

Service Description

This document provides a service description of the Digital Distribution Australia Pty Ltd (DDA) wholesale Ethernet E-LAN service suitable for local, metropolitan and wide area networks.

The DDA Ethernet E-LAN service provides service providers with a cost effective and scalable carriage service using the industry standard Ethernet interface. Capacity is available from 2Mbps to 1Gbps.

The Ethernet E-LAN service is carried across the DDA IP MPLS national network.

Class of Service

There are 3 service classes available:

- Carrier Data Service
- Business Data Service
- Consumer Data Service

The Carrier Data Service is an “expedited” class of service across the DDA MPLS network and it has strict end to end performance characteristics for latency, jitter and packet loss. It is a leased line replacement service suitable for the carriage of real time and interactive data such as VoIP and video.

The Business Data Service is a “priority” class of service with strict end to end performance characteristics for latency and packet loss, making it suitable for the carriage of bulk data.

The Consumer Data Service is a “standard”, best efforts class of service suitable for internet access.

Configuration

DDA Ethernet E-LAN services provide multipoint connectivity between multiple sites. Each of the sites can have more than one UNI in the same bridge domain.

The UNI can either be configured with one service per port (EP-LAN) or multiple services per port with VLAN ID (EVP-LAN).

Service Specification

Service Parameter	E-LAN Data			
	Carrier E-LAN Data	Business E-LAN Data	Consumer E-LAN Data	
Configuration	Multipoint			
MEF Standards	EVP-LAN			
Transport Technology	MPLS VPLS			
Bandwidth (Mbps)[1]	Ingress & Egress: 2-20Mbps in 2Mbps increments, 20-100Mbps in 10Mbps increments, 100Mbps -1000Mbps in 50Mbps increments			
Ethernet Frame Size (MTU)	Fast Ethernet: 1536 Bytes Gigabit Ethernet: 4960 Bytes			
VLAN Transparency	EP-LAN: Transparent to VLANs, QinQ [2] EVP-LAN: Transparent to VLANs [3]			
Protocol Transparency	Transparent to all layer 3 protocol. High degree of L2CP transparency			
QoS Transparency	Transparent to customer QoS (802.1p/DSCP)			
Number of UNI per Site	Min: 1; Max: 4			
Number of Site	Min: 2; Max: 5			
Interface Protection (Optional)	LACP IEEE802.3ad / Static LAG			
Interface Configuration	Gigabit Ethernet: Hard code 1000 non-negotiate			
Interface Standards	Fast Ethernet: 100BASE-T Gigabit Ethernet: 1000BASE-LX, 1000BASE-SX, 1000BASE-T			
Physical Connectors	Fast Ethernet: RJ45 Gigabit Ethernet: LC, SC, RJ45			
Cabling	Fast Ethernet: Cat5e Gigabit Ethernet: SM, MM fibre, Cat5e			
Commissioning standards	RFC2544	Ranging from Verified Connectivity to RFC2544	Ranging from Verified Connectivity to RFC2544	
MAC Learning Limit	50			
Frame Delivery Condition	Unicast Frame Delivery	Deliver Unconditionally		
	Multicast Frame Delivery	<512kbps		
	Broadcast / Unknown Unicast Frame Delivery	<512kbps		
Performance Target	Availability	99.95%	99.95%	99.86%
	Frame Loss Ratio [4]	<0.01%	<0.01%	N/A
	Frame Delay [4] [5]	Based on distance of path	Based on distance of path	N/A
	Inter-Frame Delay Variation [4] [5]	<10ms	N/A	N/A

Note

1. Guaranteed bandwidth includes data and Ethernet overheads. Overheads include both Ethernet physical layer and MAC layer.
2. Fast Ethernet Interface doesn't have QinQ transparency
3. Customer equipment at Hub site needs to support VLAN Stacking if VLAN transparency is required
4. Frame loss ratio, frame delay, inter-frame delay variation are average value measured over 48 hours. Measurement burst traffic is sent every 5 mins.
5. Frame delay and inter-frame delay variation are two-way measurement.

Service Level Agreement

- SLA performance monitoring is based on ITU-T Y.1731
- Annual availability is the inverse of unavailability. Unavailability which is the sum of all outages due to either equipment failure, circuits breaks or packet loss measured over the year.