

**COMCAST ENTERPRISE SERVICES  
PRODUCT SPECIFIC ATTACHMENT  
SOFTWARE DEFINED NETWORKING SERVICES**

**ATTACHMENT IDENTIFIER: Masergy SDN, Version 1.0**

The following additional terms and conditions are applicable to Sales Orders for Masergy SDN Services ordered under an Enterprise Master Services Agreement or the General Terms and Conditions:

**DEFINITIONS**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the Enterprise Master Services Agreement or General Terms and Conditions.

“WAN” means wide area network.

“**Customer Premises Equipment**” or “**CPE**” means the Comcast-provided hardware appliance or other endpoint or network interface device installed at the Service Location. CPE constitutes Comcast Equipment. CPE may also be referred to on a Sales Order as “intelligent bridge”, “MIB”, “tunnel endpoint” or “MTE”, as applicable.

“**Customer Switch or Router**” means the switch or router installed at the Service Location and used to connect to the CPE or Customer-Provided Endpoint (as defined in Schedule A-1). The Customer Switch or Router may be Comcast Equipment or Customer-Provided Equipment.

“**Estimated Availability Date**” means the target Service Commencement Date for the Service.

“**LAN**” means a local area network.

“**Masergy**” means Comcast’s Affiliate Masergy Communications, Inc., or one of its applicable operating affiliates or subsidiaries.

“**Services**” or “**SDN Services**” means the software defined networking services described in Schedule A-1.

“**Underlay Service**” means the connectivity (either private ethernet or public internet access) over which the Service operates.

## **ARTICLE 1. SERVICES**

This attachment shall apply to Comcast's SDN Services. A further description of the Services is set forth in Schedule A-1 hereto, which is incorporated herein by reference.

## **ARTICLE 2. PROVIDER**

Comcast's affiliate Masergy Communications, Inc. or one of its applicable operating affiliates or subsidiaries shall provide the services under this PSA, which may include, without limitation, invoicing, access to a customer portal and customer support services.

## **ARTICLE 3. SERVICE PROVISIONING INTERVAL**

Following Customer's acceptance of a Sales Order, Comcast shall notify Customer of the Estimated Availability Date applicable to that Sales Order. Comcast shall use commercially reasonable efforts to provision the Service on or about the Estimated Availability Date; provided, however, that Comcast's failure to provision Service by said date shall not constitute a breach of the Agreement.

## **ARTICLE 4. SERVICE COMMENCEMENT DATE**

Comcast may inform Customer when the Service is available ("**Availability Notification**"). Charges for the Services shall begin to accrue on the Service Commencement Date. The Service Commencement Date shall be the earlier of: (a) the date on which Comcast provides the Availability Notification, or (b) five (5) business days

following the Service Commencement Date (as defined in the PSA for the applicable Underlay Service) for the last-installed Comcast-provided Underlay Service included on the Sales Order for the SDN Services. A single Sales Order containing multiple Service Locations or Services may have multiple Service Commencement Dates.

## **ARTICLE 5. TERMINATION CHARGES; PORTABILITY**

**5.1** The charges set forth or referenced in each Sales Order have been extended to Customer in reliance on the Service Term.

### **5.2 Termination Charges.**

**A.** Subject to Sections 5.2(C) and 5.2(D), in the event that a Service is terminated following Comcast's acceptance of the applicable Sales Order, but prior to the Service Commencement Date, Customer shall pay Termination Charges equal to equal to one hundred and twenty percent (120%) of the costs and expenses incurred by Comcast in installing or provisioning or preparing to install or provision the Service.

**B.** Subject to Sections 5.2(C) and 5.2(D), in the event that a Service is terminated on or following the Service Commencement Date but prior to the end of the applicable Service Term, Customer shall pay Termination Charges equal to a percentage of the monthly recurring charges remaining for the unexpired portion of the then-current Service Term, calculated as follows:

- i 100% of the monthly recurring charges with respect to months 1-12 of the Service Term; plus
- ii 80% of the monthly recurring charges with respect to months 13-24 of the Service Term; plus
- iii 65% of the monthly recurring charges with respect to months 25 through the end of the Service Term.

Termination Charges shall be immediately due and payable upon cancellation or termination, and shall

be in addition to any and all accrued and unpaid charges for the Service rendered by Comcast through the date of cancellation or termination.

**C. Exclusions.** Termination Charges shall not apply to Service(s) terminated by Customer as a result of Comcast's material and uncured breach in accordance with the General Terms and Conditions.

**D.** Customer acknowledges and agrees that termination of any Comcast-provided Underlay Service shall constitute a termination of the Services and Customer shall pay Termination Charges with respect to the Services as provided herein; provided, that, if Customer terminated such Underlay Service as a result of Comcast's material and uncured breach in accordance with the General Terms and Conditions, then Customer will not be obliged to pay Termination Charges with respect to the Service.

**E. Notice of Termination.** Customer must provide written notification of Sales Order or Service termination to the Masergy disconnect department by electronic mail to [disconnect@masergy.com](mailto:disconnect@masergy.com)

**5.3 Portability.** Customer may terminate an existing Service (an "**Existing Service**") and turn up a replacement Service (*i.e.*, activate Service at a different Service Location) (a "**Replacement Service**") without incurring Termination Charges with respect to the Existing Service, provided that: (a) the Replacement Service must have a Service Term equal to or greater than the remaining Service Term of the Existing Service, but in no event less than twelve (12) months; (b) the Replacement Service must have monthly recurring charges equal to or greater than the monthly recurring charges for the Existing Service; (c) Customer submits a Sales Order to Comcast for the Replacement Service that expressly provides that such Replacement Service is intended to be a replacement of the Existing Service, on or before termination of the Existing Service and that Sales Order is accepted by Comcast; provided that, if Customer submits a Sales Order to Comcast for a Replacement Service within ninety (90) days after termination of the Existing Service and that Sales Order is accepted by Comcast, Customer may request a credit to Customer's account in the amount

of any Termination Charges paid by Customer with respect to the termination of the applicable Existing Service; (d) Customer reimburses Comcast for any and all installation charges that were waived with respect to the Existing Service; and (e) Customer pays the actual costs incurred by Comcast in installing and provisioning the Replacement Service.

## **ARTICLE 6. CUSTOMER PORTAL**

Comcast provides Customer with access to a password-protected web portal (“**Portal**”) for the purpose of accessing information regarding Customer’s Service. The Portal may also provide a view of certain network-related data, subject to the availability of the Service and as determined by Comcast from time to time in its sole discretion.

## **ARTICLE 7. TECHNICAL SPECIFICATIONS; SERVICE LEVEL AGREEMENT**

The technical specifications applicable to the Services are set forth in Schedule A-1 hereto. The service level agreement applicable to the Services is set forth in Schedule A-2 hereto (“**Service Level Agreement**” or “**SLA**”). Comcast strives to achieve all Objectives (as defined in Schedule A- 2) from the Service Commencement Date. However, Comcast is contractually relieved of the Service Level Agreement set forth in Schedule A- 2 and any Objectives specified herein and, where applicable, any Sales Order, for the first ninety (90) days immediately following the Service Commencement Date at any Service Location. Any remedies, including Service Credits (as defined in Schedule A-2), set forth in Schedule A- 2 and, where applicable, in any Sales Order shall be the Customer’s sole and exclusive remedy for any failure to meet the specified Objectives.

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**SCHEDULE A-1  
SERVICE DESCRIPTIONS AND TECHNICAL SPECIFICATIONS**

The Services will be provided in accordance with the service descriptions and technical specifications set forth below:

**1. Service Descriptions**

- A. SDN Services are connectivity solutions that use multiprotocol label switching (“**MPLS**”) and Comcast’s native MPLS technology and software-defined core network (“**Core Network**”) to provide fully-meshed connectivity for any-to-any communications between Service Locations. Except as otherwise provided herein, SDN Services originate from and terminate at Customer Premises Equipment, and leverage MPLS and the Core Network to connect Customer’s Service Locations via Comcast points of presence (each, a “**PoP**”) over an Underlay Service. The availability of a particular type of SDN Service, and the variations, features, and functionality of the SDN Services, are dependent on the type of Underlay Service. Each type of SDN Service requires an Ethernet handoff (e.g., an RJ45 cable) from the Customer Switch or Router to the Customer Premises Equipment. SDN Services offer various levels of quality of service (“**QoS**”), as further described below, based on bandwidth to differentiate between business critical versus best-effort applications. The types of SDN Services Comcast makes available are described in Section 1.C. below.
- B. Subject to bandwidth availability of the Underlay Service, CPE and, if applicable, Customer-Provided Endpoint, SDN Services offer the following levels of QoS:
- i. Limited, Best Effort, Priority, and Mission Critical, which are included at no additional charge; and
  - ii. Voice and Video, which are optional and subject to additional charges.
- C. Comcast makes available the following types of SDN Services on a standalone basis, or in certain combinations and quantities, in each case as determined by Comcast and subject to Service requirements, including the Service requirements in Section 2 below. Subject to availability and Service requirements, Comcast may provide different types of SDN Services across a single dedicated circuit.
- i. **Virtual Private LAN Service (“VPLS”)**:
    - a. VPLS is a Layer 2 virtual private network (VPN) service that provides point-to-point and/or point-to-multipoint connectivity between two or more Service Locations across the Core Network.
  - ii. **Virtual Private Routing Network Service (“VPRN”)**:
    - a. VPRN is a Layer 3 VPN service that provides multipoint-to-multipoint connectivity between two or more Service Locations across the Core Network.
  - iii. **Internet Enhanced Service (“IES”)**:
    - a. IES is a Layer 3 service that provides routed connectivity between a Service Location and a router IP interface at the PoP to send and receive Internet traffic.
    - b. IES is provided over the public Internet and VPRN and VPLS require a private Underlay Service, IES is not compatible with VPRN or VPLS.
    - c. Comcast will provide a static /31 IP address and insert the interface IP address for the applicable CPE into a public routing table.

- iv. **Network-as-a-Service (“NaaS”):**
  - a. NaaS operates by establishing (over a non-Ethernet Underlay Service) an encrypted IPSec VPN tunnel connecting a Customer’s CPE, or other compatible Customer-Provided Endpoint (as defined in Section 3(C)(iv) below), to the applicable PoP’s provider edge (“PE”) router where such connection is then terminated into the Customer’s VPRN or, optionally, into a CPE, with the CPE configured to act as an IPSec terminating device only.
  - b. For clarity, NaaS is not compatible with VPLS or IES, and may be used only to connect to a Customer’s VPRN.

## 2. Service Requirements

In order to provide the Services to a Service Location, compatible Underlay Services must be installed, functioning and available at such Service Location. Unless a Sales Order indicates use of pre-existing Underlay Services with the Services, Customer must order such Underlay Services from Comcast in conjunction with the Services. If Internet connectivity is provided by Comcast, the applicable Underlay Services PSA or Sales Order will describe the bandwidth requirements and capabilities of such Internet connectivity (including upload and download capacities, as applicable). If the Underlay Service is either terminated at a Service Location or unavailable for any reason at any time, the SDN Services at such Service Location will be inoperable.

## 3. SDN Services - Technical Specifications

### A. VPLS

- i. VPLS is a Layer 2 service that is compatible with IP and non-IP applications, and allows the Customer to extend its LAN throughout its entire WAN and use various routing protocols including, for example, OSPF, EIGRP, RIP and BGP.

### B. VPRN

- i. Comcast provides Layer 3 routing via route tables consisting of IP addresses and next hop information.
- ii. A VPRN typically consists of one or more customer edge (“CE”) routers located at the Service Location and one or more PE routers located at a PoP. The PE routers learn routes from the CE routers and distribute them into the VPRN across the Core Network to establish reachability between CE routers.
- iii. Each Customer is segmented into its own specific virtual routing & forwarding (“VRF”) instance with VRF tables on PEs specifying the import and export rules for Customer routes advertised between PEs.

### C. Network-as-a-Service (NaaS)

- i. **PoP Selection.** Customer may request (based on proximity to the Service Location, disaster recovery design strategy, or other factors) which of the available Comcast PoPs in the United States will be used to reach Customer’s WAN. Customer’s requested PoP may impact Customer’s connection speed and reliability.
- ii. **Split Tunneling.** NaaS supports “split tunnel” configurations, so Customer can choose to route Internet traffic directly to its Internet provider instead of routing such traffic through Customer’s VPRN. NaaS also supports BGP routing, VRRP (Virtual Router Redundancy Protocol), and LAN dynamic routing.
- iii. **Connectivity Requirements.** NaaS leverages the public Internet (Comcast on-net Layer 3 internet access services over fiber and DOCSIS, Comcast provided off-net Layer 3 internet access, or third-

party-provided internet access, or LTE provided by Comcast or a third party). NaaS is compatible with both asynchronous and synchronous Internet connectivity services, including broadband services, as well as Ethernet transport media. However, NaaS requires a 10Mbps, 100Mbps, or 1Gbps Ethernet handoff between the Customer Switch or Router and the CPE or Customer-Provided Endpoint. NaaS performance may be impacted by Internet bandwidth limitations, speed limitations, and the reliability of public Internet. NaaS is compatible with Internet bandwidths from 1Mbps to 4 Gbps.

- iv. **Customer Provided Tunnel Endpoint.** Customer may, upon obtaining prior written approval from Comcast, be permitted to use its own tunnel endpoint instead of the CPE (“**Customer-Provided Endpoint**”). Comcast shall have no responsibility or liability for the Customer-Provided Endpoint, or for issues impacting the SDN Services caused by or related to the Customer-Provided Endpoint. Comcast will not monitor the Customer-Provided Endpoint. Such Customer-Provided Endpoint will be deemed Customer-Provided Equipment under the General Terms and Conditions.
- v. **Static Public IP Address.** NaaS requires a static public IP address. Unless Comcast provides prior approval for Customer to use a static public IP address provided by a third party, Comcast will provide Customer with such static public IP address.
- vi. **Multiple VPRNs.** A separate NaaS connection is required to reach each VPRN. Accordingly, Customer cannot use a single NaaS connection to reach multiple VPRNs.

#### 4. Service Delivery and Service Management

- A. Kick-off call: Comcast will sponsor a kick-off call with the Customer to explain the SDN Service delivery process and Comcast and Customer will review Comcast and Customer’s respective roles and responsibilities.
- B. Customer & Technical Information Forms: Comcast may engage Customer in one or more interviews related to Customer’s network design initiatives.
- C. Managed Install, Test, and Turn-up: When Comcast or Customer installs the CPE device, the configuration created for the Customer will be loaded onto the CPE device by Comcast, and Comcast will test the SDN Service.
- D. Network Monitoring and Management: On and after the Service Commencement Date, Comcast will monitor the SDN Service 24/7/365 and pull alarms from the CPE device related to the availability of the Services. Comcast will open an internal ticket, begin troubleshooting the issue and send an alert to the Customer for specific, Service-impacting alarms.
- E. On-Going Solution Support: Comcast will support Customer-requested configuration changes, in accordance with Comcast’s then-current configuration change policy. Any moves, additions, changes, or deletions to the Services shall be requested by means reasonably acceptable to Comcast. This includes any changes to the Service configuration.
  - i. **Software Updates and Security Patches.** If a Comcast vendor develops software updates and/or security patches for such vendor’s equipment, which Comcast uses to provide the Services, Comcast will upload such software updates and/or security patches to the applicable equipment to the extent Comcast determines, in its sole discretion, that such software updates and/or security patches are necessary. Updates or patches that are viewed as critical may require immediate action with a maintenance window. For the avoidance of doubt, Comcast shall have no obligation to develop software updates or security patches and its only obligation under this paragraph is to install updates

and security patches developed by its applicable vendors to the extent Comcast determines, in its sole discretion, that such software updates and/or security patches are necessary.

- ii. **Technical Support.** Comcast provides Customers a toll-free trouble reporting telephone number to reach the network operations center that operates on a 24x7x365 basis. Comcast provides technical support for Service-related inquiries. Technical support will not offer consulting or advice on issues relating to non-Comcast Equipment.
- iii. **Escalation.** Reported troubles are escalated in accordance with Comcast's standard escalation procedure.
- iv. **Maintenance.** Comcast will provide at least seven (7) days' notice for Service-impacting Scheduled Maintenance (as defined in Schedule A-2) and at least forty-eight (48) hours' notice for non-Service impacting Scheduled Maintenance. Emergency Maintenance (as defined in Schedule A-2) or other unplanned maintenance is performed as needed.

## 5. Security Monitoring and Mitigation.

For the Services, Comcast monitors the CPEs. **COMCAST DOES NOT PROVIDE MONITORING OF SECURITY EVENTS, ANY SECURITY EVENT MITIGATION, OR ADVICE REGARDING SECURITY ISSUES OR THREATS.**

Upon request by Customer, to the extent available, Comcast will modify the configuration of the Services in accordance with specifications provided by Customer to attempt to mitigate security events and security threats identified by Customer. Comcast's sole obligation is to implement the configuration settings requested by Customer to the extent such settings are available as determined by Comcast in its sole discretion. This Service is provided on a commercially reasonable efforts basis only and Comcast makes no guarantees with respect to the detection or blocking of viruses/worm/malware or any other types of attacks and is not responsible for any such malicious data that may be transmitted over the provided network.

## 6. Customer Responsibilities

**In addition to the responsibilities and obligations identified in the Agreement, during the kick-off call, or otherwise, Customer shall have the following responsibilities related to the installation, support, and maintenance of the Service:**

- A. Provide an operating environment with temperatures not below fifty-five (55) or above eighty-five (85) degrees Fahrenheit. Humidity shall not exceed ninety (90) percent at eighty-five (85) degrees Fahrenheit.
- B. Provide secure space sufficient for access to one (1) standard, freestanding equipment cabinet at each of the Customer facilities, no farther than fifty (50) feet from the Customer router or switch interface.
- C. Provide power, including UPS AC power equipment, circuit sizing to be determined, if applicable.
- D. Provide emergency local generator backup service, if applicable.
- E. Provide access to the buildings and point of demarcation at each Customer Service Location to allow Comcast and its approved contractors to install CPE and any other Comcast Equipment.
- F. Provide access to each Service Location for regular (8am - 5pm) and emergency (24 hour) service and maintenance of Comcast's equipment and facilities.

- G.** Provide a point of contact (POC) for installation, service activation, notices for Service Outages, and any maintenance activities.
- H.** Ensure that any Customer-provided or existing Underlay Service is installed and operational prior to installation of the Services and meets the requirements necessary for the Services.
- I.** The demarcation point of the SDN Service is the CPE. Customer shall have sole responsibility for installing, configuring, providing and maintaining all Customer LAN equipment.

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**SCHEDULE A-2  
SERVICE LEVEL AGREEMENTS AND OBJECTIVES**

**1. Definitions**

Capitalized terms not otherwise defined herein shall have the meaning ascribed to them in the SDN Services PSA or the General Terms and Conditions. For purposes of this Service Level Agreement, “**Services**” means only VPLS and VPRN Services provided over private ethernet Underlay Services.

“**Emergency Maintenance**” means efforts to correct network conditions that Comcast believes or determines are likely to lead to a material disruption in Service. Emergency Maintenance may temporarily degrade the quality of the Service or cause temporary outages. Comcast reserves the right to undertake Emergency Maintenance at any time Comcast deems necessary to protect and preserve the Network or Services.

“**Latency**” means the average time it takes for a packet to travel roundtrip between Comcast PoPs on the Core Network over a calendar month, as measured by Comcast.

“**Jitter**” means the average interpacket delay variance for video and voice packets traveling between Comcast PoPs during a calendar month, as measured by Comcast.

“**Objective(s)**” means the Proactive Outage Notification Objective, Service Availability Objective(s), and Service Performance Objective(s) described in this SLA. For clarity, each of the Service Performance Objectives is a separate Objective.

“**Packet Delivery**” means the percentage of packets that are delivered between Comcast PoPs on the Core Network during a calendar month, as measured by Comcast.

“**Proactive Outage Notification**” and “**Proactive Outage Notification Objective**” are each defined below in Section 2.

“**Scheduled Maintenance**” means upgrades, modifications or other maintenance events related to any Comcast Equipment or any of the Network equipment’s hardware and/or software, including, without limitation any local exchange carrier equipment. Scheduled Maintenance may temporarily degrade the quality of the Service or cause temporary outages. Scheduled Maintenance events shall not give rise to Service Credits under this SLA and shall not be deemed a Service Outage.

“**Service Availability**” means the percentage of time in a calendar month that the Service is available to transmit and receive data. The Service is considered available whether data is passing through the primary connection or through a backup connection. Service Availability percentage is calculated as follows:  $A/M * 100$ , where A is the total number of minutes during the calendar month for which the Service was available to transmit and receive data, and M is the total number of minutes in the calendar month.

“**Service Availability Objective(s)**” means the percentage of time in any given calendar month that the Service is intended to be available to transmit and receive data, as set forth in Section 2 below.

“**Service Credit**” means a proportion of the monthly recurring Service fees (attributable to a certain number of days and excluding local access circuit (loop) charges) for the portion of the Service experiencing an Objective failure, credited to Customer against the applicable monthly invoice. For clarity, “one days’ Service Credit” is calculated as the monthly recurring Service fees for the affected Service (excluding local access circuit (loop) charges), divided by thirty (30) days.

“**Service Outage**” means the complete unavailability of the Service as measured by Comcast, except that any unavailability, delay, outage, disruption, or degradation for reasons listed in Section 3 shall not be deemed to be a Service Outage.

“**Service Performance Objective(s)**” means the Latency Objective, Packet Delivery Objective, Jitter Objective, and/or Fast Fail-Over Objective, each as defined in Section 2.C. below.

**2. SLA Details**

The Service Credit allowance available to Customer shall be limited to the amounts set forth in this Section.

**A. Service Availability**

In the event Comcast fails to meet the Service Availability Objective set forth below due to a Service Outage, Customer will be eligible to receive two (2) days’ Service Credit (i.e., 2/30 of the monthly recurring Service fees (excluding local access circuit (loop) charges) for portion of the Service experiencing an Objective failure), and an additional two (2) days’ Service Credit for each cumulative hour thereafter that such Service Outage continues during the calendar month in which the Service Availability Objective is not met due to such Service Outage, not to exceed, in the aggregate for all failures to meet the Service Availability Objective in a given calendar month, one hundred percent (100%) of the total monthly recurring Service fees (excluding local access circuit (loop) charges) for portion of the Service experiencing an Objective failure.

<b>Product Criteria</b>	<b>Region</b>	<b>Service Availability Objective</b>
VPRN and VPLS	Contiguous United States, Alaska, Hawaii and Canada	99.999%

**B. Proactive Outage Notification**

Comcast’s standard procedure is to monitor Customer’s Service on five (5) minute monitoring cycles. Two monitoring cycles of no response shall, subject to the exceptions in Section 3 below, constitute a Service Outage, and will trigger initiation of proactive outage notification procedures by Comcast. In the event of a Service Outage, Comcast will proactively notify Customer within five (5) minutes of Comcast’s confirmation of a Customer-affecting Service Outage as detected by Comcast (“**Proactive Outage Notification Objective**”). The proactive notification process will involve Comcast delivering notification to Customer’s POC, via email, or telephone that a Service Outage has occurred (a “**Proactive Outage Notification**”). Customer is not entitled to a Service Credit under this Section if Customer’s POC is unavailable due to incorrect information provided by Customer or other cause attributable to Customer. In the event Comcast fails to meet the Proactive Outage Notification Objective, Customer will be eligible to receive two (2) days’ Service Credit for the calendar month in which the particular Proactive Outage Notification Objective is not met, not to exceed, in the aggregate for all failures to meet the Proactive Outage Notification Objective in a

given calendar month, one hundred percent (100%) of the total monthly recurring Service fees (excluding local access circuit (loop) charges) for the portion of the Service experiencing an Objective failure.

C. Service Performance Objectives as Measured Between Comcast PoPs

- i. **Latency Objective.** Latency will be equal to or less than 39 milliseconds (“**Latency Objective**”). Latency is calculated by averaging five (5) minute roundtrip measurements between Comcast’s PoPs taken by Comcast during the applicable calendar month. In the event that Comcast fails to meet the Latency Objective, and Customer has Service between the affected PoPs, Customer will be eligible to receive seven (7) days’ Service Credit for the calendar month in which the Latency Objective is not met.
- ii. **Packet Delivery Objectives.** Comcast’s Packet Delivery objectives are as follows based on the applicable QoS (each, a “**Packet Delivery Objective**”):

QoS	Limited	Best Effort	Priority	Mission Critical (within CSIR)	Voice and Video (within CSIR)
<b>Packet Delivery Objective</b>	99.9%	99.9%	99.9%	99.99%	100%

In the event that Comcast fails to meet the applicable Packet Delivery Objective, Customer will be eligible to receive seven (7) days’ Service Credit for the calendar month in which the Packet Delivery Objective is not met.

- iii. **Jitter Objective.** Comcast’s target for maximum Jitter is less than 1 millisecond (“**Jitter Objective**”). In the event that Comcast fails to meet the Jitter Objective, Customer will be eligible to receive seven (7) days’ Service Credit; provided that such Service Credit shall be based only on Customer’s recurring Video and Voice QoS Service fee(s) (excluding local access circuit charges) for the calendar month in which the Jitter Objective is not met.
- iv. **Fast Fail-Over Objective.** If any link between Comcast PoPs on the Core Network being used for video or voice service becomes unavailable during a voice or video call, the link will transparently be rerouted on an alternate standby path in less than 50 milliseconds (“**Fast Fail-Over Objective**”). In the event that Comcast fails to meet the Fast Fail-Over Objective, Customer will be eligible to receive seven (7) days’ Service Credit; provided that such Service Credit shall be based only on Customer’s recurring Video and Voice QoS Service fee(s) (excluding local access circuit charges) for the calendar month in which the Fast Fail-Over Objective is not met.

3. Service Credits; Exceptions

A. The following applies to all types of Service Credits under this SLA:

- i. The measurement of Objectives will be based on Comcast’s own measurements utilizing the Comcast ticketing system and other applicable measurement tools including, but not limited to measuring Customer’s traffic.

- ii. If a single Objective failure (e.g., caused by a Service Outage or other event impacting the Service Performance Objectives) affects the performance of a Service resulting in Comcast's failure to meet multiple Objectives under this SLA, a Service Credit will be applied only for the single Objective failure that results in the highest Service Credit. By way of example, if Comcast fails to meet the Service Availability Objective, Proactive Outage Notification Objective, and Latency Objective in connection with a Service Outage, a Service Credit will be applied only for the single Objective failure that results in the highest Service Credit.
  - iii. Notwithstanding anything to the contrary contained herein, Customer's total Service Credit allowance per calendar month is capped at one hundred percent (100%) of the total monthly recurring Service fees (excluding local access circuit (loop) charges) for the portion of the Service experiencing an Objective failure. Separately occurring Service Outages and resulting failures to meet Objectives are not aggregated for the purposes of determining Service Credit allowances.
  - iv. For purposes of calculating Service Credits, the monthly recurring Service fees on which the Service Credits are based shall not include governmental fees, taxes, surcharges or similar additional charges.
  - v. No Service Credits will be provided under this SLA for Underlay Services.
  - vi. Customer is not eligible for Service Credits if Customer is not in good standing with Comcast and/or not current in its obligations (including, without limitation, any payment obligations) under the Agreement.
  - vii. Service Credits are not available for beta, pilot, or trial services.
  - viii. For clarity and avoidance of doubt, the Service Credits shall be calculated based only on the monthly recurring Service fees (excluding local access circuit (loop) charges) for the portion of the specific Service for which the Objective was missed.
- B. A Service Outage shall not include, and Objectives shall not apply to or be deemed missed as a result of, any unavailability, outage, disruption, delay or degradation that is caused by or otherwise attributable to any of the following, and Comcast shall have no liability for such unavailability, outage, disruption, delay or degradation or related failure to meet any Objective, in the form of Service Credits or otherwise.
- i. Any act, omission or delay of Customer, its contractors, suppliers, or otherwise attributable to Customer.
  - ii. Interruptions or outages caused by the failure of power, equipment, services or systems not provided by Comcast, including but not limited to local access circuits or ports not ordered through or provided by Comcast.
  - iii. Comcast does not have access to the Service Location where the affected Service terminates or Customer does not release the affected Services for testing or repair and/or continues to use the Service on an impaired basis.
  - iv. Events of force majeure.
  - v. Scheduled Maintenance.
  - vi. Emergency Maintenance.

- vii. Systemic Internet issues.
- viii. Failures attributable to Customer's bandwidth restrictions.
- ix. Outdated, incomplete or inaccurate POC information.
- x. Trouble tickets associated with new installations, including, but not limited to, when end users are being added at a Service Location, or when a new device is being provided to an existing end user.
- xi. Any event or occurrence that results in "No Trouble Found" resolution to trouble tickets.
- xii. Any Service Outage for which Customer may have previously obtained a credit or compensation outside of the terms of this SLA.
- xiii. Customer-provided Underlay Services or Internet connectivity, Customer-Provided Equipment, or Customer-provided power.
- xiv. Any third party not contracted through Comcast, including, without limitation, Customer's users and third-party network providers.

#### **4. Emergency Blocking**

The parties agree that if either party hereto, in its reasonable sole discretion, determines that an emergency action is necessary to protect its own network, the party may, after engaging in reasonable and good faith efforts to notify the other party of the need to block, block any transmission path over its network by the other party where transmissions do not meet material standard industry requirements. The parties further agree that none of their respective obligations to one another under the Agreement will be affected by any such blockage except that the party affected by such blockage will be relieved of all obligations to make payments for charges relating to the circuit(s) which is so blocked and that no party will have any obligation to the other party for any claim, judgment, or liability resulting from such blockage.

#### **5. Remedy Processes**

To request a Service Credit, Customer must, within thirty (30) calendar days of the end of the month in which the failure to meet the Objective giving rise to the Service Credit occurred, open a trouble ticket via Comcast's Portal, or submit a claim via email sent to the address designated by Comcast. Comcast will acknowledge and review all claims promptly and will inform Customer by electronic mail or other correspondence whether a Service Credit will be issued or the claim rejected, with the reasons specified for the rejection.

#### **6. Eligibility for Service Credit Allowances**

This SLA applies only to VPLS and VPRN Services provided over private ethernet Underlay Services. In order to be eligible for Service Credits, Services must: (A) be either VPLS or VPRN Services provided over private ethernet Underlay Services, (B) have a minimum Service Term of one (1) year, and (C) have had Service activated and placed under monitoring by the Comcast Network Operations Center for at least thirty (30) days prior to the occurrence of the Service Outage giving rise to failure to meet the applicable Objective. For clarity, this SLA does not apply to NaaS or IES.

## 7. **Other Limitations**

The remedies set forth in this Service Level Agreement shall be Customer's sole and exclusive remedies for any Service Outage, outage, unavailability, disruption, delay, or other degradation, or any Comcast failure to meet any Objective.