

State Agency Leads the Way in Wireless Network Security

Unified Wireless Network helps Washington Department of Ecology increase employee productivity and efficiency.

EXECUTIVE SUMMARY

DEPARTMENT OF ECOLOGY

- Washington State Government
- Olympia, WA
- 1682 employees

CHALLENGE

- Create wireless network to meet employee demand for increased work convenience and efficiency
- Provide easy-to-use mobile solution with government-grade security
- Build a strong case for wireless security to convince decision-makers to approve wireless network adoption

SOLUTION

- Unified wireless network enables staff to meet and work from any Department of Ecology office or site and gives visiting guests Internet and VPN access
- Cisco Secure Services Client automatically authenticates laptop users and enables them to move smoothly between wired and wireless networks

RESULTS

- Provided continuous connectivity for bandwidth-intensive applications, reducing helpdesk calls
- Increased staff mobility, flexibility, and productivity which allowed Department's employees to use their laptops more fully

Challenge

The State of Washington's Department of Ecology is responsible for protecting, preserving, and enhancing the state's environment. Using a diverse set of tools and processes, the Department works to prevent and clean up pollution, supports sustainable communities and natural resources, and promotes the effective management of air, land, and water. "With twelve buildings spread across the State of Washington, maintaining effective communications between our field, regional, and headquarters employees is key to delivering on our mission," says Jim French, network manager at the Department of Ecology.

In 2005, the Department of Ecology's IT team sent a customer service survey to the agency's approximate 1600 employees. "We wanted to find out what services we could provide our employees to help them work more efficiently," says French. "The number-one response was wireless access." Despite the overwhelming demand for wireless, however, the IT team knew that convincing the decision-makers in the Department of Information Services (DIS), the agency that approves

technology for the State of Washington, would be challenging. "At the time, most government agencies in the State of Washington believed that wireless networks could not provide the security levels needed to protect highly-sensitive information. We needed to build a strong business case for wireless security," says French. With a significant number of employees to support, the Department of Ecology required an easy-to-use wireless solution that could also provide government-grade security.

Solution

A Cisco® partner for nearly a decade, the Department of Ecology knew where to turn for an enterprise-class wireless solution. Working with the Cisco team, the Department of Ecology presented the Cisco Unified Wireless Network design to the Department of Information Services. To provide maximum security, the Cisco representatives proposed using the Cisco Secure Services Client (CSSC) as a critical component in the network. "The Cisco team, together with the

solution they recommended, was instrumental in helping us pass the DIS security design review,” says French.

The Department of Ecology deployed 150 Cisco Aironet® access points and two Wireless Service Modules throughout six of its main buildings. After completing some initial CSSC installations and testing, the IT team finished deploying the services client on the Department’s laptops using the Cisco System Management Server (SMS). The CSSC enables users to boot up their laptops wirelessly and authenticate through the controller and the Cisco Secure Access Control Server. Once authenticated, users have complete access to their mapped drives, applications, and printers. “Because the CSSC authenticates against our active directory, we didn’t have to build a separate user database, which was a huge time savings for us,” says Gary Maciejewski, Network and Desktop Section manager.

Today, the IT team installs the CSSC client on every new laptop. “With the CSSC in place, employees don’t have to do anything unusual to log in securely,” says French. If a staff member boots up wirelessly, the CSSC automatically associates to the wireless network. The client enables employees to move smoothly from wired to wireless networks while keeping all of their applications running. “The Department’s network remains secure at all times, and employees can continue working without having to shut down when they move to and from their docking stations,” he says.

For the Department’s mobile workforce, the Cisco Unified Wireless Network facilitates working at multiple sites. Employees moving between headquarters and field offices can easily access the production network at any Department site. “We no longer have to set up a physical work space for visiting employees,” says Maciejewski. “They can sit and work anywhere in our offices.” Using the guest access capabilities of the network, the Department also provides secure Internet access for visiting contractors, legislators, vendors, and local government partners. Each guest is granted a unique Service Set Identifier (SSID) by the wireless network, enabling users to connect securely to their external VPNs via the Internet.

“...our success in implementing this wireless network helps everyone recognize the value of technology instead of seeing it as just another organizational expense.”

—Gary Maciejewski, Network and Desktop Section manager

Results

Although the Department initially deployed the wireless network for employee convenience, speed and stability have made it the solution of choice among staff. “We run more than 120 different bandwidth-intensive applications in the Department, including water- and air-sampling software and Geospatial Information Systems,” says French. The network provides continuous connectivity, even when roaming between access points. French recounts that he’s walked a quarter of a mile within the headquarters building while streaming bandwidth-intensive applications from his laptop, without experiencing any packet loss. “Because the Cisco Unified Wireless Network works so smoothly, we receive infrequent helpdesk calls, and employees often forget that there is a wired network they can use,” he says.

The Cisco Unified Wireless Network increased staff mobility, flexibility, and productivity at the Department of Ecology. "Providing employees with easy access to their information at all times makes meetings more efficient," says Maciejewski. In the past, employees had to vie for wired conference room capability for their meetings. "Wireless access makes it possible for employees to meet anywhere. In fact, our cafeteria has now become a perfect meeting place for larger groups." As a result of staff satisfaction with their ability to be mobile workers, the Department is getting more value out of the wireless devices that it already had in place. "Employees are making more and better use of existing equipment," says Maciejewski.

The controller-based architecture of the Cisco Unified Wireless Network simplifies network management across the Department of Ecology's organization. The controllers and Wireless Control System make centralized administration and standardization across the enterprise possible. "The ability to configure 150 access points at once saves our IT staff an enormous amount of time and money and helps ensure that we work efficiently," says French.

Deploying the Cisco Unified Wireless Network reinforced the Department of Ecology's position as a leading agency in the State of Washington. "Before I joined the Department of Ecology, I knew that it had successfully deployed a mobile network. The agency was clearly a leader when it came to the implementation of a secure wireless network," says Maciejewski. Both French and Maciejewski agree that the successful wireless network deployment strengthens the credibility of the agency's technology work force. "As a result of our success, we're known as an agency that understands how to deploy secure technology, produce efficiency, and use tax dollars wisely," says Maciejewski. "I also think that our success in implementing this wireless network helps everyone recognize the value of technology instead of seeing it as just another organizational expense."

PRODUCT LIST

Wireless

- Cisco Aironet 1130AG Series Access Points
- Cisco Catalyst® 6500 Series Wireless Service Modules
- Cisco Wireless Control System

Routing and Switching

- Cisco Catalyst 6500 Series Switches

Security and VPN

- Cisco Secure Services Client (SSC)
- Cisco Firewall Services Module
- Cisco Secure Access Control Server

Next Steps

The Department of Ecology is planning to deploy the Cisco Unified Wireless Network throughout its remaining buildings in the future. "The wireless network is just one example of the Department of Ecology's commitment to continue using new technologies that increase mobility, are more green, and reduce costs," says French. The technology team is currently testing additional mobile services over the wireless network including voice and video. "We chose Cisco so we could support data, video, voice, and unified messaging applications. With

Cisco, we're ready to meet the requirements of our evolving business environment well into the future," says French.

For More Information

To find out more about the Cisco Unified Wireless Network and 802.11n technology, visit <http://www.cisco.com/go/nextgen-wireless>.

To find out more about Department of Ecology, visit <http://www.ecy.wa.gov>.



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