total failure of a service type in a central office. Or, a backbone failure or failure of any part of the Equipment associated with the backbone that causes a service failure. **Measurement Process** The outage duration start shall be determined by the network alarm resulting from the outage-causing event or the opening of a trouble ticket by the Customer, whichever occurs first. Outage duration shall be measured on a per circuit or per-port basis from information recorded from the network Equipment or trouble ticket The Contractor shall open a trouble ticket and compile a list for each circuit or service affected by the common cause. Each circuit or service is out of service from the first notification until the Contractor determines the circuit or service is restored. Any circuits or service reported by the End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. (7X24) **Objectives** Less than 30 minutes **Immediate Rights and Remedies** 100 percent of the TMRC and 2 days of the AMUC for each phone number/service not meeting the per occurrence objective for a single Cat 2 fault End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** N/A

* This SLA does not apply to the AVPN Managed Router features.

6.1.11.2.6 Catastrophic Outage 3 (M)

Services	Catastrophic Outage 3
Analog Asynchronous Transfer Mode (ATM) Business Access Lines Carrier (DS0,DS1,DS3) Central Office Exchange Basic Services Central Office Trunk Service Frame Relay Managed Frame Relay Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) ISDN Primary Rate Interface (PRI) Intra-LATA Calling GigaMAN SONET (Ring and Point-to-Point) AVPN* AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring Switched 56 Voice Mail	**Definition** The total loss of more than one service type in central office, or the loss of any service type on a system wide basis. **Measurement Process** The outage duration start shall be determined by the network alarm resulting from the outage-causing event or the opening of a trouble ticket by the Customer, whichever occurs first. Outage duration shall be measured on a per circuit or per-port basis from information recorded from the network switches or trouble ticket. The Contractor shall open a trouble ticket and compile a list for each circuit or service affected by the common cause. Each circuit or service is out of service from the first notification until the Contractor determines the circuit or service is restored. Any circuits or service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. (7X24) **Objectives** Less than 15 minutes **Immediate Rights and Remedies** Senior Management Escalation Process 100 percent of the TMRC for each circuit/service not meeting the per occurrence objective for a single Cat 3 fault **Monthly Rights and Remedies** N/A

*This SLA does not apply to the AVPN Managed Router features.

6.1.11.2.7 Transmission Delay (M)

Services	Transmission Delay
Asynchronous Transfer Mode (ATM) Frame Relay Managed Frame Relay GigaMAN SONET (Ring and Point-to-Point) AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring	**Definition** Average round trip transfer delay measured from MPOE to MPOE. **Measurement Process** End-User/Customer is responsible for opening a trouble ticket with the Contractor Customer Service Center (helpdesk) when the frame/packet/cell transfer delay is below the committed level. DTS/STND shall determine the sample interval, provided that a minimum of 100 pings or more shall constitute test. The process requires timely verification, consistent with industry Standards (e.g., a protocol analyzer), by the Contractor. Trouble shall be tracked as a Quality of Service (QoS) problem using a special disposition code on the trouble ticket. QoS tickets shall not count in availability or Time to Repair measurements unless and until the End-User reports circuit as unusable for its intended uses. (7x24) **Objectives** *DS0 to DS1* 64 byte ping: <120ms 1000 byte ping: <400ms *DS1* 64 byte ping: <60ms 1000 byte ping: <120ms *DS3* 64 byte ping: <65 ms 1000 byte ping: <110 ms

6.1.11.2.7 Transmission Delay (M)

Services	Transmission Delay
	OC3 64 byte ping: <65 ms 1000 byte ping: <100 ms *OC12* 64 byte ping: <55 ms 1000 byte ping: <100 ms *OC48* 64 byte ping: <55 ms 1000 byte ping: <100 ms *Ethernet:* --- 10/100 Mbps --- 1000 Mbps (1 Gbps) --- 10 Gbps --- LAN-PHY (10.3 Gbps) ---WAN-PHY (9.95 Gbps) 64 byte ping: <60 ms 1000 byte ping: <100ms **Immediate Rights and Remedies** 15 percent of TMRC per occurrence for the reported circuit. Next consecutive month to fail to meet the SLA objectives shall result in a 25 percent rebate of TMRC. Each additional consecutive month to fail to meet the SLA objective shall result in a 50 percent rebate of the TMRC. End-User Escalation Process DTS/STND Escalation Process **Monthly Rights and Remedies** N/A

6.1.11.2.9 Excessive Outage (M)

Services	Excessive Outage
Analog Asynchronous Transfer Mode (ATM) Business Access Line Carrier (DS0,DS1,DS3) Central Office Exchange Basic Services Central Office Trunk Service Frame Relay Managed Frame Relay ISDN Primary Rate Interface (PRI) Intra-LATA Calling GigaMAN SONET (Ring and Point-to-Point) AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring Switched 56 Voice Mail Locally Based ACD Interactive Voice Response (IVR) Specialized Call Routing Computer Telephone Integration	**Definition** An Excessive outage shall be defined as a trouble ticket that remains opened with the Contractor on a circuit or service, for more than twelve hours. **Measurement Process** The circuit or service is unusable during the time the trouble ticket is reported as opened until restoration of the circuit or service, minus stop clock conditions. Any circuits or service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. (7 x 24) **Objectives** Less than 12 hours **Immediate Rights and Remedies** Senior Management Escalation Customer may request from Contractor an Excessive Outage restoration briefing 100 percent of the TMRC per occurrence for each circuit or service out of service greater than 12 hours. **Monthly Rights and Remedies** N/A

6.1.11.2.12 Provisioning (M)

Services	Business Days	Provisioning
SONET (Ring and Point-to-Point) AVPN AVPN Managed Router AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles CSME EPLS-WAN FibreMAN MON Ring NBFW ANIRA Secure Email Gateway (SEG)	Contracted Service Project Work – Section 6.1.9	
Specialized Call Routing	Contracted Service Project Work – Section 6.1.9	
Station Cabling	Contracted Service Project Work – Section 6.1.9	
Switched 56	Contracted Service Project Work – Section 6.1.9	
Voice Mail per box	3 Days	

6.1.11.2.13 Time to Repair (TTR) – Major (M)

Services	Time to Repair (TTR)-Major
Analog Asynchronous Transfer Mode (ATM) Carrier (DS0,DS1,DS3) Frame Relay Managed Frame Relay ISDN Primary Rate Interface (PRI) GigaMAN SONET (Ring and Point-to-Point) AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles DecaMAN CSME EPLS-WAN FibreMAN MON Ring Switched 56	**Definition** A Major Fault shall be defined as five (5) or more physical circuit (DS-1 or higher speed) at the same address location affected by a common cause. Or The loss of 2 or more service types to a single End-User at the same address location. **Measurement Process** This Service Level Agreement (SLA) applies to the services listed in the adjacent column. This SLA is based on a trouble ticket outage durations. The circuit or service is unusable during the time the trouble ticket is recorded as opened in the Contractors trouble ticket system minus stop clock conditions. This SLA is applied per occurrence. Trouble reporting shall be 7X24. Any circuits or service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. **Objectives** Analog=less than 2 hours DS0=less than 2 hours DS1=less than 2 hours DS3=less than 2 hours ISDN=less than 2 hours PRI ISDN=less than 2 hours 10/100 Mbps = less than 2 hours 1000 Mbps (1 Gbps) = less than 2 hours 10 GBPS = less than 2 hours LAN-PHY (10.3 Gbps) = less than 2 hours WAN-PHY (9.95 Gbps) = less than 2 hours OC-X = less than 2 hours **Immediate Rights and Remedies** Failing to meet the SLA objective shall result in a 25 percent rebate of the TMRC per occurrence. End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** N/A

6.1.11.2.14 Time to Repair (TTR) – Minor (M)

Services	Time to Repair (TTR)-Minor
Analog Asynchronous Transfer Mode (ATM) Carrier (DS0,DS1,DS3) Frame Relay Managed Frame Relay ISDN Primary Rate Interface (PRI) SONET (Ring and Point-to-Point) AVPN AVPN Managed Service Bundles OPT-E-MAN AT&T Switched Ethernet (ASE) OPT-E-MAN Managed Service Bundles OPT-E-WAN OPT-E-WAN Managed Service Bundles CSME EPLS-WAN FibreMAN MON Ring Switched 56	**Definition** A Minor Fault shall be defined as a trouble ticket opened with the Contractor's helpdesk on the loss of any circuit or service to a single End-User at a site. **Measurement Process** This Service Level Agreement (SLA) applies to the services listed in the adjacent column. This SLA is based on a trouble ticket outage durations. The circuit or service is unusable during the time the trouble ticket is recorded as open in the Contractors trouble ticket system minus stop clock conditions. This SLA is applied per occurrence. Trouble reporting shall be 7X24. Any circuits or service reported by End-User/Customer as not having been restored shall have the outage time adjusted to the actual restoration time. **Objectives** Analog=less than 5 hours DS0=less than 5 hours DS1=less than 4 hours DS3=less than 2 hours PRI ISDN=less than 5 hours 10/100 Mbps = less than 4 hours 1000 Mbps (1 Gbps) = less than 4 hours 10 Gbps = less than 4 hours OC-X = less than 3 hours LAN-PHY (10.3 Gbps) = less than 4 hours WAN-PHY (9.95 Gbps) = less than 4 hours **Immediate Rights and Remedies** Failing to meet the SLA Objective shall result in a 15 percent rebate of the TMRC per occurrence. End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** N/A

Packet Loss

Service	Packet Loss
AVPN Managed Service Bundles OPT-E-MAN Managed Service Bundles OPT-E-WAN Managed Service Bundles	**Definition** Packet loss is measured from Contractor's hand off to Customer at each end of data channel. **Measurement Process** End-User/Customer is responsible for opening a trouble ticket with the Contractor Customer Service Center (helpdesk) when the data packet loss exceeds the committed level. The problem requires timely verification, consistent with industry Standards (e.g. protocol analyzer), by the Contractor. Trouble shall be tracked as a Quality of Service (QoS) problem using a special disposition code on the trouble ticket. QoS tickets shall not count in availability or Time to Repair measurements unless and until the End-User reports service as unusable for its intended uses. This measurement applies to local loop transport under the control of the Contractor or not under the control of Contractor that do not exceed 70% peak utilization for three consecutive business days. (7x24) **Objectives** 0.5 percent maximum packet loss **Immediate Rights and Remedies** 15 percent of TMRC per occurrence for the reported service. Next consecutive month to fail to meet the SLA objectives shall result in a 25 percent rebate of TMRC. Each additional consecutive month to fail to meet the SLA objective shall result in a 50 percent rebate of the TMRC. End-User Escalation Process DTS/ONS Escalation Process **Monthly Rights and Remedies** N/A

Proactive Notification SLA – Managed Router

Service	Proactive Notification – Managed Router
AVPN Managed Service Bundles OPT-E-MAN Managed Service Bundles OPT-E-WAN Managed Service Bundles	**Definition** The proactive outage notification SLA provides credits if AT&T fails to notify Customer of an Outage by electronic means (e.g., pager or e-mail) An Outage is defined as an unscheduled period in which the Customer Device is interrupted and unavailable for use by Customer for sixty (60) seconds. Or more then 60 cumulative seconds within a 15-minute period measured by AT&T. **Measurement Process** The outage duration start shall be determined by the first network alarm resulting from the outage-causing event or the opening of a trouble ticket by the Customer, whichever occurs first. AT&T has fifteen (15) minutes to notify Customer's primary point of contact from the start point of the Notification Period. AT&T is in compliance with the proactive outage notification SLA if the Customer opened the trouble ticket or contacts AT&T within the Notification Period. AT&T will provide the ticket number and an initial status. **Objectives** 15 Minutes **Immediate Rights and Remedies** Customer will receive a credit equal to ten percent (10%) of the monthly recurring charge for each Managed Service that was impacted during an Outage that was not properly notified by electronic means (e.g., pager or e-mail). End-User Escalation Process DTS/STND Escalation Process **Monthly Rights and Remedies** N/A

AT&T Switched Ethernet (ASE) Service - Class of Service (CoS) SLA

Service	Class of Service (CoS) SLA
AT&T Switched Ethernet Service (ASE)	**Definition** CoS SLA credits will be granted for AT&T Switched Ethernet (ASE) Service if the Contractor fails to meet service parameters (i.e., Latency, Packet Delivery Rate (PDR) and Jitter) defined for each CoS, subject to the following terms and conditions: (1) The Customer must open a trouble ticket when the service parameters within any calendar month fail to meet the committed level. (2) The Customer must request a service credit within 45 days after the end of the month when the failure occurred. (3) Upon verification by the Contractor that the actual service performance for that parameter failed to meet the committed level, the Contractor has one month to correct the problem. (4) If after one month, the service performance for that parameter is still failing to meet the committed level, the Customer will be provided a service credit. **Measurement Process** Latency, Jitter and Packet Delivery Rate (PDR) are measured by averaging sample measurements taken during a calendar month between the NTE to which the Customer ports are attached (i.e., end to end), when the AT&T Switched Ethernet Service network is available for use by the Customer. The SLA service parameters are based on a LATA-wide average of the Customer's one-way traffic traversing the NTE and the network. The SLA target for Latency and Jitter is to be not more than, and for PDR is to be not less than, the applicable amount set forth in the table below. **Objectives**

Class of Service	Service Measurement		
	Latency (one-way)	Jitter	Packet Delivery Rate (PDR)
Real Time	5 ms	3 ms	99.995%
Interactive	13 ms	10 ms	99.95%
Business Critical – High	20 ms	n/a	99.9%
Business Critical – Medium	30 ms	n/a	99.9%
Non-Critical High	50 ms	n/a	99.5%
Non-Critical Low	n/a	n/a	n/a

Latency may vary on ports with Real Time CIR of 10 Mbps or below and Real Time EVCs on such ports are excluded from calculations that determine whether the latency SLA is met.

Real Time EVCs between ports that are connected with an inter-Central Office facilities path extending more than 200 miles are not subject to the Real Time Latency SLA and are excluded from calculations that determine whether the Latency SLA is met.

AT&T Switched Ethernet (ASE) Service - Class of Service (CoS) SLA

Service	Class of Service (CoS) SLA
	Immediate Rights and Remedies N/A **Monthly Rights and Remedies** 25% of the TMRC for all affected ports (for each of the SLAs other than Network Availability). Only one such credit, per port, shall be applied per calendar month.