Federale Overheidsdienst Personeel & Organisatie/Service public fédéral Personnel & Organisation and FEDICT

Integrated data and speech network from Cisco sets the tone for modernisation

"Our data network was built with an eye to the future. Integrated communication is a part of that. As a pilot project, it is an example to other governement services of what is possible."

Jean-Dominique Veuve, *project leader at the Federale Overheidsdienst Personeel & Organisatie/ Service public fédéral Personnel & Organisation*

In April 2001 the Federale Overheidsdienst (FOD) Personeel & Organisatie / Service public fédéral (SPF) Personnel & Organisation and Federale Overheidsdienst Informatie- en Telecommunicatietechnologie / Service public fédéral Technologie de l'Information et de la Communication (FEDICT) moved to the Copernicus building in Rue de la Loi. The completely new building allowed them to begin with a clean slate and to go for a computer network that looked to the future. Between July and September 2001, Jean-Dominique Veuve, project leader at the FOD Personeel & Organisatie/SPF Personnel & Organisation, established the general outline for an installation for 300 IT users and 250 telephone sets. The decision was made to install a completely redundant infrastructure and also to allow telephony through the new computer network. To protect against hacking, the FOD/SPF opted for the most advanced technologies that are currently available on the market, such as establishing VPNs (Virtual Private Networks) between the different offices.

The installation in the Copernicus building was financed entirely by the FEDICT. Since September 2001, the government institution has been working on a common strategy for the Belgian government with regards to e-government. More and more public services are going on-line. Each federal government service remains responsible for its own e-government projects. Currently, FEDICT is working flat out on the basic technological components that are needed to realise these projects. The institution defines the norms, standards and the basic architecture and is initiating umbrella projects. It also guides government services through the implementation of the strategy. Moreover, FEDICT is

EXECUTIVE SUMMARY

Background
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Challenge
The Cabinet is working on modernising the federal administration and this includes paying close attention to communications and e-government. The installation in the Copernicus building is a pilot project that has to serve as an example to the other government services. Moreover, the aim in the long-term is to build a medium-sized data centre in the Copernicus building.

Solution
The decision was made to install a double infrastructure for both data and speech traffic for 300 computer users and 250 telephone sets. The installation included equipment from Cisco because Cisco's IP telephony system is the only one which really offers a complete integration of data and speech.

Results
The FOD Personeel & Organisatie/SPF Personnel & Organisation and the FEDICT now have a homogenous, converging and well-organised high-speed network. It is managed entirely internally, which means that the FOD/SPF saves considerably on the maintenance costs for telephony. Moreover, IP telephony offers enormous flexibility to staff members who regularly change posts.

taking care of the coordination and collaboration between federal, regional and local authorities, with an eye to interoperability and a homogeneous public virtual environment.

The FOD/SPF retained three potential partners for the project, based on references. The final decision went to Cisco and partner Telindus because Cisco's IP telephony system was the only one that really offered a complete integration of data and speech. Telindus and Cisco were assigned the installation because of their coherent, global vision of a converging network with growth potential for the future. Moreover, they already had the necessary technical expertise and experience in-house to bring such a relatively modern installation to a successful conclusion. Telindus took care of the logistical and technical migration and the integration with existing systems. This was preceded by a study that established the general design, security and migration. Training of personnel and maintenance were also included in the agreement.

"Only Telindus's proposal had in mind a truly complete integration of data, speech and video," according to Jean-Dominique Veuve. "Moreover, Telindus assigned a project manager who supervised the entire implementation and who was very good to work with. So one person had a complete overview of the entire project and its aims, which played a key role in its success. The installation also ran smoothly and according to schedule. Everything was ready when we moved and that was important. You see, it was the first installation of its kind for the federal government. So it had to serve as an example to the other government services. Moreover, we intend to build a medium-sized data centre in the Copernicus building, so growth potential and redundancy are indispensable." All the important components are duplicated, so that SPOFs (Single Points of Failure) are almost completely minimised. Moreover, there has been an investment in the methods of dealing with possible power cuts. This means important components have sufficient time to switch themselves off.

To make the telephone installation completely redundant, Jean-Dominque Veuve opted for IP telephony. With traditional telephone exchanges something like this is impossible, or rather, prohibitively expensive. With IP telephony the price remains acceptable. But there are other good reasons. Jean-Dominque Veuve: "IP telephony was an obvious choice. It is the new way to communicate, taking into account investments, maintenance costs and market trends. You need this method of telephony in order to have a complete integration of all communication tools. Another important point is that the management of the installation is now completely in the hands of the ICT people at the FOD/SPF. In the past, telephony was the responsibility of the Regie der Gebouwen/Régie des Bâtiments.

From now on the management of the telephone installation is run internally, which means a considerable saving on maintenance costs for the FOD/SPF. Moreover, IP telephony offers enormous flexibility. The staff move around regularly and now they can just take their sets and reconnect to the network without having to involve a technician. The overall management of the network is centralised on a CiscoWorks platform, so the informatics division of the FOD/SPF has a complete overview of the network. As a result, tracing faults and solving problems is speeded up considerably.

The network is founded on Cisco Catalyst 4000 gigabit Ethernet switches. Cisco Catalyst 3500 switches with an integrated power supply provide the connection to the telephone sets. Access to the Internet is through a 2 Mbps (megabit per second) leased line from Colt Telecom. Colt also has available two separate connections to the telephone network. In this way, the FOD/SPF is connected through three PRIs (Primary Rate Interfaces, a set of 30+1 ISDN lines).

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