Government Improves Remote Employees' Productivity

Lolland Municipality accelerated WAN and cellular network performance using Wide Area Application Services (WAAS) Mobile.

EXECUTIVE SUMMARY

LOLLAND KOMMUNE (LOLLAND MUNICIPALITY)

- Government
- Denmark
- 47,000 Residents; 4,400 Employees

BUSINESS CHALLENGE

- Improve service effectiveness
- Increase productivity of remote and mobile government workers
- Avoid costs of bringing fiber to remote areas

NETWORK SOLUTION

- Deployed Cisco WAAS Mobile Server Software in central data center
- Installed Cisco WAAS Mobile software on remote office PCs and mobile users' laptops

BUSINESS RESULTS

- Accelerated download speeds from 1 Mbps to 66.9 Mbps
- Accelerated upload speeds from 64 Kbps to 10.5 Mbps
- Enabled remote employees to access all applications available to headquarters employees

Business Challenge

Denmark's fourth largest island, Lolland spans 480 square miles and is home to 47,000 residents. Its municipal government, Lolland Kommune, was formed in 2007 from the merger of seven smaller municipalities.

Lolland Kommune has 136 office locations and 4400 employees involved with healthcare, education, social services, economic development, and other government services. The workforce uses approximately 200 applications, most of them housed in the central data center in the town of Nakskov.

Employees in the main government offices enjoy excellent WAN performance over 1 Gigabit or 100 MB fiber connections. Employees in small remote offices, however, connected over asymmetric DSL (ADSL) lines with a maximum speed of 2 Mbps downstream and 700 K upstream, too slow to exchange large spreadsheets, access the enterprise resource planning (ERP) application, or view large graphics files, for instance. Bringing fiber to these remote locations would not be cost-effective. The government's 1000 field workers could not reliably access data center applications over the cellular network access because of congestion and weak signal strength.

The lack of a high-speed network connection for remote and mobile workers can impede government service effectiveness. Examples in Lolland Kommune include the following:

- When water leaks occurred, water plant employees could not access drawings of pipe locations over their ADSL lines. Without precise location information, field workers had to do more digging, increasing the time and cost of repairs.
- Accountants and financial analysts who worked from home lost productivity. Opening large spreadsheets and saving changes took much longer than it did for main office employees.
- Nurses who visited elderly citizens in their homes often could not access or update the patient's medical records from their laptops. Therefore, they printed out medical records before visits, and updated the records the next time they visited the office. In between, the patient's medical record was out of date, introducing the risk that a healthcare worker would have incomplete information for diagnosis and treatment.

"Denmark is one of the world leaders in digital government," says Lars Kristensen, network manager for Lolland Kommune. "We wanted to empower employees in remote locations to serve citizens more efficiently." Unable to justify the cost of bringing fiber to dozens of smaller locations, the IT department needed a way to optimize existing WAN bandwidth for remote offices and enable mobile workers to connect wirelessly even in areas with weak signal strength.

Solution

After Kristensen saw an article about Cisco® Wide Area Application Services (WAAS), he engaged Netteam A/S, a Cisco Certified Silver Partner, to set up a proof of concept. The partner's test shows that Cisco WAAS Mobile increased download speeds from 10 Mbps to 90 Mbps, and upload speeds from 1 Mbps to 10 Mbps.

The Lolland Kommune IT department also wanted to test Cisco WAAS Mobile in its own environment. Netteam deployed Cisco WAAS Mobile Server software in the central data center, and installed Cisco WAAS Mobile clients on several PCs in locations with ADSL connections and on laptops with wireless access cards. "After a month of testing in our own environment, we had no doubt that Cisco WAAS Mobile could significantly improve government service," Kristensen says. "Not only did Cisco WAAS Mobile accelerate file transfer, it enabled employees to access mapping and accounting applications that they previously could not use at all."

The Lolland Kommune IT department purchased a Cisco WAAS Mobile Concurrent User License and installed Cisco WAAS Mobile software on 150 PCs. The first workers to use the solution work in municipal water plants, the accounting department, the IT department, and from home.

Results

Accelerated WAN Performance

In Lolland Kommune's tests, Cisco WAAS Mobile increased ADSL download speeds from 1 MB to 66.9 Mbps, and upload speeds from 64 K to 10.5 Mbps. "We are experiencing LAN-like performance over the WAN for some applications, including JPEG image files and Microsoft Office suite," says Kristensen. "We can open any size spreadsheet, which we simply couldn't do before."

Cisco WAAS Mobile typically accelerates initial downloads by 200 to 500 percent and subsequent transfers by 2000 percent or more. Lolland Kommune is experiencing similar results: "After downloading an 11 MB PDF file from an external site in two minutes, I uploaded that same file to our data center in just two seconds," Kristensen says.

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Increased Government Service Levels

Employees in remote offices can access certain applications with Cisco WAAS Mobile that they simply could not use before. For example, during the proof of concept, water plant employees for the first time could use a centralized mapping application to see where pipes were buried, helping the government find and repair leaks faster. This capability improved government service while also saving money. Similarly, financial personnel have become more productive because they can access the centralized ERP application and share spreadsheets.

After the local mobile operator improves signal strength, which is expected in mid-2010, mobile workers, such as nurses who visit elderly residents in their homes, will connect to government databases over the mobile network. Giving nurses the ability to update patient medical records from the field will help ensure that records are up to date. It will reduce the need for roundtrips to the office to file reports, freeing up nurses to visit patients more often and spend more time with their patients. "Cisco WAAS is contributing to better government," says Kristensen.

Low IT Resource Requirements

To use Cisco WAAS Mobile, the Lolland Kommune IT department did not need to make any changes to applications, routers, switches, or network topology. The Cisco WAAS Mobile software on users' PCs directs traffic to the Cisco WAAS Mobile Server in the data center.

Deployment was simple: a system administrator configured the Cisco WAAS Mobile client and then remotely installed it on employees' PCs and laptops using Lolland Kommune's usual software deployment tool.

Next Steps

The IT department plans to add approximately 1000 users, a few departments at a time. Kristensen concludes, "Cisco WAAS Mobile gives the mobile government workforce access to the same network services as headquarters employees. And it saved taxpayer money, because we did not have to pay for fiber or even for higher ADSL speeds. I encourage other governments to try it in their own environment."

PRODUCT LIST

Data Center

- Cisco WAAS Mobile Server
- Cisco WAAS Mobile Concurrent User License

For More Information

To find out more about the Cisco WAAS and Cisco WAAS Mobile, visit: www.cisco.com/go/waas

To find out more about Cisco Data Center 3.0 solutions, visit: www.cisco.com/go/datacenter

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