



Optical Internet

PRODUCT RIDER – ETHERNET SERVICES GLOBAL

This product rider (Rider) amends the CSA entered into between Customer and COGENT for the Services specified therein. Unless otherwise defined herein, capitalized or defined terms in the CSA have the same meaning in this Rider. In the event of a conflict between forms, the following will be the order of priority: First, the Order Form; Second, this Rider; Third, the Terms; and Fourth, the SLA.

1. Service and Options

Within the scope of Ethernet Services, COGENT transmits Ethernet frames between Customer networks by means of multi-protocol label switching (MPLS) executed over COGENT's Internet network. COGENT offers two types of Ethernet Services:

- **Ethernet Point-to-Point** services provide communication between two locations. With Ethernet Point-to-Point, Ethernet frames are transmitted by means of dedicated VLAN connections (Virtual Circuits or VC), set up using MPLS, between a pair of Ethernet ports. Depending on the selected port type (see options below), several VC's may be combined on a single Ethernet port, to build hub-and-spoke or meshed topologies based on multiple VC's. COGENT's Ethernet Point-to-Point service does not support multicast service.
- **Ethernet VPLS** services provide multipoint-to-multipoint (*i.e.*, any-to-any) communication between more than two locations. With Ethernet VPLS, MPLS is used within COGENT's Internet network to create a virtual Ethernet switch, where all connected LAN locations share an Ethernet broadcast domain, thus creating a single geographically dispersed bridged LAN (*i.e.* a "virtual private LAN" or "Mesh").

COGENT's Ethernet Services are offered solely on a "flat rate" basis per port. A Bandwidth CDR (Committed Data Rate) for each port is set forth in the applicable Order Form, and the CDR represents the maximum bandwidth that can be carried on such port. The CDR of any single port is independent of the CDR of other ports to which a given port is virtually connected by a VC (in the case of Ethernet Point-to-Point), or which are part of a Mesh (in the case of Ethernet VPLS). At On-Net Service Locations, CDR is available in increments of 100 Mbps. At Off-Net Service Locations, CDR may be available in smaller increments, limited by the third-party local loop selected to connect the Customer location.

At certain Off-Net Customer Service Locations, COGENT may offer *Off-Net Basic* services (*i.e.*, where the third-party carrier delivers the local loop for that location to COGENT across a shared trunk interconnection port, together with other COGENT-ordered local loops serving other locations), as opposed to *Off-Net Premium* Services (which benefit from a dedicated interconnection for each local loop). The nature (*Basic* or *Premium*) of the Off-Net Service delivered by COGENT to the Customer is indicated on the Order Form. *Off-Net Basic* Services are not eligible to any of the guarantees under COGENT's SLA and do not support most options listed below.

Customers ordering COGENT's Ethernet Services may use either a router (layer 3 device) or a bridge / switch (layer 2 device). If Customer elects to connect with a layer 2 device, COGENT's Ethernet services will support a maximum of 512 MAC (Media Access Control) addresses across all ports intended to be (i) connected by a VC (in case of Ethernet Point-to-Point) or (ii) part of a Mesh (in case of Ethernet VPLS) – however, if Off-Net locations are involved, the number of supported MAC addresses across all ports may be limited by third-party local loop carriers.

Subject to availability, Customer may select one or more options listed below, in which case Customer agrees to pay the related fees which will be indicated in the applicable Order Form.

- **Port Type:** COGENT may offer Access (Untagged), Trunked (Tagged) or QinQ port types on certain Ethernet services. *Access (Untagged)* is the standard port type for Ethernet VPLS ports and Ethernet Point-to-Point ports with a single VC. Where available, *Trunk (Tagged)* is the required port type for Ethernet Point-to-Point ports with multiple VC's, and an optional port type for Ethernet VPLS services. *QinQ* is the required port type when VLAN tunneling is to be performed by COGENT. Please note that *Access (Untagged)* is the only port type available for *Off-Net Basic* services.
- **MTU Size:** COGENT's Ethernet Services support a standard maximum Ethernet MTU size of 1,500 bytes. COGENT may offer jumbo frames on certain Ethernet Point-to-Point services, up to 1,546 bytes on Fast-Ethernet ports, 2,000 bytes on Gig-Ethernet ports, and 9,216 bytes on 10Gig-Ethernet ports, as well as for Ethernet VPLS services, up to 9,216 bytes on all port sizes. Please note that *Off-Net Basic* services do not support jumbo frames.
- **Expedite Delivery:** COGENT's sole installation guarantee is the installation guarantee stated in the SLA. Customer may request in the Order Form an expedited delivery for the Service. COGENT will use commercially reasonable efforts to accommodate Customer's request; provided, however, that COGENT does not guarantee that any such request will be fulfilled (and any such guarantees given either orally or in writing are hereby disclaimed) nor does COGENT guarantee that the Service will be delivered on a specific date, such as the Requested Service Date indicated on the Order Form.
- **Multi-Site Services:** Multi-site orders are orders where Ethernet ports at more than two (2) Service Locations are ordered at the same time. For all multi-site orders, COGENT does not guarantee (and any such guarantees given either orally or in writing are hereby disclaimed) that all ports ordered will be installed on the same date, that the ports will be installed within any specified time of each other or that billing for the Services ordered will be delayed until all ports are installed. COGENT will install the ports as they become available and will begin billing for installed Services (i) for Ethernet Point-to-Point services, once a minimum of two (2) ports intended to be connected by a VC are installed or (ii) for Ethernet VPLS services, once a minimum of three (3) ports intended to be part of a Mesh are installed. As additional ports at additional Service Locations are installed, billing for those ports will begin upon installation. Multi-site services comprised of On-Net and Off-net ports may experience a significant lag time between the installation of the On-Net ports and the installation of the Off-net ports; as noted above, billing for the Service will begin once a minimum of (i) two (2) ports for Ethernet Point-to-Point services or (ii) three (3) ports for Ethernet VPLS services are installed.

2. Customer's Duties to Cooperate

Customer or its representative must cooperate with COGENT in the installation process, which includes accurate completion of an Order Form containing detailed demarcation information and other onsite contact listings, and of the necessary technical questionnaires (IP Questionnaire, BGP Questionnaire, etc.) as provided by COGENT. Customer or its representative must be physically present at the time of installation. During installation and at all other times, the Customer will allow access and if necessary provide escort, for COGENT's or its representatives' necessary personnel to perform the installation and maintenance of the Service, to the designated building's phone closet(s) or telecommunications room or to the Customer's premises for the purposes of survey, installation, operations and maintenance of the Service, after prior arrangement between the parties. Customer's failure to cooperate shall release COGENT from its obligations pertaining to the Installation Guarantee part of the SLA, and shall not suspend the Service Date and thus the billing start date.

In the event of technical problems relating to the Service, the Customer will ensure that COGENT's or its representatives' service engineers have unrestricted access to the designated building's phone closet(s) or telecommunications room or to the customer premises equipment. Customer's failure to provide access shall release COGENT from its obligations pertaining to the Network Availability part of the SLA.

3. Demarcation Point

Within a COGENT data center: If Service delivery takes place within a COGENT data center, COGENT will deliver the Service at a demarcation point situated on the COGENT equipment. COGENT will provide, maintain and operate the necessary wiring ("Cross-Connect") for Customer to connect to COGENT's service at the indicated demarcation point. COGENT will provide such Cross-Connect against fees such as indicated on the Order Form.

Within a third-party data center: If Service delivery takes place within a third party data center (i.e. that is not owned and/or operated by COGENT), COGENT will deliver the Service at a demarcation point situated on the COGENT equipment. Unless otherwise agreed, Customer will at its own cost provide, maintain and operate the necessary wiring ("Cross-Connect") to connect to COGENT's service at the indicated demarcation point. If Customer and COGENT agree that COGENT shall provide such Cross-Connect, then COGENT will provide such Cross-Connect against fees such as indicated on the Order Form.

Within an On-Net corporate building: If Service delivery takes place within an On-Net corporate building, COGENT will deliver the Service at a demarcation point situated on the COGENT equipment within the Customer's suite. COGENT will provide, maintain and operate the necessary wiring ("Riser") between the building entry and the indicated demarcation point.

At an Off-Net Customer Location: Off-Net Services are being delivered to the Customer Location indicated in the Order Form through a third-party local loop to be provisioned by COGENT on behalf of Customer. As such, the Customer and COGENT agree that the charges set forth in the Order Form for such Service assumes that such Service will be terminated at a pre-established demarcation point or minimum point of entry (MPOE) in the building housing the Customer Location, as determined by the local access provider. COGENT may charge Customer additional nonrecurring charges not otherwise set forth herein for such Service where the Customer or local access provider determines that it is necessary to extend the demarcation point or MPOE through the provision of additional infrastructure, cabling, electronics or other materials necessary to reach the Customer Location. It shall be the Customer's responsibility to allow access to the facility for the local access provider, as well as to facilitate or coordinate with the property owner at the Customer Location, all additional space and electricity determined by the local access provider to be necessary to provide the Service. COGENT will notify Customer of any additional non-recurring charges, if any, as soon as practicable after COGENT is notified by the local access provider of the amount of such charges. From time to time, COGENT may provide, and Customer may accept, budgetary estimates for the extension of the demarcation point to the Customer Location along with the initial Order Form. These estimated costs may be based on certain known costs or typical installations that do not require extraordinary efforts by the provider to extend the service. In the event actual costs exceed the budgetary estimate, Cogent will notify the Customer as outlined above.

In addition, the charges and the Term set forth in the Order Form for the Service assumes that such Service can be provisioned by COGENT through the local access provider selected by COGENT (and/or Customer) for the stated Term. In the event COGENT is unable to provision such Service through the selected local access provider or the selected local access provider requires a higher cost or longer Service Term than that set forth in the Order Form, COGENT reserves the right, regardless of whether COGENT has accepted the Order Form, to suspend provisioning of the Service hereunder and notify Customer in writing of any additional non-recurring charges, monthly recurring charges and/or Term that may apply, or to cancel the Service set forth on the Order Form. Upon receipt of such notice, Customer will have five (5) business days to accept or reject such changes. If Customer does not respond to COGENT within the five (5) business day period, such changes will be deemed rejected by Customer. In the event Customer rejects the changes (whether affirmatively or through the expiration of the five (5) business day period) or if COGENT elects to cancel the Service ordered herein, the affected Service will be cancelled without cancellation or termination liability of either party.

Accepted and agreed to:

CUSTOMER: _____

COGENT

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____