HUAWEI

Huawei's Agile eGovernment Solution Provides Efficiency and Better Services for a Dutch Government and its Citizens

Background

Haarlemmermeer, home to the Schiphol International Airport, is a municipality in North Holland previously known for its agriculture, and more recently, for aviation, machinery, and lifeboat manufacturing. Although this robust city has been undergoing rapid economic development, the warranty for their legacy network devices expired in 2015.

Challenges

The legacy network was no longer able to keep up with bandwidth requirements for the city government or provide a flexible communications system. Challenges for a new network included:

- Increasing bandwidth from 1 Gbit/s to 10 Gbit/s to accommodate a growing number of cloud applications and Voice over IP (VoIP) services
- Improving government surveillance, warning, and emergency handling capabilities to increase the quality of social administration and public services
- Building a highly efficient, reliable, secure, and scalable network

The municipal government's campus comprises one office building and four branch offices. As office sites are not fixed, many personnel frequent the Municipal Government Office to deal with the large number of interdepartmental administrative services. In addition, traditional IP-address-based or VLAN-based rights control policies overload the network and decentralize network management. As a result, limited numbers of network O&M must travel to different branches, making efficiency poor and O&M labor costs high. To solve this problem, the government requires the new network infrastructure to provide automated management and easy O&M, as well as being environment-friendly and energy-efficient.

Solution

After evaluating numerous vendors, Haarlemmermeer chose the Huawei Agile Campus Network Solution to meet their stability, capacity, security, and flexibility standards.

"In Haarlemmermeer, there is a comparatively low ratio of government officials to civilians, only about 1 to 160. Public managers should think about increasing efficiency of government work using information technology, improving office coordination, and providing better public service with eGovernment window services. Huawei helped us deploy services quickly, delivering mobility and eGovernment operations. As a result, an efficient and coordinated network was built, which is people-centric and service-oriented."

said Ed de Myttenaere
the IT director of the Haarlemmermeer municipal government

gemeente Haarlemmermeer

Executive Summary

Industry
Government

Challenges
- Increasing bandwidth from 1 Gbit/s to 10 Gbit/s to accommodate a growing number of cloud applications and Voice over IP (VoIP) services
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Solution
Huawei Agile Government Campus Network Solution
- Free mobility: centralized control architecture, unified user management and policy control through a controller
- Wired and wireless convergence: multiple wired and wireless devices are virtualized into a network element, centralized authentication and policy enforcement for wired and wireless users
- Validity check on visitors: validity authentication based on social platforms or QR code ensures access security

Benefits
- Convenient services: Policy configuration system is oriented to government officials and services.
- Secure authentication: Social platforms are used to identify citizens and visitors.
- Efficient O&M: A single device manages a government campus.

CASE STUDY

The solution comprises the following features:

- **Reliable architecture and service continuity** — Huawei's S12700 Agile Switches, using Cluster Switch Generation2 (CSS2), guarantee reliable networks and reduce interference and packet forwarding latency; support 1+N MPU backup; all components work in 1+1 or M+N redundancy mode and are hot-swappable; services remain uninterrupted even if hardware faults occur, ensuring reliability of entire system.
- **Free mobility and simple rights control** — Huawei's solution uses centralized authentication architecture that stores all authentication information on the campus network controller, enabling users consistent experiences by connecting to the network in any branch office; the controller implements fine-grained management over users' network access rights; therefore, guests can connect only to the Internet and not to the government's network; the controller identifies all user identities and centrally manages a variety of policies such as network access rights, service priorities and bandwidth.
- **Agile and efficient network O&M** — Solution leverages Super Virtual Fabric (SVF) technology to virtualize the entire network architecture composed of "core/aggregation switches + access switches + APs" into a single switch; therefore, devices, services, and users are centrally and simply managed; network O&M personnel configure and perform maintenance operations on the super virtual switch via Huawei's eSight NMS.
- **Green technology and energy efficiency** — Huawei deployed the S5700-LI series intelligent low-power consumption switches at the access layer, which minimizes power usage using multiple innovative technologies, such as Energy Efficient Ethernet (EEE) that reduces power consumption by 30 percent; multiple S5700-LI switches that support the iStack feature are virtualized into a virtual switch, which requires fewer uplink fibers and removes additional cabling; during migration, Huawei's solution allows customer to use energy-efficient devices and legacy cables.

Benefits

Huawei's agile network infrastructure provided the following benefits:

- **Convenient services** — Policy configuration system is oriented to government officials and services; Huawei's solution enables users to access the network anytime, anywhere; the controller centrally manages a variety of policies, such as network access rights, service

priority, and bandwidth to ensure consistent experiences anywhere.
- **Secure authentication** — Real-name authentication system, based on social platforms, ensures the validity of access users; according to online duration and traffic quota management, bandwidth resources are allocated efficiently; visitors' online behaviors are managed to block threats from malicious websites by identifying 500,000+ malicious URLs.
- **Efficient O&M** — One device manages an entire government campus; wired and wireless networks are converged, solving the problem of separate systems; SVF technology virtualizes all switches in a campus network into a switch, simplifying network management and deployment.

Opening Ceremony of
Huawei Agile Government Demonstration Campus in Western Europe

About Huawei Enterprise Business Group

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.

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