

Ethernet service to build corporate or regional networks

The Telia WAN capacity service provides you with accesses and connections, while you handle the design and configuration of your corporate, municipal or regional network. Ethernet and MPLS let you keep costs down while providing an adaptable, high-quality network. Virtual LANs (VLANs) and real-time traffic for IP telephony and videoconferencing are some of the applications that work well on this platform.

Cost-effective alternative

Telia WAN is the right solution when you want to create a corporate network using a scalable backbone at OSI layer 2, such as when upgrading from ATM, frame relay, X-line, ISDN or tunnels over Internet. Since the service is ethernet-based you can use standardized, affordable components.

The service is not just for commercial use. System integrators, municipalities and county councils can benefit greatly from Telia WAN.

For IP telephony, video and critical applications

Do you believe that IP telephony will be an interesting alternative the next time you review the company's PBX solution? You can take the first step right now by choosing Telia WAN, which is ready for voice over IP. The service offers different traffic classes that provide you with full control over performance even when you mix different types of traffic in your network. Our three traffic class packages make it easier to optimize network solutions; for more information please see the "Good to know" section.

Standard Package

This standard traffic class is always included in the offer.

MIX Package

If you have additional needs for high-quality traffic you can add a QoS package with a mixture of the different traffic classes customized to your needs.

VoIP Package

A package specifically for speech traffic and IP switches.

We're located where you need us

No other communications solutions provider can match with Telia in geographic coverage. Our national backbone network has nodes in over 2,400 locations all over Sweden. This makes Telia Wan an excellent solution when you want to connect a large number of local offices or other geographically decentralized units.

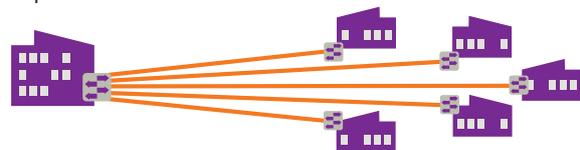
Integrated internet connection for improved traffic

If you want to access the Internet via your Telia WAN solution, we connect one of the connections to Telia ProLane. This fixed internet connection offers just the features you need when you want to deploy powerful, web-based operational support to the entire organization.

Choose a network topology that fits your needs

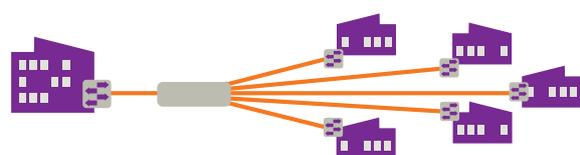
Point-to-multipoint

This topology gives you a star network. The connection is also known as an Ethernet Virtual Connection (EVC). The two ports that terminate a connection are placed on separate accesses.



Multipoint-VLAN

A network bridge provides you with an expanded virtual LAN with more than two endpoints, known as a multipoint VLAN. This technology allows you to easily and flexibly build your corporate network. For larger networks the connections are divided geographically or operationally with up to 30 connections per multipoint VLAN.



Separating traffic

A corporate network must satisfy users with a wide variety of needs. The VLAN feature in Telia WAN allows you to effectively separate user groups from each other; for example, different subsidiaries, different customers, different subcontractors or teachers and students.

Traffic in a certain VLAN can never reach another VLAN. Therefore it's easy to assign each user the right privileges and capacity. You can choose to let Telia define your VLAN on delivery or retain control via a transparent interface.

For normal usage, a VLAN is not needed. In this case you use what is known as untagged traffic, which means that traffic does not need to be marked at the local workplace.

Service included

Service is an integrated part of Telia WAN. Basic service is included in the price and covers measures carried out during office hours. Of course you can supplement with expanded service; for more information please see the "Good to know" section below.

Network elements are in operation and monitored 24 hours a day, 365 days a year. However, simple connections such as ADSL are not actively monitored.

Administration via Web interface

The WanOverView tool is included in the service. This web interface provides you with an overview of the network and its function, allowing you to follow up on deliveries and report problems. If you sign an agreement for expanded service you can also produce reports to document how we meet the terms of the agreement.

Good to know

Scope of service:

Telia WAN consists of the following components:

- Customer access point with access to Telia's ethernet network.
- Network bridge (at multipoint VLAN)
- Connection between two ports in Telia's ethernet network or between a port in Telia's ethernet network and a network bridge
- Service Level Agreement with Basic Service

Accesses

- Asymmetric copper connection (0.5–24 Mbps)
- Symmetric copper connection (2–4 Mbps)
- Fiber connection (10/100, 1,000 Mbps and 10 Gbps)

Interface

- Untagged, IEEE 802.3. One logical channel per physical port.
- Trunk. IEEE 802.1Q. Multiple logical channels to the same physical port. Untagged packets are not supported in this port type.
- T-transparent. IEEE 802.1Q. Allows you to define several different VLANs in a single physical port. Untagged packets are not supported in this port type.
- TO-transparent IEEE 802.1Q. Allows you to define several different VLANs in a single physical port. Both tagged and untagged packets are supported.
- Double-tagged trunk port, IEEE 802.1ad. This is also usually called QinQ, VMAN, or Service VLAN.

Connections

Connections connect accesses via Telia's ethernet network. Transmission speed ranges between 500 Kbps and 1000 Mbps.

Traffic classes

Traffic classes allow a connection to be assigned different characteristics based on needs. It is also possible to divide a single connection into different VLAN with different traffic classes. The service offers three traffic classes:

- Standard Traffic Class: for e-mail, Internet and other normal traffic
- Critical Traffic Class: for critical data applications with low value on packet loss
- Realtime Traffic Class: for IP telephony, video and similar applications with low delay and packet loss

Traffic Class packages

The three traffic classes are sold in packages with three different customized versions:

- Standard Package: all traffic as Standard Traffic Class
- MIX Package: a mixture of Realtime, Critical and Standard traffic classes
- VoIP Package: for connections that only have real-time traffic (e.g., between IP switches) and no Internet traffic, e-mail, etc.

Service Level Agreement

The service includes basic service with following conditions:

- Supported Service Hours: Mon.-Fri. (excluding holidays) 7:30 a.m.–6:00 p.m.
- Guaranteed resolution time: 12 hours

A higher service level is available by signing a separate service level agreement. You can combine a Guaranteed Resolution Time of 12, 8 or 4 hours with the following Supported Service Hours levels:

- Mon.-Fri. (excluding holidays) 7:30 a.m.– 6:00 p.m.
- Mon.-Fri. (excluding holidays) 7:30 a.m. – 12 midnight
- Mon.-Fri. (excluding holidays) 24-hour coverage
- Every day 7:30 a.m. – 6:00 p.m.
- Every day 7:30 a.m. – midnight
- Every day 24-hour coverage

Optional services

- Internet access via Telia ProLane (only fiber access)
- Service Level Agreement for expanded service
- TRAFFIC CLASSES
- Work in building network (ARBIFAS)
- Network design, consulting

Would you like to know more about Telia WAN or place an order? Submit your information online at www.telia.se/foretagskontakt and a sales associate will soon contact you. You can also call us at tel. 90 400.