Go Green with Adaptive Wireless LAN Power Management

Challenge

Cost-effective IT solutions that embrace environmental responsibility are in demand as organizations start to reduce their carbon footprint. Solutions that are quick to implement, require little or no capital investment, are environmentally beneficial, and deliver an immediate and quantifiable financial return are highly valued. Organizations are looking for solutions that deliver measurable savings for the wireless network and support their Green IT initiatives.

Solution

Intelligent control measures can help in creating a culture of sustainable business. These measures and tools improve your operational efficiencies and reduce the energy consumption of your wireless network. By implementing these measures, your organization can gain momentum for its Green IT initiatives.

For the wireless network, Cisco offers adaptive power management capabilities that are built into the Cisco® Unified Wireless Network through its management platform Cisco Wireless Control System (WCS) running software release 5.1 and later. Cisco WCS adaptive power management allows you to shrink your carbon footprint immediately through measurable reductions in energy usage and operational expenses.

Cisco WCS Adaptive Power Management

Cisco WCS adaptive power management improves the power management of Cisco Aironet® lightweight access points and supports the Cisco Green IT initiative. This feature turns access point radios on or off periodically at scheduled intervals while leaving the access point powered, reducing the time required for network reconvergence (Figures 1 and 2).

Figure 1. Cisco WCS Adaptive Power Management Feature – Scheduling

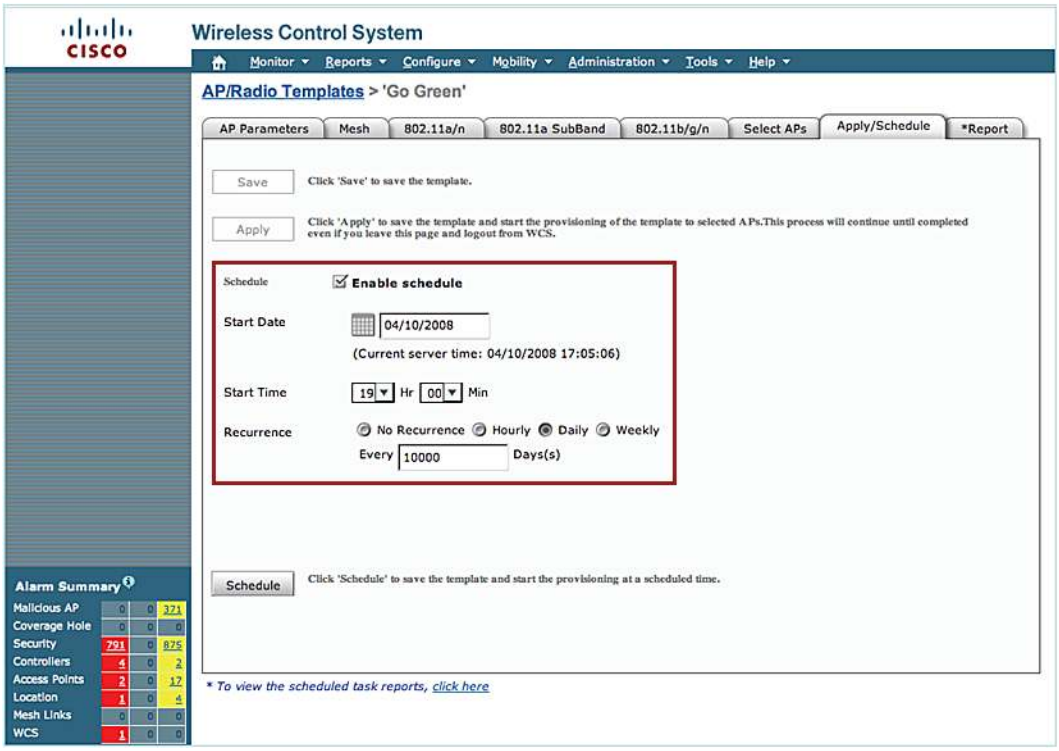
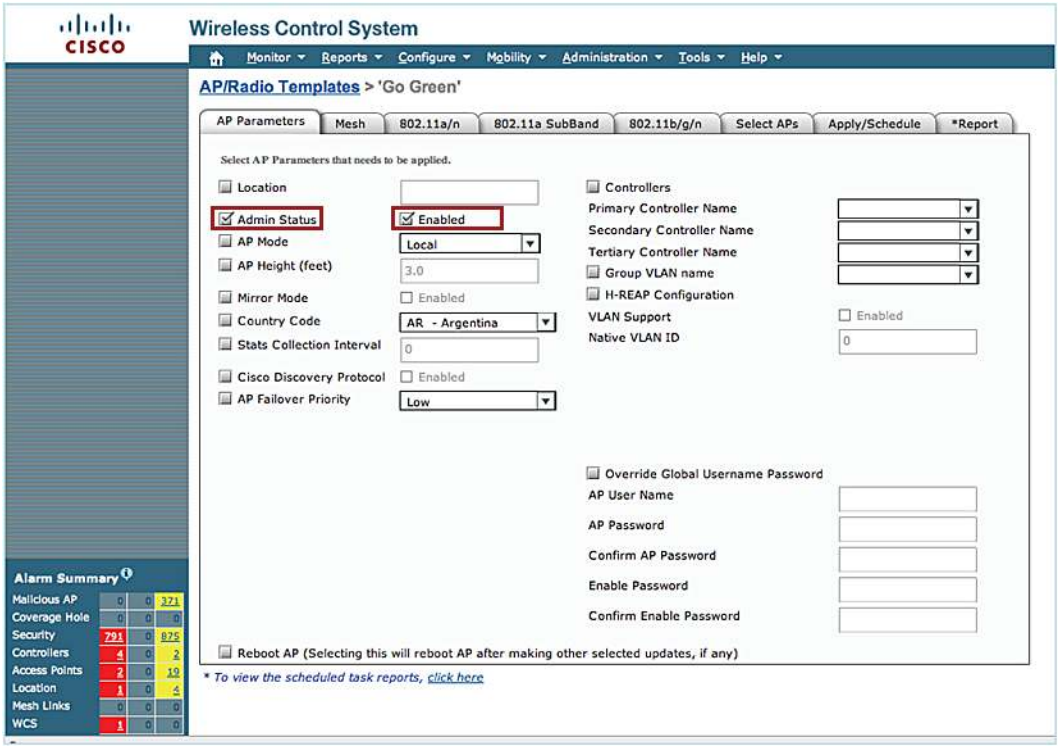


Figure 2. Cisco WCS Adaptive Power Management Feature – Access Point Parameters



Realize Measurable Cost Savings

By using Cisco WCS adaptive power management to turn the access point radios on or off at scheduled intervals (hour, day, and week) you can reduce your power requirements, carbon footprint, and operating expenses. The power savings gained will vary based on the Cisco Aironet access point model deployed (Table 1).

Table 1. Measurable Cost Savings with Cisco WCS Adaptive Power Management

	Small Campus	Large Campus
Number of access points	400	5000
Estimated total watts saved every hour when both radios are turned off*	2800 W	35,000 W
Estimated cost savings per year when radios are turned off for 7 hours every day**	$572	$7,154

* 7 watts saved every hour, per access point (1250 Series) when both radios are turned off using Cisco WCS adaptive power management. The saved wattage includes power savings from the switch and power injectors that power the access point.

** $0.08 saved per kilowatt-hour for a 365 day year

Benefits

Benefits of using the Cisco WCS adaptive power management feature include:

- Reduced operating expense
- Reduced power requirements
- Reduced carbon footprint
- Simplified management of WLAN security through the ability to restrict WLAN usage by day, time, or location

Summary

Organizations can realize measurable cost savings and reduce their carbon footprint by using the Cisco WCS adaptive power management feature to turn Cisco Aironet lightweight access point radios on or off at scheduled intervals. Using this feature can help organizations create a culture of sustainable business and gain momentum for their Green IT initiatives.

Solution Components

- Cisco Unified Wireless Network
- Cisco Aironet Access Points
- Cisco Wireless LAN Controllers
- Cisco Wireless Control System (WCS)

To learn more about the Cisco Wireless Control System, please visit http://www.cisco.com/en/US/products/ps6305/index.html.

To learn more about the Cisco Unified Wireless Network, please visit http://www.cisco.com/go/unifiedwireless.

Americas Headquarters
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Asia Pacific Headquarters
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Singapore

Europe Headquarters
Cisco Systems International BV
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Printed in USA C02-519055-00 01/09