

IP VPN

COMMITTED TO QUALITY



T · · Systems ·

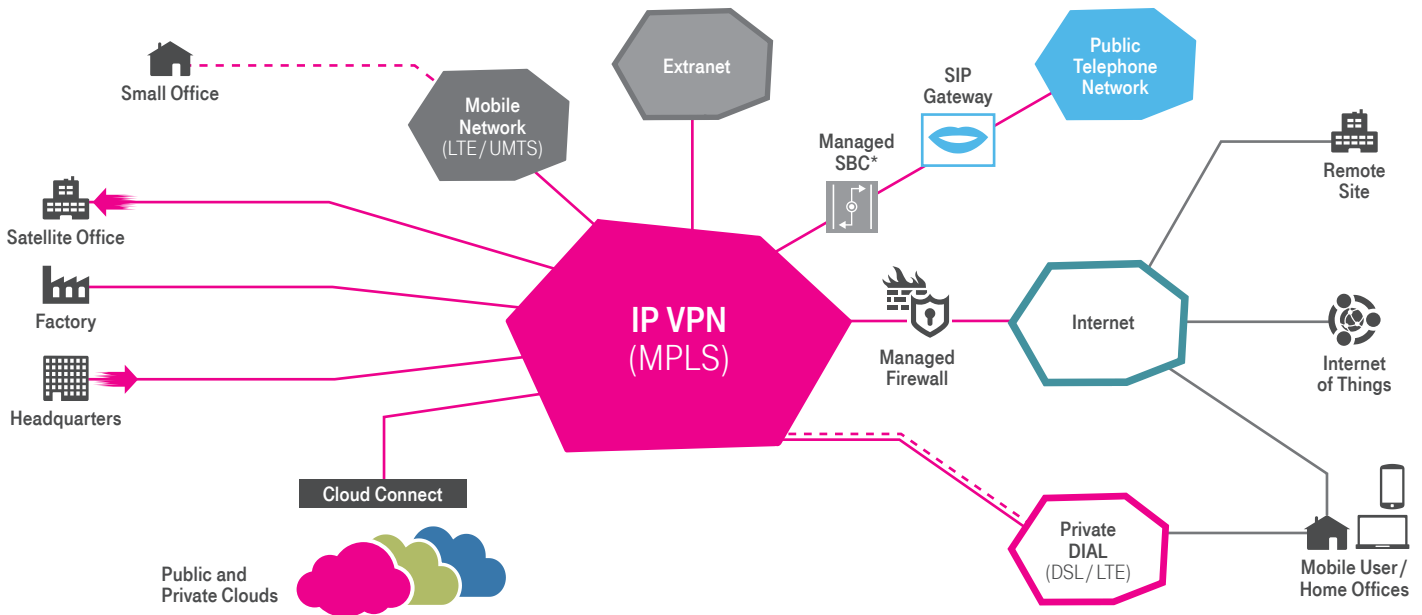
INTRASELECT

THE RIGHT SERVICE FOR ALL AND ANY REQUIREMENTS

CONNECTIVITY TAILORED TO YOUR BUSINESS

Businesses face an array of connectivity challenges. They need high bandwidth and robust security. They must support around-the-clock, around-the-world operations, the Internet of Things, hybrid clouds – and much more. This calls for innovative network services and a variety of carrier technologies. T-Systems provides just that – leveraging its modular offering to build secure, high-performance infrastructures with excellent transmission quality. The IntraSelect solution described below is a managed, MPLS-based VPN that delivers outstanding network reliability and cost-effectiveness.

IntraSelect connects geographically dispersed sites, satellite offices and mobile workers. It enables traffic prioritization for key applications, and provides secure access to centralized software and cloud services. T-Systems offers a choice of access options with scalable bandwidths via fixed (Fixed Connect) and mobile connections (Remote Connect). It also provides high-performance connections to public and private clouds (Cloud Connect). Further, modular IP VPN services streamline voice and data traffic, accelerate applications within WANs, and significantly increase transmission speed for VPN tunnels across the Internet.



← WAN Optimization *Session Border Controller

ENGINEERING MADE IN GERMANY

SECURITY, QUALITY AND RELIABILITY

Security was a key design criterion for IntraSelect from the very outset, giving enterprises total peace of mind. Customers benefit from robust, “made in Germany” contracts and security. Moreover, dedicated T-Systems contacts with in-depth expertise ensure IntraSelect’s reliability at all times.

technologies. The ICT service provider’s extensive experience and the deployment of tried-and-true standard solutions ensure rapid implementation.

MODULAR SERVICES AND AUTOMATED PRODUCTION

From design to operation, the offering is highly standardized and industrialized. At the same time, it allows significant scope for customization. Customers can choose services from a broad portfolio, in line with their real-world needs and situations. They also benefit from end-to-end solutions primarily based on T-Systems’ own skills and resources, and on proven

HYBRID NETWORKS AND CLOUD CONNECTIVITY

IntraSelect supports the design of hybrid networks (MPLS, Internet, LTE). This enables the creation of made-to-measure networks – tailored to specific sites, technical constraints and applications. Diverse cloud environments can be incorporated via the Cloud Connector. And customers can be confident of strict German data protection for connections between clouds and their networks.

INTRASELECT FIXED CONNECT

Fixed Connect access options provide high-performance connections between national and international sites and the MPLS platform – with the technology that best matches customer requirements, and flexible, scalable bandwidths:

- **Fixed Connect Ethernet:** Access based on Ethernet technology, up to 10 GBit/s
- **Fixed Connect Premium DSL:** High-quality DSL access with class-of-service option, up to 100 MBit/s*
- **Fixed Connect DSL:** Internet-based DSL access with IPsec encryption, up to 100 MBit/s*
- **Fixed Connect Mobile:** Access via cellphone network (UMTS / LTE), up to 20 MBit/s

*depending on local provider

FEATURES

Eight classes of service (CoS)

Applications are assigned defined classes of service, with traffic prioritized according to need (delay, jitter, packet loss). Up to three CoS classes can be allocated to mission-critical applications. Agreed minimum bandwidths ensure that network overloads do not impact other classes. Implementation of the voice signaling class ensures reliable, high-quality VoIP.

Multi-VPN

A multi-VPN enables the logical segregation of communications for multiple organizational units, applications, or customers within a multi-tenant data center.

Traffic offloading

In practice, bandwidth reserved for backup purposes is often unused and can be exploited as a permanent secondary path for non-critical applications. There is then more bandwidth available on the primary path for time-sensitive applications (e.g. VoIP and ERP). This can eliminate the need for network upgrades, drive down costs, and improve transmission performance.

Advanced reporting

Threshold reporting identifies times when predefined bandwidth thresholds are exceeded for each connection and for each VPN at the router. Forecast reporting predicts when the usable bandwidth for each connection will no longer be sufficient to meet requirements.

WAN acceleration

This service can accelerate the performance of connections for individual sites, data centers, cloud services and mobile users by up to 50-fold. WAN round-trip delay can be slashed by up to 98 percent, required bandwidth by up to 95 percent. WAN acceleration is available as a managed service, with no capital investment required by the customer.

Extranet solutions

An extranet enables efficient, secure exchange of sensitive data across organizational boundaries. Suppliers, distributors and partners can be integrated via industry-specific networks. Certified European Network Exchange (ENX) providers implement excellent standards of quality and security.

INTRASELECT CLOUD CONNECT

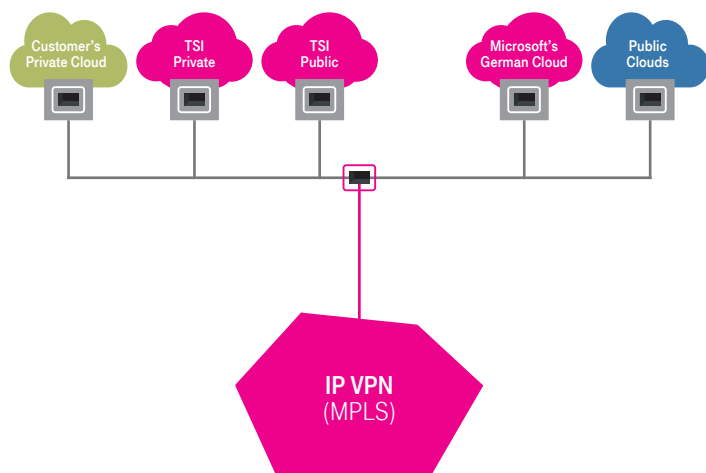
IntraSelect Cloud Connect enables the rapid implementation of high-performance connectivity for cloud platforms of various types. A secure, high-quality connection between the platform and the corporate network is vital – for private and public clouds operated by T-Systems, for customers' own private clouds, and for public clouds from other providers. As a modular cloud gateway, IntraSelect Cloud Connect supports secure cloud connectivity for enterprise VPNs – in accordance with the private or public cloud provider's specifications.

FEATURES

- Multiple regional connections for reduced latency
- Connectivity via MPLS
- Scalable bandwidths from 2 MBit/s up to 10 GBit/s (MPLS - Cloud Connect)

HOW YOU BENEFIT

- Assured performance and quality
- Security based on Deutsche Telekom infrastructure
- High cost efficiency and contractual flexibility
- Implementation of new cloud services within days, not months



INTRASELECT REMOTE CONNECT

IntraSelect Remote Connect allows the secure, reliable integration of small and satellite offices, teleworkers and mobile professionals into the corporate network. Access is based on a variety of technologies:

- **DSL** (up to 51.3 MBit/s)
- **UMTS/LTE** (up to 300 MBit/s)
- **ISDN** (until 2018)
- **Internet** with IPsec encryption; speeds depend on provider (bandwidth depends on Internet access option)

OFFICE CONNECT: CONNECTIVITY FOR SATELLITE AND HOME OFFICES

Office Connect Internet (OCI)

A connection to the MPLS platform is established over the Internet via IPsec encryption. The user must have an Internet connection.

Office Connect Private

This solution provides secure connections to the MPLS platform for teleworkers and satellite offices. Connections are routed via a private T-Systems Remote Connect platform. However, Office Connect Private is only available in Germany, and requires Deutsche Telekom ISDN or DSL connections.

MOBILE CONNECT: FOR MOBILE EMPLOYEES

Secure Client

An IPsec-encrypted Internet connection to the MPLS platform is established via a VPN software client. This is possible for all mobile devices, including smartphones and tablets. SSL encryption is optionally available for laptop/notebook computers.

Secure Internet Dial

An (IPsec or SSL) encrypted Internet connection from a laptop or notebook to the MPLS platform is established via a VPN software client and dialer software. Dial-in, with user authentication, is possible via xDSL, a hotspot or a dedicated access number (ISDN, until 2018).

Private Dial

A connection between a laptop or notebook and the MPLS platform is established via a software client over T-Systems' Remote Connect platform. This solution is only available in Germany and requires a Deutsche Telekom DSL/mobile or ISDN (until 2018) connection.

REFERENCES

BRENNTAG

A leading international distributor of industrial and specialty chemicals, Brenntag standardized and consolidated its entire ICT platform to support its Asian expansion plans. T Systems' end-to-end solution combines IP VPN and Application Operations for SAP® Solutions.



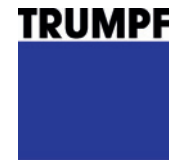
SCHLESWIG-HOLSTEIN

Germany's northernmost federal state replaced five independent communications networks with a single, consolidated voice and data network, implementing voice-over-IP for 700 sites. An MPLS voice and data network from T-Systems now serves more than 80 government agencies with a total of 320 offices.



TRUMPF

A world leader in machine tools and industrial lasers, Trumpf collaborated with T-Systems to create a future-proof, global, high-availability corporate network. This MPLS platform, with redundancy of all critical components, provides international site connectivity.



IVV

IVV is a full-service IT provider for all types of insurance companies within Germany. IVV upgraded a DSL-based data network serving 1,000 sites for leading insurer VGH. The new, managed IP VPN based on MPLS enables a large number of locations to migrate to SDSL technology. These sites benefit from fast data exchange with guaranteed transmission speeds.



REWE GROUP

REWE Group, a leading Germany-based retail and travel company, improved the performance and flexibility of its DSL2000-based network, used by 7,000 supermarkets. To prioritize critical, latency-sensitive application traffic and to integrate external partners, REWE now leverages cutting-edge router technology within flexible V-LANs.



PHONAK

Phonak is a Swiss manufacturer of advanced hearing aids and wireless acoustics solutions. T-Systems implemented, and now operates, the customer's high-performance MPLS-based WAN, featuring prioritized transmission for specific applications. Phonak benefits from extremely rapid data and voice communications worldwide, and from data transfer speeds of between 2 and 10 MBit/s, in line with actual requirements.



IP VPN FROM T-SYSTEMS



COST-EFFECTIVENESS AND FLEXIBILITY

- Unrivalled price/ performance ratio
- All-inclusive per-port pricing for a broad range of communications services
- Rapid implementation
- Services can be scaled up and down as needed

SECURITY AND COMPLIANCE

- Security by design
- Robust data protection to German standards
- ISO/IEC certification

PERFORMANCE AND NETWORK QUALITY

- Defined service classes and parameters
- Technical service levels
- Performance reporting and trend analysis

HYBRID TECHNOLOGY

- Hybrid network platform (MPLS, Layer-2 services, Internet, mobile)
- IPv4/IPv6 dual stack
- Connections to public and private clouds
- Voice/WAN integration

GUARANTEED QUALITY

- Up to 99.99 percent availability
- Guaranteed performance parameters: round-trip delay, jitter, packet loss
- Guaranteed time-to-implementation
- 24x7 services and a dedicated service manager
- End-to-end services for all components operated by T-Systems

GLOBAL AVAILABILITY

- Centralized applications made available worldwide
- Single point of contact
- Short local loop

MODULAR ADD-ON-SERVICES

- Unified communications
- Security
- IT services
- SIP gateways/VoIP
- Video
- Managed LAN/WAN services
- Managed layer-1/layer-2 services

FURTHER INFORMATION

<https://networks.t-systems.com>

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