



Ethernet Service Layer 2

Product Brief

Ethernet could be a perfect choice if your business is using IP based applications such as data, VoIP, and video services. Ethernet service suggests the same type of SLA across whole Baltic region because Ethernet based solution is designed to meet your business requirements, no matter how far your network reaches. It doesn't matter if your business needs high speed access for small branch offices, high capacity to mission-critical data centers, or end-to-end connectivity from 2Mbps to 1Gbps.

Ethernet offers an efficient environment for transferring of all types of data on a single infrastructure. The international Ethernet Line provides data communication between customer's sites located in different countries. Internationally service could be provided in the Estonia, Latvia, Lithuania with termination at major colocation nodes in Europe, Scandinavia and Russia. The service can also be delivered in other countries in co-operation with the trustful partners.

Ethernet is compliant with the technical specification of MEF 6.1 standard. The service may be configured in the following topologies:

- Point - to - Point
- Point - to - Multipoint
- NNI - Hub site

Point - to - Point topology utilizes a single Ethernet Virtual Circuit (EVC) between two customers locations. The service in the Point-to-Point configuration could be offered in two options, that is suitable for data centers interconnection, as access to larger networks, the Internet exchanges, as back-up or for load balancing your large network:

- Ethernet Private Line - EPL
- Ethernet Virtual Private Line - EVPL

Service Key Features

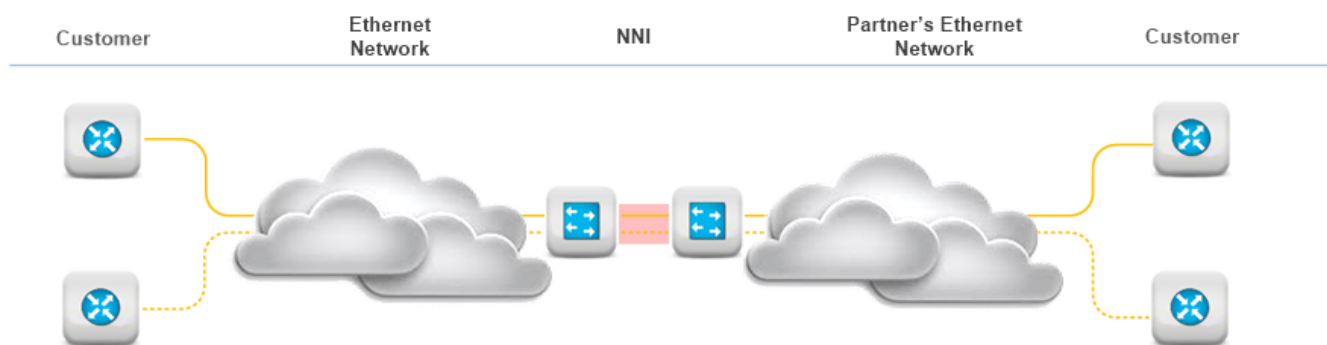
- Secure, flexible and cost effective solution.
- Ethernet services can scale quickly and easily, usually without costly upgrades – thus providing a high degree of bandwidth flexibility.
- Available in configuration of “wires only” and with managed CPE.
- Different capacities 2Mbps — 1Gbps, and consistent SLA levels
- Reduced network complexity.
- Additional options like redundancy and diversity

Service Benefits

- 24 x 7 Network Operations Center.
- Agile customer care service and dedicated account management.
- Convenient and efficient One Stop Shopping (OSS) service principles.
- Fast service deployment.

Handover interface

100Base-TX (Copper), RJ-45,
1000Base-T (Copper), RJ-45,
1000BASE-LX (Single mode fibre,
1310 nm) - LC, SC connectors



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Ethernet Private Line (EPL)

direct transparent point-to-point circuit between two customers locations. The service provides for high transparency of the transferred Ethernet frames - the level of transparency of the service is comparable with SDH capacity services.

Ethernet Virtual Private Line (EVPL)

direct non-transparent point-to-point circuit between two customers locations. Circuit could be made within Ethernet network by an EVC circuit between two termination points, defined by a physical port and a VLAN ID. VLAN ID should be allocated by the service provider and it is identical for both termination points. EVPL offers limited transparency as Layer2 control protocols are not tunneled.

Point-to-Multipoint topology

allows termination of several EVC circuits into a aggregated termination point. In this case services are handed over with different VLAN ID's. The maximum number of EVC circuits depends on the type of the access technology.

In order to achieve higher service availability, its possible to establish redundant NNI at the same or geographically different locations, Point of Presence. Redundancy is based on two connections between the communication equipment of the service provider and the communication equipment of the customerer, where LACP will be configured.

Performance parameters *

Frame Loss – expressed as the percentage of lost Ethernet frames that don't reach destination UNI from the source UNI, or dropped on the destination UNI.

Frame Delay – one-way delay of an Ethernet frame expressed in ms. The time from the moment when Ethernet frame is left source UNI to the moment, when Ethernet frame reaches the destination UNI.

Frame Delay Variation – variation of Frame Delay between the source and destination UNIs.

* All values are calculated as average values per calendar month

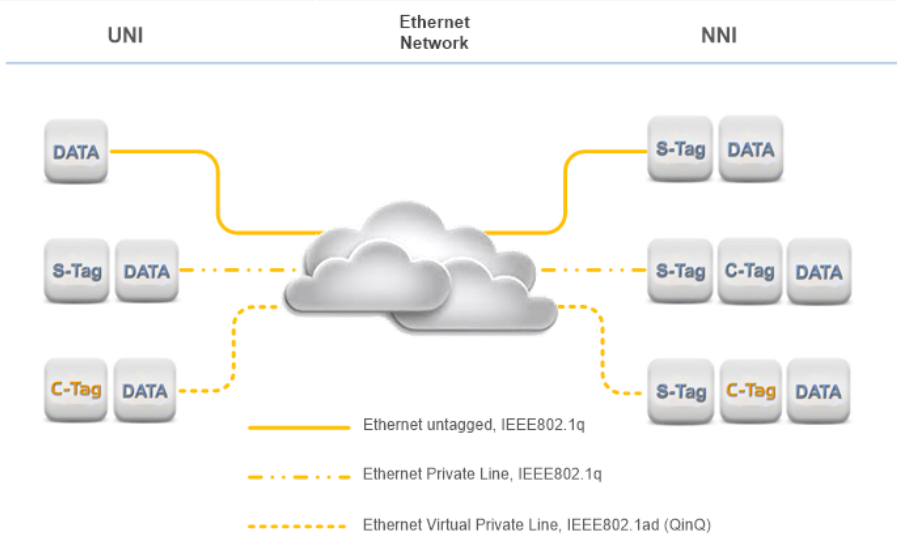
Target availability:	99.5% monthly - solution with a single last mile (default) 99.9% monthly - solution with diversified and redundant access
MTTR:	4 hours
Supported Data Rates:	2M, 4M, 6M 10M (10Mbps port rate) 10M – 100M with 10Mbps incremental step (100Mbps port rate) 100M – 1G with 50Mbps incremental step (1Gbps port rate)
MTU:	1522bytes - 1538bytes depends on technical setup (higher MTU vales is a subject of techical survey)
Bit Error Ratio:	Min. 1×10^{-6}
Lead time:	30 business days

Customer VLAN ID preservation, Customer CoS preservation MTU size **

UNI untagged / NNI 802.1q (Ethernet untagged) - Limited transparency of L2 control protocols shall be provided. Preservation of CoS bits is not applicable. MTU (UNI/NNI): required – 1518B/1522B

UNI 802.1q / NNI QinQ (EPL) - VLAN ID Preservation (C-tag unchanged), CoS preservation and L2 control protocol transparency is expected. MTU (UNI/NNI): required – 1522B/1526B

UNI any / NNI QinQ (EVPL) - VLAN ID Preservation, CoS preservation and L2 control protocol transparency must be guaranteed. MTU (UNI/NNI): required – 1534B/1538B



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