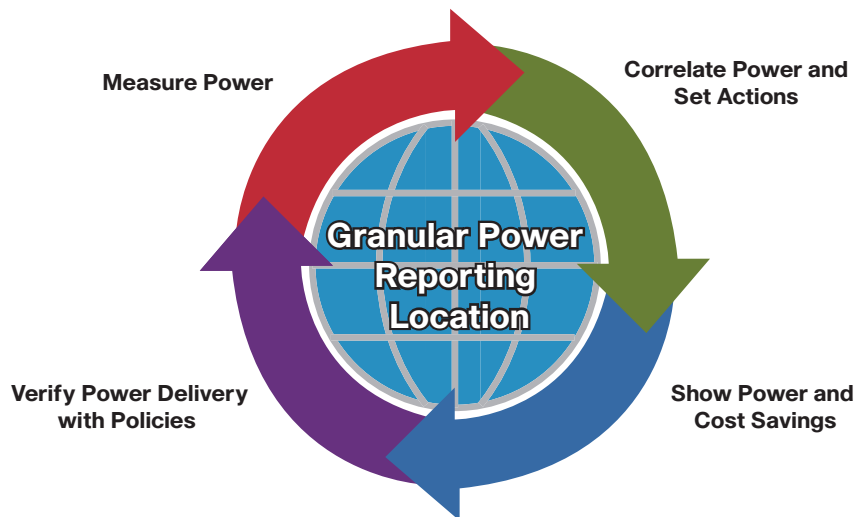


In response to energy costs, environmental concerns, and government directives, there is an increased need for sustainable and “green” business IT operations. More than 70 percent of electricity consumed in the United States is used in office buildings; within the office, lighting and office equipment account for almost 46 percent of consumption. Furthermore, the DOE estimates suggest that PCs left on are in use only 9 to 15 percent of the time.

Understanding and controlling the energy usage are now the focus of businesses worldwide. Cisco® EnergyWise is an innovative architecture, added to existing Cisco Catalyst® switching portfolio, promoting companywide sustainability by reducing energy consumption across an entire corporate infrastructure and affecting more than 50 percent of global greenhouse gas emissions created by worldwide building infrastructure: a much greater effect than the 2 percent generated by the IT industry. Cisco EnergyWise enables companies to measure the power consumption of network infrastructure and network-attached devices and manage power consumption with specific policies, reducing power consumption to realize increased cost savings, potentially affecting any powered device.

Figure 1 EnergyWise Intelligent Network Framework



What Problems Need to Be Solved?

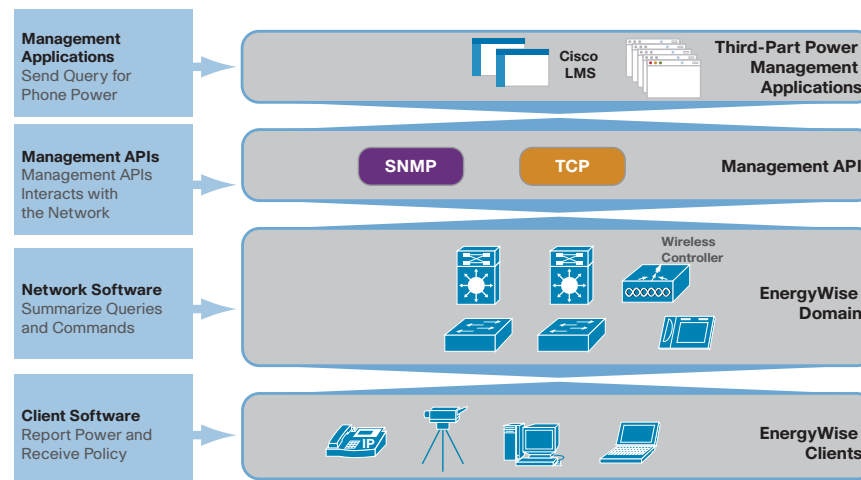
Measure organizational power consumption and greenhouse gas emissions

- Manage disparate sets of systems to manage the power in an enterprise building and devices with a common view and set of policies such as Cisco CallManager, wireless control, building control, lighting control, and PC control
- Reduce resource usage while maintaining business productivity
- Respond to green regulatory requirements
- Reduce the environmental effects of business operations
- Meet green corporate and social responsibilities

Cisco EnergyWise

Cisco EnergyWise encompasses a highly intelligent network-based approach to communicate messages that measure and control energy between network devices and endpoints. The network discovers Cisco EnergyWise manageable devices, monitors their power consumption, and takes action based on business rules to reduce power consumption. EnergyWise uses a unique domain-naming system to query and summarize information from large sets of devices, making it simpler than traditional network management capabilities. Cisco EnergyWise’s management interfaces allow facilities and network management applications to communicate with endpoints and each other using the network as a unifying fabric. The management interface uses standard SNMP or SSL to integrate Cisco and third-party management systems.

Figure 2 EnergyWise Optimized Power Delivery and Verification





What Are the Benefits of Cisco EnergyWise?

- The network discovers EnergyWise manageable devices, monitors the power consumed, and takes action to reduce power consumption while maintaining business productivity.
- EnergyWise can promote companywide sustainability by reducing energy consumption across an entire corporate infrastructure and affecting more than 50 percent of global greenhouse gas emissions created by worldwide building infrastructure, a much greater effect than the 2 percent generated by the IT industry.
- Power levels and priority levels provide fine-grained control of how network infrastructure and endpoints react to network-based control signals. High-priority devices do not shed load, while lower priority devices can shut down or reduce power.
- Network security is maintained by using authentication between management systems and the network, between clients, and between network devices.
- Device location enables customers to understand power by device type, device label, and device location. For example, a management station can ask the Cisco EnergyWise network to summarize the power of desktop IP phones within a single building. EnergyWise understands which devices are IP phones, where the IP phones reside, and which ones are designated with the desktop label.
- Network intelligence acts as a proxy, allowing easy communication with diverse endpoints and enhanced scalability.

Why Cisco?

Cisco EnergyWise converges disparate networks, services, and network-attached devices into a common view and set of policies for measuring and optimizing organizational power consumption. Furthermore, Cisco EnergyWise is designed to integrate future devices, network applications, and management tools to accommodate evolving organizational requirements.

Sources

Electricity use in offices:

http://www.eere.energy.gov/states/alternatives/office_equipment.cfm

Site reference June 27, 2008

http://www.eere.energy.gov/states/alternatives/lighting_daylighting.cfm

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