

Cisco and IBM Energy Management Integration

Q. What are Cisco and IBM announcing today?

- A.** IBM and Cisco are announcing the integration of IBM Tivoli software with Cisco® EnergyWise, an innovative Cisco Catalyst® switching technology. This announcement reinforces IBM's and Cisco's commitment to deliver integrated energy management solutions that incorporate industry-leading equipment and solutions, so organizations are able to more effectively manage energy consumption and costs across their entire infrastructure.

Combined, IBM and Cisco solutions provide a holistic approach that allows customers to integrate and instrument their infrastructure and gather energy information from a wide range of IT and non-IT devices. IBM Service Management solutions help organizations use the information collected by IBM Tivoli, Cisco EnergyWise, and other partners to measure, report, and reduce energy usage within their data center and business infrastructure, including facilities, property, and business assets.

In addition, Cisco has agreed to participate in the IBM Green Sigma Coalition. For more information about the Green Sigma Coalition, please go to <http://www.ibm.com/gbs/sustainability>.

Q. What is Cisco EnergyWise?

- A.** Cisco EnergyWise is a new Cisco energy management tool architecture that gives customers the ability to measure, monitor, and manage the power usage of their IT devices, operations, and facilities to realize significant cost savings and reduce their effects on the environment. Cisco EnergyWise first focuses on reducing power utilization on all devices connected to the network, ranging from Power over Ethernet (PoE) devices such as IP phones and wireless access points. It will ultimately allow integration with IP-enabled building and lighting controllers for a comprehensive view of power usage across operations. It uses an intelligent, network-based approach, allowing IT and building facilities operations to understand, optimize, and control power across an entire corporate infrastructure, potentially affecting any powered device.

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.

The tangible benefits associated with Cisco EnergyWise include:

- Cisco EnergyWise can promote companywide cost savings and sustainability by reducing energy consumption across an entire corporate infrastructure and affecting more than 50 percent of global greenhouse gas (GhG) emissions created by worldwide building infrastructure industry.
- The network discovers Cisco EnergyWise manageable devices, monitors the power consumed, and takes action to reduce power consumption while maintaining business productivity.
- Power levels and priority levels provide fine-grained control of how network infrastructure and endpoints react to network-based control signals. With Cisco EnergyWise, 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. Cisco 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.

Q. What is IBM Tivoli Energy Management?

A. IBM Tivoli Monitoring for Energy Management is a software solution that monitors and helps manage energy usage of IT and facility resources for efficient infrastructure operations. It will help optimize your energy consumption for higher efficiency of resources, lower operating cost, and reduced carbon emissions by allowing you to:

- Gain insight into energy and thermal information for IT equipment, data center infrastructure, and facilities equipment and enable the optimization of the monitored environment from a centralized point of control
- Store real-time, historic, and trending energy and thermal metrics in a common repository to aid in decision making and for use by other IBM service management solutions
- Use integration with [Tivoli Business Service Manager](#) to understand the business service effects of energy optimization decisions
- Pull energy usage information into [Tivoli Usage and Accounting Manager](#) to enable energy-related consumption and chargeback capabilities
- Use enhanced reporting capabilities to estimate the potential power and cost savings of proposed energy optimization recommendations
- Use enhanced workspaces, views, situations, and reports for third-party power meters

Q. What is the target market for this integrated energy management solution?

A. In response to energy costs, environmental concerns, and government directives, there is an increased need for sustainable and "green" business IT operations. Methods to measure power consumption and control energy output are now the focus of businesses worldwide, with customers looking for a method to reduce energy costs and implement increased efficient operation. Energy management is critical. As supplies and costs continue to skyrocket, achieving a greener network and greener buildings is expected to become even more imperative for customers of all sizes and shapes.

Q. What are the devices under management for this solution?

A. Cisco EnergyWise can support any PoE device in its initial phase. However, because most existing devices will not recognize EnergyWise signaling, the support will be limited to simple on/off decisions. As more devices—for example, both Cisco and third-party IP phones and access points, PCs and laptops, and other peripheral devices, as well as building control systems—become Cisco EnergyWise enabled, more sophisticated sleep modes will be possible.

Q. What is required to run Cisco EnergyWise?

A. The initial hardware platforms that support Cisco EnergyWise include the Cisco Catalyst 2960, 3560, 3560E, 3750, and 3750E Series Switches. For fixed series switches, customers must upgrade to Cisco IOS® Software Release 12.2(50)SE with either the IP Base or IP Services feature set. This software has been available since February 2009.

For the Cisco Catalyst 4500 Series Switch, customers must upgrade to Cisco IOS Software Release 12.2(52)SG, available in mid-2009.

Cisco EnergyWise is planned for the Cisco Catalyst 6500 Series Switches in the first half of calendar year 2010 in Cisco IOS Software Release 12.2(33)SXJ.

Additional support for other Cisco Power over Ethernet products are in the planning stages.

Q. What is required to run IBM Tivoli Monitoring for Energy Management?

- Hardware requirements:
 - Processor: Minimum 1 GHz for RISC architectures and 2 GHz for Intel architectures
 - Disk: 200 MB per Green Datacenter Agent
 - Memory: large environment: Est. 100 MB per Green Datacenter Agent
- Software requirements:
 - ITM software requirements:
 - ITM (IBM Tivoli Monitoring) Version 6.2 Fix Pack 1 or later fix packs of ITM v6.2
- AEM (IBM Active Energy Manager) software requirements:
 - IBM Director 5.20.2 or later fix packs of 5.20.2
 - Director HMC Extension (support System i, p servers)
 - AEM Version 3.1.1
- Supported operating systems for AEM agent:
 - Windows Server 2003 EE with Service Pack 2 for x86 32-bit
 - Windows Server 2003 EE R2 with Service Pack 2 for x86 32-bit
 - Windows Server 2003 EE with Service Pack 2 for x86 64-bit
 - Windows Server 2003 EE R2 with Service Pack 2 for x86 64-bit
 - Red Hat Enterprise Linux 4.0 for x86 64-bit
 - Red Hat Enterprise Linux 4.0 for x86 32-bit
 - Red Hat Enterprise Linux 4.0 for POWER
 - Red Hat Enterprise Linux 4.0 for System z
 - Red Hat Enterprise Linux 5.0 for x86-64-bit
 - Red Hat Enterprise Linux 5.0 for x86-32-bit
 - Red Hat Enterprise Linux 5.0 for System z
 - Red Hat Enterprise Linux 5.0 and V5.1 for POWER
 - SUSE Linux Enterprise Server 9 for x86 64-bit
 - SUSE Linux Enterprise Server 9 for x86 32-bit
 - SUSE Linux Enterprise Server 9 for POWER
 - SUSE Linux Enterprise Server 9 for System z
 - SUSE Linux Enterprise Server 10 for x86 64-bit
 - SUSE Linux Enterprise Server 10 for x86 32-bit
 - SUSE Linux Enterprise Server 10 for POWER
 - SUSE Linux Enterprise Server 10 for System z
- Supported operating systems for Simple Network Management Protocol (SNMP) agents:
 - Windows Server 2003 SE with SP2, for x86-32 bit
 - Windows Server 2003 SE R2 with SP2, for x86-32 bit
 - Windows Server 2003 SE with SP2, for x86-64 bit
 - Windows Server 2003 SE R2 with SP2, for x86-64 bit
 - Windows Server 2003 EE with SP2, for x86-32 bit
 - Windows Server 2003 EE R2 with SP2, for x86-32 bit

- Windows Server 2003 EE with SP2, for x86-64 bit
- Windows Server 2003 EE R2 with SP2, for x86-64 bit
- AIX V5.3 (32 bit and 64 bit), for POWER
- Solaris V9 (32 bit and 64 bit), for SPARC
- Solaris V10 ((32 bit and 64 bit), for SPARC
- HP-UX 11i V2 (B.11.23) (64 bit), for PA-RISC
- Red Hat Enterprise Linux, V4.0, for x86-64 bit
- Red Hat Enterprise Linux, V4.0, for x86-32 bit
- Red Hat Enterprise Linux, V4.0, for POWER
- Red Hat Enterprise Linux, V4.0, for System z
- Red Hat Enterprise Linux, V5.0, for x86-64 bit
- Red Hat Enterprise Linux, V5.0, for x86-32 bit
- Red Hat Enterprise Linux, V5.0, for Power
- Red Hat Enterprise Linux, V5.0, for System z
- SUSE Linux Enterprise Server 9 for x86-32 bit
- SUSE Linux Enterprise Server 9 for x86-64 bit
- SUSE Linux Enterprise Server 9 for POWER
- SUSE Linux Enterprise Server 9 for System z
- SUSE Linux Enterprise Server 10 for x86-64 bit
- SUSE Linux Enterprise Server 10 for x86-32 bit
- SUSE Linux Enterprise Server 10 for POWER
- SUSE Linux Enterprise Server 10 for System z
- SUSE Linux Enterprise Desktop 9 and 10 for x86-32 bit

Q. What is required to run the Cisco and IBM integrated energy management solution?

A. In addition to the hardware and software prerequisites mentioned above, installation of the IBM Tivoli Monitoring for Energy Management download package from OPAL will be required. There are no additional requirements beyond deploying the right version of Cisco IOS Software on the Cisco Catalyst switches.

Q. What is the cost associated with acquiring and deploying this integrated energy management solution?

A. This capability is being provided as a no-fee upgrade to IBM and Cisco customers with current maintenance agreements.

Q. When will be this solution available?

A. The planned availability date for the updates to IBM Tivoli Monitoring to support this integration is June 2009. Cisco EnergyWise is currently shipping. Additional platform software support for Cisco EnergyWise is detailed above.

Q. How is this integrated energy management solution acquired by customers?

A. The updates to IBM Tivoli Monitoring for Energy Management to support this integration will be available on the IBM OPAL site.

Cisco EnergyWise is available as a free software upgrade for Cisco customers with a maintenance contract. Updates are available on the cisco.com website.

Q. Who will be the integrator for the solution? What is the plan for technical support?

A. Contact your local IBM or Cisco representative for customized integration solutions.

The initial IBM Tivoli Monitoring for Energy Management download package on OPAL is being provided as is, with no implied technical support. The plan is to provide technical support for this functionality in the next release of IBM Tivoli Monitoring for Energy Management.

Q. What is the roadmap for this integration?

A. IBM and Cisco will continue to expand their respective solutions that help customers collect energy information across a range of infrastructure devices. The ability to integrate and aggregate the energy information collected today and in the future into a unified energy management platform from IBM Tivoli is a very compelling proposition for organizations seeking visibility and control of their energy consumption across their entire infrastructure. The two companies intend to work together to build upon the initial integration to deliver advanced energy management solutions and capabilities.

Q. What does this mean for the relationship of Cisco and IBM in the future? Is this a sign of future collaboration in this space?

A. Cisco and IBM have a long history of collaborating to create enhanced, valuable solutions for our customers. The two companies intend to continue to work together to build upon this initial “energy management” integration and to deliver advanced energy management solutions and capabilities. In addition, Cisco has agreed to participate in the IBM Green Sigma Coalition. For more information about the Green Sigma Coalition, please go to <http://www.ibm.com/gbs/sustainability>.

Q. Who should I contact if I have additional questions?

A. Please contact your local Cisco or IBM representative for any additional questions.



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