



SAS Institute

Cisco IP telephony makes work easier

“OUR IT DEPARTMENT TOOK CARE OF THE IMPLEMENTATION TOGETHER WITH THE SYSTEM INTEGRATOR. SO OUR PEOPLE WERE USED TO IT FROM THE START. EVERYONE QUICKLY GOT TO KNOW THEIR TASKS AND RESPONSIBILITIES AND AFTERWARDS IT WAS EASY FOR THEM TO WORK INDEPENDENTLY.

Koen Trappeniers, IT Manager at SAS Institute

SAS Institute is involved in data warehousing, business intelligence and data analysis. The company offers its clients software and services that allow them to convert information into insight and actual know-how. In this way they can develop more cost-effective relations with their customers and suppliers, take better-founded decisions and grow. Worldwide SAS has more than 3.5 million users at around 40,000 company sites, universities and government agencies in 118 countries. SAS's clients include 90% of the Fortune 500 companies. SAS Belgium was established in 1989. In 2000 an office was also set up in Luxembourg. Currently, the company has about 100 workers in the BeLux.

Since its foundation, SAS has experienced strong growth in both Belgium and Luxembourg. The number of workers has risen correspondingly, resulting in problems for the telephony. In 2002 the traditional switchboard in the Belgian office was due for replacement. The equipment was at the limit of its capacity and it offered inadequate modern functions, such as voicemail, and in particular too little flexibility.

Sharing desks and telephones

SAS likes to provide its personnel with a pleasant working environment out of town. The Belgian offices are established

EXECUTIVE SUMMARY

Background

SAS is involved in data warehousing, business intelligence and data analysis. Worldwide, in 118 countries, SAS has more than 3.5 million users at around 40,000 company sites, universities and government agencies. The Belgian office has been active since 1989, the Luxembourg one since 2000. Currently, SAS has about 100 workers in Belgium and Luxembourg.

Challenge

SAS has experienced strong growth in both Belgium and Luxembourg. As a result, there were quite a few problems with the telephony. The traditional switchboard in the Belgian office was technologically outdated and had reached the limit of its capacity. Moreover, the system did not allow workers to share the available offices in a flexible way.

Solution

SAS, together with the system integrator INS, installed Cisco IP telephony. The infrastructure is made up of two redundant CallManagers – Cisco's IP switchboard – and well over 100 Cisco 7940 IP telephone sets. The Cisco Unity voicemail system and a number of integrated computer telephony applications run on two additional servers.

Results

SAS has a flexible, efficient and reliable telephony system that is also integrated with the existing door entry system. The management and support of the switchboard is now taken care of by internal personnel. The staff members can take their personal calls on any telephone set and they have access to a number of useful functions. So they can work at any free desk at the office. Soon the office in Luxembourg will also be using the new telephony system through the long-distance connection.

in de Robiano Castle in Tervuren, a beautiful building in green surroundings but one that does not really allow for expansion. SAS can wholly get round this limitation by allowing its workers to share desks, only in this case the traditional telephony system would not allow them to have their own number.

“If you also take into account the limited

options for managing the telephony in house, the high costs of external support, the lack of redundancy and the fact that the switchboard formed an island inside our IP-based telecommunications system, then you will appreciate that we had reasons enough to be on the lookout for a more modern telephony infrastructure,” according to Koen Trappeniers, IT Manager at SAS

SAS drew up a list of requirements for a new system and set it before a number of telephony suppliers. The company was considering systems based on traditional switchboards as well as those based on Voice-over-IP and IP telephony. Next SAS checked which proposals best met their requirements. After an initial selection two parties were left. SAS compared how well the proposals could be integrated with the existing infrastructure and the price and the project approach, as there was a clear deadline by which the installation had to be operational.



Internal telephony maintenance

Finally it was decided to accept the offer of the system integrator INS, based on Cisco IP telephony. Koen Trappeniers: "To start with, Cisco's technology best supported the functions that we were looking for and we know from experience that Cisco supplies dependable equipment. We have been working with their network equipment for years. It is the standard in our network backbone. Moreover, Cisco's IP telephony is a stable, mature technology. We had tested it before and noticed that it had evolved considerably in the meantime. What's more, INS had plenty of experience with the equipment and they proposed a realistic, sophisticated plan that also took training into account."

Gunter Devis, account manager at INS, adds: "With projects such as these, INS pays special attention to the planning. It's not merely a matter of installing a system and getting it up and running. The customer also has to learn to work with it. One big advantage of IP telephony is that the company can manage its telephony itself. So you have to make the future managers, as well as the end users, familiarise themselves with the technology in time. Often this is the making or breaking of such a project."

This factor was of great importance for SAS. The new switchboard was no longer allowed to be the 'mysterious black box' of the infrastructure. So one condition was that the company's IT department should take care of the implementation together with the system integrator. "So our people could familiarise themselves with the system from day one and go through a learning process. Such on-the-job training guarantees the fullest transfer of knowledge. Everyone quickly gets to know their tasks and responsibilities and afterwards it is easy for them to work independently," explains Koen Trappeniers.

Always accessible

The IP telephony infrastructure at de Robiano Castle consists of two redundant CallManagers – Cisco's IP switchboard – and this can serve well over 100 Cisco 7940 IP telephone sets. On a third and fourth server respectively run the Cisco Unity voicemail system and a number of applications for the telephones, such as a screensaver and a calendar. The existing network did not need to undergo any modifications and neither did extra ports for network connections have to be installed in the offices. The IP telephones have an internal switch, which allows the staff members' PCs to be connected to the network through the telephone sets.

"The redundancy of the Cisco CallManager guarantees that we can always telephone. After all, communication is essential. In an emergency, we can do without voicemail and the extra applications for a while but we should always be accessible. We also opted for fairly advanced telephone sets to offer all our staff the same facilities and to leave room for new functions," says Koen Trappeniers.

Simple expansion to Luxembourg

SAS is very pleased with the flexible expandability and the smooth management of Cisco's IP telephony. Koen Trappeniers: "We have a solid foundation on which to build further. Soon we are going to equip our office in Luxembourg with some 15 IP telephones. Our colleagues there can then call over our WAN via the switchboard in Tervuren. So we no longer have to provide local support for the telephony and internal calls are free. Our architecture is now also completely based on IP, which greatly simplifies the management. IP telephony is actually a very intuitive system. With a little extra training an IT worker could quickly master it. Moreover, unlike in traditional telephony, the functions are based on software rather than hardware. Such an installation evolves more flexibly than one where you have to change the hardware. Besides, it is an open system, so you're no longer tied to one single supplier."

All these factors naturally have their repercussions on the cost of the telephony. Koen Trappeniers: "It's too early to cite the figures but a number of savings are obvious. As far as direct costs go the invoices for maintenance and programming have been eliminated. Indirectly, our managers are losing less time and uninteresting and time-consuming tasks have gone. In addition, we now have a general maintenance contract with INS for IT and telephony, which allows us to negotiate advantageous terms."

Saving time and space

The new system offers end users greater efficiency and more mobility. The staff members can now work at any free desk at de Robiano Castle. They type their username and password into the telephone set and calls for their number come automatically to the right place. This is also very handy when setting up a conference call during a meeting. You no longer have to dig up and pass on the number of the telephone in the room involved. You just log on and the caller can use your personal number," says Koen Trappeniers.

People can call the number immediately from the personal address book in each telephone. Koen Trappeniers: "The feedback from our staff on this is positive. The new possibilities have clearly caught on. Also you mustn't underestimate the importance of voicemail. Think about a salesperson who misses a request for a quotation because the telephone carried on ringing in his absence. Being accessible is an important point. As soon as our Luxembourg branch is integrated, personnel at both offices will have the same facilities and everyone will be able to work at both locations."



Receptionist oversees everything

The system automatically logs out on the previous set when the user logs on to a different telephone. Moreover, SAS has the switchboard programmed so that all lines are automatically logged out each night. "So each morning we begin with a clean slate and that has several advantages. Someone who calls a staff member who is not in the office and therefore not logged on is directed straight to the voicemail. And our receptionist knows exactly who is present. The personnel use different entrances and don't necessarily have to pass reception to come inside. But the receptionist can see on her switchboard who had logged on," explains Koen Trappeniers.

SAS and INS have also succeeded in integrating the old door entry system in the castle with the new telephony infrastructure. If there is no one at reception and a late visitor arrives, then a signal rings out throughout the castle. Any staff present can listen to who is ringing at the door and open the door via the telephone.

Cheaper conference calls

Regarding future plans, SAS will use Cisco's Survivable Remote Site Telephony technology (SRST) for the expansion of the IP telephony to Luxembourg. SRST takes care of backups through the local Cisco routers when the long-distance network fails. During such interruptions conversations are handled locally and the IP telephone sets remain operational.

In addition, SAS is working on a conference bridge system for setting up secure conference calls itself with various parties, all within previously specified time windows and a predefined call number. As yet the company relies on an operator for this. But the new telephony system makes it possible to offer this service internally more quickly and more cheaply.

Finally, the future lies open to other practical applications through the telephone. After all, IP telephony can be easily integrated with computer applications. "Perhaps in the long term we could make more data available via the telephone. Salespeople who just come along to the office for an appointment can then quickly look up or check things without having to get their laptops out. The possibilities are endless," concludes Koen Trappeniers.



Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems Europe
11, Rue Camille Desmoulins
92782 Issy Les Moulineaux
Cedex 9
France
www.cisco.com
Tel: +33 1 58 04 60 00
Fax: +33 1 58 04 61 00

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems Australia, Pty., Ltd
Level 17, 99 Walker Street
North Sydney
NSW 2059 Australia
www.cisco.com
Tel: +61 2 8448 7100
Fax: +61 2 9957 4350

Cisco Systems has more than 190 offices in the following countries. Addresses, phone numbers, and fax numbers are listed on the [Cisco.com Website at www.cisco.com/go/offices](http://www.cisco.com/go/offices).

Argentina • Australia • Austria • Belgium • Brazil • Canada • Chile • China • Colombia • Costa Rica • Croatia • Czech Republic • Denmark • Dubai, UAE
Finland • France • Germany • Greece • Hong Kong • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia
Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Singapore
Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan • Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela