

Technical Specification

pVLAN Closed User Group

1. A Closed User Group is a method of allowing a group of members to pass traffic between themselves for a specific purpose. The group will have a separate bandwidth allocated to this traffic as well as its usual peering needs. This may be for a specific group task such as a method of communicating between suppliers or for passing voice traffic between members, or it may be used by a member offering their services for consumption across the LINX fabric.
2. In both instances the group will need one member to be the owner and controller of the group. In this document this role is known as the group controller. They will have the responsibility of setting up the group. When setting up the group they will specify the maximum bandwidth of the service. They will also have the ability to authorise members who wish to join the closed user group. Members joining the group are known as participating members.
3. Closed user groups are Layer2 multipoint to multipoint services for the exchange of (Layer2) frames between the group controller and participating members of the specific service to enable connectivity and gain privileged access to the specific services offered by the group controller. Closed user groups offer a dedicated and secure environment to exchange IP traffic for special use cases and services amongst the participating members. This controlled environment and the well-defined set of participants within the closed user group, technically based on an E-LAN setup, enables bandwidth guarantees, secure routing, and follows highest standards in terms of redundancy.
4. The member shall present individual Layer2 ports as 802.1q tagged interfaces. These interfaces will be added into the Closed User Group Layer2 domain and as such become part of the broadcast domain. The interfaces can be delivered over dedicated or existing physical 1G, 10GE or 100GE ports or multiples thereof and can have a bandwidth chosen at order time up to the physical port speed.
5. The Layer2 connection is limited to the contracted bandwidth as specified during the order process. The member is not permitted to oversubscribe the Interconnection Port. As an example, on a 10Gbps port, a maximum of ten 1Gbps or any other combination up to a total of 10Gbps total traffic rate is allowed. LINX applies per VLAN rate-limiting configurations at the LINX edge router. These are setup to 10% above the committed rate with a burst size limit of the equivalent number of bytes transferred over a period of 1 second at the committed rate. The member shall ensure that traffic sent through the port conforms at all times with the technical requirements as specified in Appendix 1 of the LINX MoU.

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6. The service can be provided to the member via a Channel Partner.
7. By default, all frames forwarded to closed user group services shall have the same source MAC address. It is possible to increase the limit of MAC addresses allowed on per service basis.
8. The group controller will define and manage the IP address space.
9. The maximum MTU size is 1500 bytes at the launch of the product. We have plans to allow larger frame sizes in a future iteration of the product, based on Member demand.
10. The following policies shall apply to broadcast/multicast traffic.

Protocol	Policy	Enforcement
Broadcast Traffic and Unknown Unicast traffic	Allowed, but rate limited to 2,000kbps with a burst size of 10,000kbps	Discard above limit
LACP (Ethertype 0x8809)	Discard	Discard
802.1qad	Not currently allowed	