Annex: International Private Connectivity

Service Description

International Link that enables the connection of Customer's sites within the territory with the rest of the world and/or vice versa, including provision, installation, uninstallation, upgrading, replacement, management and maintenance of equipment and staff required for service provision.

Overall Features

The International Link Service is a Layer 2 or Layer 3 service, depending on the Agreement made by Customer.

Layer 3 Service is based on standard MPLS (Multi Protocol Label Switching), which provide Customer with full-mesh connectivity, making it possible to set differentiated classes of services which enable multiple applications on a single network. The service is private and secure for the Customer, where sites are connected to an MPLS Network, enabling direct communication. Service is implemented on both Antel's and Carrier's MPLS Networks, based on the BGP/MPLS VPN (RFC 4364) Standard. Under this model, the network establishes peering with Customer's sites and routes traffic through network in order to interconnect sites.

Layer 2 Service is an end-to-end layer 2 service, where Customer's traffic is encapsulated and carried through both Antel's and Carrier's MPLS Networks, fully seamless to layer 3 data and protocols used by Customer. Service implementation is based on layer 2 service, EPL, defined by MEF in its 6.1 Standard. Service is implemented on MPLS Network based on RFC 4447.

Interconnection to Carrier

Interconnection of Carrier's MPLS Network to Antel's MPLS Network is based on providers interconnection standards in accordance with RFC 4364 (BGP/MPLS VPN INTER–AS BGP) for Layer 3 Services and in accordance with RFC 4447 for Layer 2 Services.

Network Topology

- CE (Customer Edge) Equipment with Fast Ethernet interface to Customer's LAN is installed and managed at Customer's site.
- CE is linked to Access Port (PA) through a physical medium (line) and this Access Port is connected to the MPLS Network with at least one PE (Provide Edge).
- Each site has a single access line and a single CE. There is no backup in case of line, port or CE drop.
- Available media and technology to access the MPLS Network are the following:
- Layer 1: Fiber Optics or Copper or Wireless
- Layer 2: Ethernet or xDSL

Network Protocols

Layer 3 Service: Antel provides WAN, CE to CE Connectivity. WAN routing is managed by Antel, for which Public IP addresses are used. Service provided only supports IPV4. BGP AS (Autonomous System) in each site will be defined by Antel. Customer is responsible for LAN IP routing of each site, and private range routing (RFC 1918) shall be used.

Layer 2 Service: Customer is allowed to carry Ethernet (MTU 1500bytes) Traffic. The network does not interchange Spanning Tree Bridge Protocol Data Unit (BPDU) with Customer. All traffic carried through the Network in this type of services is classified in a single class of service in the whole Network. Customer is responsible for LAN routing of each site, and private range routing (RFC 1918) shall be used.

Definition of Borders

Antel is responsible for the provision, maintenance, and management of all elements up to CE LAN interface, including CE. Customer is responsible for each site's LAN. Outside the national borders, service will be in accordance with the rules and conditions set forth by Carrier.

Equipment to be used

CE features are those required to provide service in each site. CE LAN interface is specified as Fast Ethernet 100BaseT / Full Duplex.

Hired Bandwidth

Hired Bandwidth in each site equals Access Port Bandwidth, and comprises usable bandwidth by Customer including Ethernet header.

Where usable bandwidth exceeds Hired Bandwidth, service configuration will limit traffic to port bandwidth.