

Brazil Streamlines eGov Services with Huawei's Agile Campus Solution

Background

Huawei Agile Government Campus Network Solution help the Brazilian Government solve its networking issues such as bandwidth bottlenecks, O&M challenges, and high Total Cost of Ownership (TCO). The new network built to support the coexistence of routine services and reserved enough bandwidth for Frequent, critical issues. which help to build streamlining government services to better serve citizens.

Challenges

There are over 5,000 workers, 7,000 PCs, and 3,000 IP phones in Planalto Palace. The palace's network supports large-scale voice, video, and instant messaging in addition to routine services. However, its original network was not built to support the coexistence of these services, and the space reserved for bandwidth upgrades was insufficient. Frequent, critical issues included:

- Bandwidth bottlenecks
- High service latency
- Packet loss
- High disconnection rates
- Video freezing
- Intermittent voice transmission
- Broadcast storms

What's more, the original network was made up of devices from multiple vendors, and the non-intelligent network management system made network maintenance cumbersome. Fault location was difficult and network recovery time-consuming.

Solution

To help the Brazilian Government solve its networking issues, Huawei implemented its Agile Government Campus Network Solution for the Planalto Palace. This solution uses an extremely simple network architecture, which increases network speed, simplifies O&M, and

"Huawei quickly responded to our requirements and completed reconstruction of this large network in only three months. Huawei also helped us reach our goal of reducing annual administrative spending by 20 percent. We hope that this win-win partnership can be extended to other state government departments in Brazil."

— Brazil's Minister of Public Administration

Executive Summary

Industry

Government

Challenges

- Bandwidth bottlenecks, Video freezing, Broadcast storms
- High service latency, Packet loss, Intermittent voice transmission
- High disconnection rates

Solution

- Huawei Agile Campus Network Solution for a fast, virtualized network
- Desktop bandwidth increased from 100 Mbit/s to 1,000 Mbit/s, and now supports smooth upgrades from 10 GE to 40 GE/100 GE
- Huawei Super Virtual Fabric (SVF) technology implements the industry's simplest converged networking

Benefits

- Network speed increased tenfold
- Isolation of network areas, simple resource scheduling, and flexibility to scale network
- Virtual, unified management of network-wide devices improved efficiency of O&M and fault locating and processing

CASE STUDY

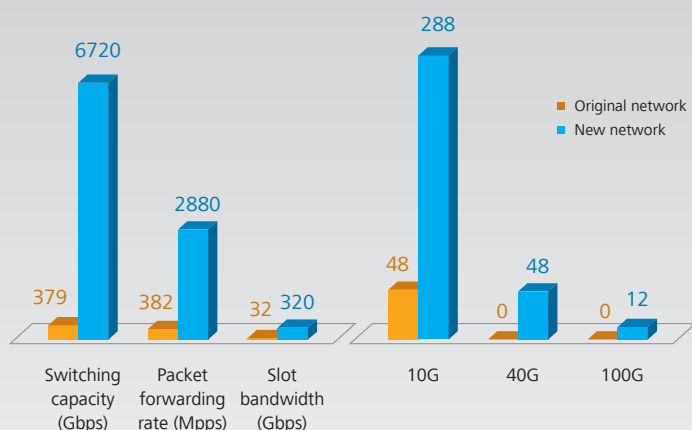


Figure 1 Planalto Palace office network performance before and after reconstruction

allows for continuous evolution. This allowed the Brazilian government to resolve their main networking problems such as bandwidth bottlenecks, O&M challenges, and high Total Cost of Ownership (TCO).

10-Fold Bandwidth Increase Guarantees Smooth Service Operations

In the Huawei Agile Government Campus Network Solution, core switches are clustered to implement full 10GE interconnection, which provides a 10 fold increase in bandwidth, and allows for smooth upgrades from 10GE to 40GE/100GE. Aggregation and access switches are stacked, and the desktop bandwidth is raised from 100 Mbps to 1,000 Mbps, ensuring smooth service.

No Broadcast Storms and Interruptions, SVF-Based Virtualization, Easy O&M

The combination of stacking and link aggregation breaks the original loop networking, and enables active-active links. The network is modularized to facilitate resource scheduling. In addition, the network achieves 100% network resource utilization and can be smoothly expanded without interrupting services.

Furthermore, the Huawei Agile Government Campus Network Solution features Huawei's exclusive Super Virtual Fabric (SVF) technology. SVF virtualizes the entire campus network into one switch, which simplifies configuration templates and services. IT O&M is simplified through centralized and visual management, flexible resource scheduling, and automatic configuration delivery.

Continuous, Long-Term Evolution Lowers TCO

Huawei Agile Campus Network Solution is the first campus network

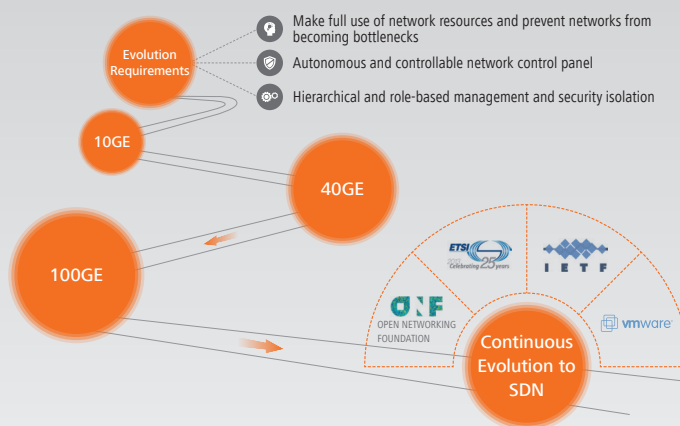


Figure 2 Network research and continuous network evolution

solution to feature Software-Defined Networking (SDN). This solution supports evolution from 10GE to 40GE or 100GE networks over the next five to ten years, and provides network-wide programmability based on services. It has helped the Planalto Palace reduce its TCO and achieve its target of reducing its administrative expenditure by 20%.

Benefits

The Planalto Palace network uses the industry's unique hardware clustering and stack link backup technologies, which greatly improves network reliability. Desktop access bandwidth has risen from 100 Mbps to 1,000 Mbps. Full 10GE interconnection is implemented on the aggregation and core layers, enabling high-quality voice and video services. The high bandwidth has prevented network disconnections and has drastically improved work efficiency and customer experience. Furthermore, visible and unified management of all network devices has improved network O&M and fault location efficiency.

Huawei's solution not only improved Brazil's Planalto Palace office network, but also set the stage for future transformation to a Software-Defined Network (SDN):

- Desktop access bandwidth increased from 100 Mbit/s to 1,000 Mbit/s
- Full 10 GE interconnections at the access layer ensured consistently clear transmission of audio and video services
- Network disconnections were eliminated and work efficiency and user experience improved
- Visible, unified management of all network devices on the live network increased the efficiency of network O&M
- Improved fault location made the transition from 10 GE to 40 GE/100 GE easy, and maximized return on investment

CASE STUDY



- Isolation of network areas, simple resource scheduling, and flexibility to scale network

About Huawei

Huawei Enterprise Business Group ("Huawei Enterprise") is one of the three business groups of Huawei, a leading global information and communications technology (ICT) solutions provider. Leveraging Huawei's strong R&D capabilities and comprehensive technical expertise, Huawei Enterprise provides a wide range of highly efficient

customer-centric ICT solutions and services to global vertical industry and enterprise customers across government and public sector, finance, transportation, electric power, energy, commercial businesses, and ISPs.

Huawei Enterprise's innovative and leading solutions cover network infrastructure, unified communications and collaboration (UC&C), cloud computing & data center, enterprise information security, and industry application solutions.

For more information, please visit: <http://e.huawei.com>

For more information about Huawei Agile Campus Network Solution and campus switches, please visit:
<http://e.huawei.com/en/solutions/industries/government/network/campus-network>

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