

Managed Layer 3

- **Ideal for connecting company addresses**
- **Multi IP scopes**
- **Distributed DHCP service**
- **Secure and fully closed network**
- **Can be expanded with new locations continuously**

Managed Layer 3 is a professional router network delivered via GlobalConnect's MPLS-core.

It comes in the form of customer premises routers that provides IP routing, services, prioritization and security.

Standard routing

Managed Layer 3 is delivered on standard routing protocols that do not restrict your network in any way in terms of packet sizes, etc.

Your local network will simply be extended to the locations you have.

GlobalConnect take care of operations

GlobalConnect provides monitoring, troubleshooting, and updating of all active devices. This saves you time and you can concentrate on your core tasks.

Typical applications

Routed interconnection of company departments. Consolidation of servers, in for example main location for optimal operation. Replacing an Internet-based VPN network with a more secure and fully closed network.

IP-addresses

There is a free choice of IP addresses. We customize our equipment to suit your network.

QoS

It is possible to prioritize between your networks. E.g. to be sure that IP telephony works perfectly. At the same time, access connection bandwidth

usage is optimized as a result of dynamic traffic prioritization based on current load.

VRF

If there is a need for a separately routed network, it is possible to set up route instances (VRF) which are isolated from each other. One VRF is default. More can be purchased.

Redundancy

If you want to protect yourself against failure by fibre excavation damage or failure of the devices, we can establish the connection of two separate fibres and two separate routers at each address where redundancy is required.

Flexible

It is the customer who decides how many and which IP scopes are to be routed in the network. It can be changed even after the installation has been taken into operation.

It is also simple to get a new office installed.

Traffic quality

A Managed Layer 3 access connection can be used for the most demanding traffic types, such as IP telephony, video streaming, etc. The guaranteed access connection quality is defined by upper limits of the following parameters¹:

- Latency < 10 ms (typically 5 ms)²
- Jitter < 1 ms
- Packet loss < 0,01 %

¹ Valid for GC proprietary infrastructure

² Latency is measured over 3 hours and is typically 5 ms. Round Trip Delay (RTD) is double Latency.

Technical data

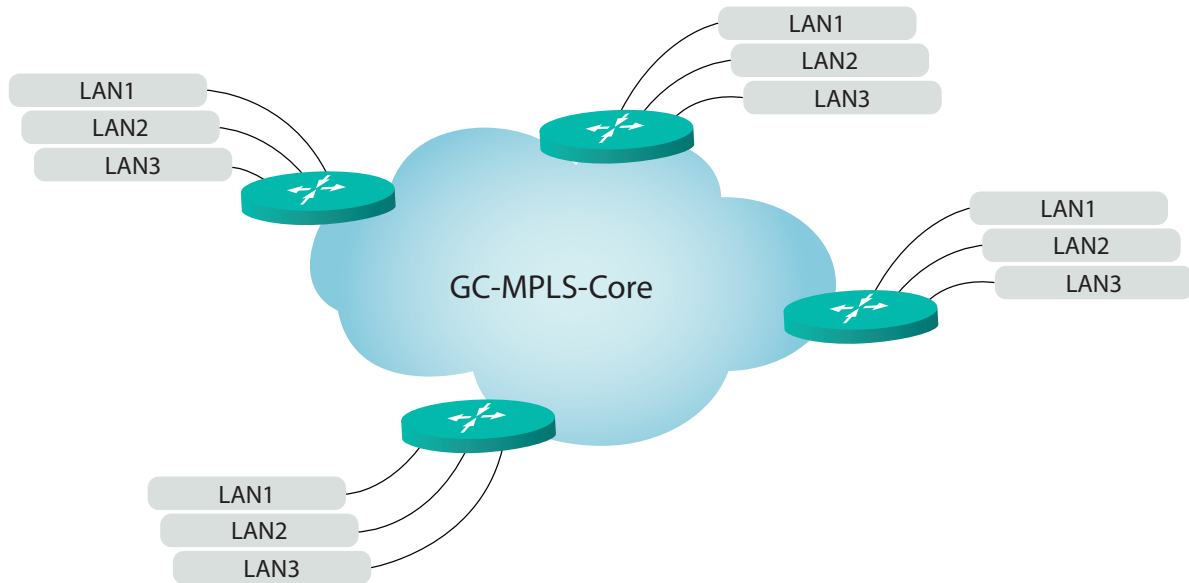


Figure 1: The customer defines which IP scopes shall be routed from the locations.

Service Class	% of bandwidth	Action at excess usage
Realtime Traffic	Max. 5 %	Excess usage dropped
Critical Traffic	Max. 25 %	Excess usage mapped to Best Effort
Business Data	Max. 25 %	Excess usage mapped to Best Effort
Best effort	Op til 100 %	Not relevant

Figure 2: Standard QOS profile on GC's own infrastructure.

	Line connections 2 Mbit/s - 1 Gbit/s	Line connections 1 Gbit/s - 10 Gbit/s
Interfaces	10/100/1000Base-T or 1G optical	10/100/1000Base-T or 1/10G optical
Quality of Service (QOS)	Yes, with four traffic classes, see Figure 2	Yes, with four traffic classes, see Figure 2
Customer access to SNMP read	Yes, with port status, traffic, etc.	Yes, with port status, traffic, etc.
Option for redundancy	Yes partially/fully diverse	Yes partially/fully diverse
Option for tagged VLAN	Yes	Yes
Extra VRF's	To be purchased	To be purchased
Additions/changes after installation, e.g. additional subnet, additional IP-helper, additional port/VLAN, additional static routes	To be purchased	To be purchased