

Cisco Network Building Mediator

The Cisco Network Building Mediator ("Mediator") is the industry's first solution that extends the network as a platform to transform the way buildings are built, operated, and experienced. The Mediator:

- Enables energy reduction across global operations.
- Takes advantage of Cisco's expertise in collaboration, convergence, and security to foster sustainable energy use.
- Provides flexible integration of new technologies that deliver energy efficiency, clean energy, and environmental stewardship.

Mediator in the Network

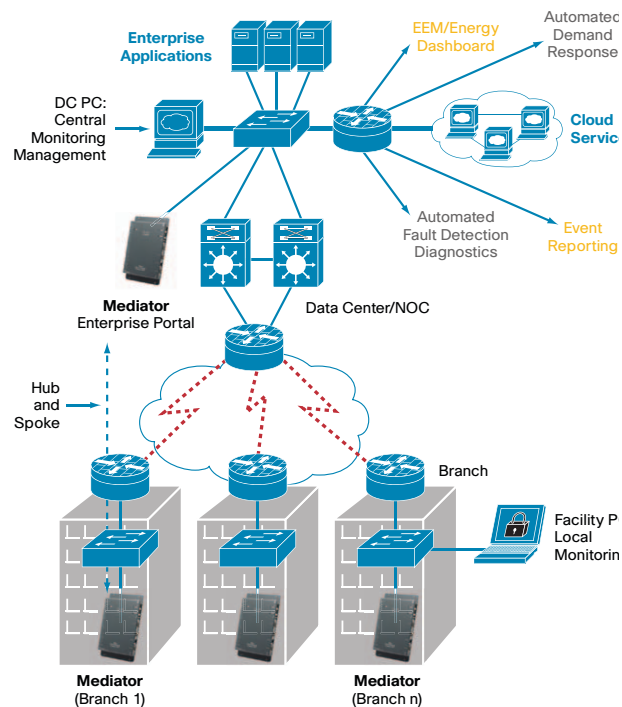


Figure 1. Mediator in the Network

Convergence with Cisco Mediator

The Mediator collects data from the building, IT, energy supply, and energy demand systems, which use different protocols. The Mediator then normalizes the data into a common data representation. This enables the Mediator to perform any-to-any protocol translation and to provide information to the end user in a uniform presentation. This network-based framework creates a common, standards-based, open platform that allows enterprise applications, cloud services, and building/IT systems to communicate. The Mediator is protocol-agnostic and extends the network to serve as an effective foundation for sustainability management.

The Mediator provides the following customer benefits:

- Reduced total cost of ownership (TCO)
- Simplified management of energy and facilities
- Flexible integration of building, IT, and clean technology systems
- Enhanced uptime and resiliency with networking technology
- Secure, high-quality delivery of concurrent building and IT services
- Future proofed investment with third-party applications and cloud services

The Mediator provides a network-based framework that interconnects four key systems: building, IT, energy supply, and energy demand. The integration of these disparate systems onto an IP network leads to a truly converged, energy-efficient building.

The Mediator's strategy is built on:

- Any-to-any connectivity: Building, IT, and "green" technologies
- End-to-end management: Efficiency, conservation, and decarbonization
- Extensible platform: Third-party applications and cloud services



Figure 2. Mediator NBM5000-K9

Cisco Mediator Series

Cisco Mediator NBM 5000-K9

- Suitable for large buildings and campuses
- Supports up to 5000 points

Cisco Mediator NBM 2500-K9

- Suitable for smaller buildings and branch offices
- Supports up to 1000 points



Case Study: Cut Energy Usage by 25% in 18 Months

Google is widely recognized as the world's largest search engine, providing an easy-to-use free service that can return relevant search results in a fraction of a second. Google owns and operates a vast number of data centers and corporate real estate to meet its massive IT needs. One of Google's objectives as part of its Corporate Social Responsibility is to be energy efficient and create a healthy and innovative environment where its employees can be productive. As part of this initiative, Google has focused on reducing their energy consumption and overall carbon footprint, improving energy efficiency, utilizing renewable power, and investing in carbon offset projects.

Challenge:

- Develop electricity from renewable sources using advanced solar thermal power, wind power technologies, and enhanced geothermal systems
- Invest in projects that help offset the generated carbon

Solution:

- Google has connected more than forty buildings, which required the networking of numerous disparate building controls systems, metering and sub-metering systems, Lighting Controls, UPS systems, Solar PV systems, Fuel Cells, power generators, irrigation systems, and weather stations that communicate under different protocols

Benefits:

- Developed several custom facility dashboards including for e.g., Enterprise Energy Management (EEM), Automated Demand Response (ADR), Distributed Generation (DR), Automated Fault Detection and Diagnostics (AFDD) all with real-time data content and hyperlinks to all of the integrated building systems
- Summary screens were built, which allow their facility manager to manage how much energy is being produced using real-time data

Licensing

Mediator provides a very flexible pay-as-you-grow licensing mechanism allowing customers the option to add additional points and protocols as per their need. There are two types of licenses that are provided:

- **Point Licenses:** Each base hardware platform comes with a certain number of built in points that can be configured per device. Customers can purchase additional licenses to increase the number of points.
- **Protocol Licenses:** Each base hardware platform comes with a certain number of built in protocols.

Cisco Services and Support

Cisco and our partners offer a wide range of services programs to accelerate customer success and can help improve the return on your investment. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help accelerate migration with assessment of the readiness of your network to support the system and development of a sound design. Support smooth implementation through effective planning and expert installation, configuration, and integration. Cisco services help protect and extend the value of your network investment with award-winning technical support, optimize network operations, and prepare your network for the system and new applications to extend network intelligence and the power of your business. For more information about Cisco services, visit Cisco Technical Support Services or Cisco Advanced Services.

For More Information

Cisco Mediator Series:
<http://www.cisco.com/go/mediator>

Cisco Environmental Sustainability:
<http://www.cisco.com/go/green>