



TIM and Huawei provide advanced SD-WAN services for Italian enterprises

By Yang Xinfeng, Marketing Director of Huawei Enterprise Gateway Domain

TIM is the leading information and communications service provider in Italy and one of the largest integrated telecom carriers in Europe. As an industry leader in ultra-broadband infrastructure for optical fiber, Digital Subscriber Line (DSL), and Long Term Evolution (LTE), as well as upcoming 5G networks, TIM places high importance on innovation and providing high-quality services for more than 50 million customers in Italy.

As we enter the cloud and digital

era, we're seeing the rapid growth of a large number of new enterprise services that are based on technologies such as 4K, Voice over Internet Protocol (VoIP), Artificial Intelligence (AI), and Internet of Things (IoT). These services are also becoming closely intertwined with cloud computing. The rapid development of these technologies is causing enterprises to rethink how they operate. It's also causing enterprises to place new demands on network services. "Today, more than ever, companies need networks that can adapt to different business

needs over time, in particular to enable cloud and VoIP services," says Luigi Zabatta, Head of Fixed Offers, TIM's Chief Business & Top Clients Office.

TIM's B2B Division is focusing on providing end-to-end professional services based on connection services and one-stop, converged Information and Communications Technology (ICT) service experience for enterprise customers, including quality Wide Area Networks (WANs) and Value-Added Services (VASs).

TIM is proactive in enterprise-oriented SD-WAN service transformation

Based on TIM's ultra-broadband infrastructure covering optical fiber, DSL, and LTE, as well as the upcoming 5G networks, Software-Defined WAN (SD-WAN) technology will enable TIM's solutions to balance and optimize applications across different virtual private lines and the networks of multiple sites or data centers, improving the reliability, flexibility, and O&M efficiency of enterprise WANs.

The complexity and large scale of carrier networks has led to a few challenges in the implementation of enterprise-oriented SD-WAN service transformation.

First, implementing interworking and the migration of existing customers and building future-proof networks that are cloud-ready. As a growing number of enterprise services are moving to the cloud, the requirements of enterprise customers are changing. In most cases, enterprises need to connect to multiple networks (including optical fiber, DSL, LTE, and upcoming 5G networks), as well as requiring multi-cloud connections and adaptability to a range of service requirements (such as branch communication and isolation and group security management and control). Implementing large-scale networking and building future-proof networks that are cloud-ready is the basis for TIM to consolidate its leadership and further improve its operating results.

Second, optimizing network performance at a reasonable cost and providing first-class

application experience for enterprises. TIM aims to strengthen network quality and improve its leading position when it comes to customer satisfaction. Generally, traditional enterprise network services cannot monitor the traffic direction of enterprise applications. During traffic bursts at peak hours, the traffic of key services may become congested, affecting an enterprise's business. In this case, enabling enterprises to select hybrid links at reasonable cost as well as balancing and optimizing applications (especially key applications) on different virtual private lines and networks, will be critical for TIM to win over enterprise customers.

Third, automated management tools are required to reduce network deployment and O&M costs and shorten the network service provisioning time to improve customer satisfaction.

TIM works with Huawei to provide advanced SD-WAN services for enterprises

Having worked with Huawei in the WAN edge sector, TIM chose Huawei's SD-WAN Solution to build cloud-ready network solutions for enterprise customers. TIM integrates the Huawei SD-WAN solution into its cloud infrastructure and provides Italian enterprises with innovative services based on SD-WAN technology, improving reliability, flexibility, and the O&M efficiency of enterprise networks.

The strong ever-evolving networking capability of Huawei's SD-WAN solution is the basis for SD-WAN construction.

In October 2018, Gartner released its inaugural Magic Quadrant for WAN

Edge Infrastructure. Huawei was positioned as a Challenger in this Magic Quadrant in recognition of its SD-WAN capabilities in terms of Customer Premises Equipment (CPEs) and large-scale networking, which are the foundation of TIM's SD-WAN construction.

The CPEs can seamlessly integrate with TIM's ultra-broadband infrastructure to provide hybrid link access and optimize link costs for different enterprises. In addition, Huawei's SD-WAN solution can customize different network topologies. Moreover, networks can be smoothly expanded to support large-scale multi-tenant network services and, more importantly, legacy CPEs can be smoothly migrated to SD-WAN networks through a simple software upgrade.

High-performance CPEs will become the key to improving network performance and optimizing application experience.

Huawei's next-generation SD-WAN CPEs contribute hugely to network performance improvements and application experience optimization, instead of simply forwarding traffic. The intelligent identification engine embedded in SDN-WAN CPEs can quickly identify a vast number of enterprise applications such as Software as a Service (SaaS), VoIP, and video applications. Enterprises

can fully leverage hybrid links to optimize application experience, thus offering high-quality interconnection experiences for business-critical applications.

In addition, high-performance CPEs are not only the key to improving network experience, but are also key for TIM to enable VAS such as Virtualized Network Functions (VNFs), virtual firewalls (vFWs), and virtual WAN Optimization Controllers (vWOCs).

"Thanks to the advanced technologies, these networks can be managed both jointly and by customers themselves through simple tools," says Zabatta. "The partnership with Huawei allows us to expand our value proposition for companies and to enrich our offerings through the adoption of a technological model that is increasingly and rapidly emerging in the ICT industry."

The entire process is automated to optimize network services.

With the technical support and expertise of TIM's National Assistance Center, the new service model of TIM will allow customers to manage their networks through a single control platform. Of the solutions provided by TIM, Huawei's SD-WAN technology will be the first to be integrated into this control platform, enabling end-to-end, full-process automation. TIM is able to fully optimize their network

service process and further improve enterprise customer satisfaction by leveraging a centralized and automated platform, plug-and-play network service provisioning capability, complete application and network policy configuration tools, and multi-dimensional visualized reports based on links, applications, users, sites, and devices.

Huawei's SD-WAN Solution assists TIM in providing on-demand branch-to-branch, branch-to-DC, and branch-to-cloud interconnection, and delivering an outstanding experience in enterprise interconnection. The solution also flexibly provides differentiated, customizable network services based on enterprises' application requirements, ensuring high-quality interconnection experience and the full autonomy of enterprises.

Huawei's SD-WAN solution has already successfully helped TIM win the first commercial SD-WAN project in Europe and expand the SD-WAN market in Italy. By 2020, SD-WAN, as an important innovative technology and based on local networks, will be used on Multiprotocol Label Switching (MPLS) networks, the Internet, and LTE networks to implement multi-cloud and multi-network on-demand interconnection, helping TIM increase the penetration rate of its ultra-broadband infrastructure and win over more enterprise customers. 