Cisco Services for Grid Security

A Secure, Intelligent Smart Grid

The foundation of the smart grid is a converged, intelligent network that provides critical infrastructure-grade security to utility systems, data, and facilities. This comprehensive and converged approach reduces grid vulnerability to cyber or physical attack and improves overall operating resiliency.

Cisco's Grid Security approach supports utilities in meeting smart grid security needs with:

- A solutions approach to security that combines a comprehensive set of Cisco technologies, solutions, services, and ecosystem partners
- Deep experience helping utilities plan and build end-to-end security architectures that include physical security, cybersecurity, compliance, intrusion detection and prevention, data center security, and security management
- Help developing business strategies and architectures, understanding compliance needs, and designing, building, and operating grid physical and network security solutions

Cisco's vision of a smart grid includes a fully connected energy network system. Intelligent communication networks are at the core of the smart grid transformation as the platform that enables grid instrumentation, analysis, and control of utility operations from power generation to transmission and distribution networks that support control centers, substations, and neighborhood area networks.

The transformation to a smart, intelligent grid has accelerated the need for utilities to integrate the network and physical security into all segments of the power grid. Cisco® Grid Security solutions provide critical infrastructure-grade security to control access to critical utility assets, monitor the network, mitigate threats, and protect grid facilities.

By converging physical and logical security into an integrated security infrastructure, the Cisco Smart Grid Security solution enhances overall security while simultaneously making security easier and less costly to manage and yields the following benefits:

- Reduced system vulnerability to physical attack or cyberattack
- Operating resiliency against security disruptions
- Secure access and data privacy for smart grid information
- Optimized network reliability, computing, and operational support for grid communications
- Establishment of a framework for meeting regulatory compliance requirements

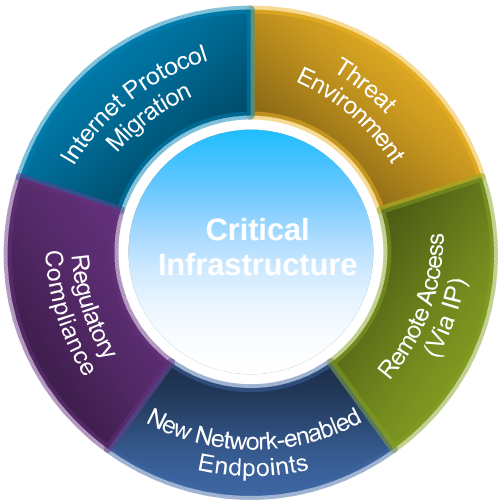
Cisco Solutions for Grid Security

Designed to meet the requirements of next-generation energy networks, Cisco Grid Security solutions take advantage of Cisco's extensive portfolio of cybersecurity and physical security products, technologies, services, and ecosystem partners to help utility companies reduce operating costs while delivering improved cybersecurity and physical security for critical energy infrastructures.

Cisco's Grid Security solutions provide:

- **Identity management and access control:** Secure utility facilities, assets, and data with user authentication and access control custom-built for grid operations. Cisco products supported include Cisco Secure Access Control Server, Cisco Identity-Based Network Services, and Cisco Network Access Control.
- **Threat defense:** Build a layered defense that integrates firewall, VPN, intrusion prevention, and content security services to detect, prevent, and mitigate threats. Cisco products supported include Cisco ASA, Cisco IOS® Security, Cisco Intrusion Prevention System (IPS), and Cisco Security Agent.

- **Data center security:** Turn network, computing, and storage solutions into a secure, shared pool of resources that protects application and data integrity, secures communications between business processes and applications within the utility, and secures connectivity to external resources such as providers of renewable energy. Cisco products supported include Cisco ASA, Cisco IPS, server and data center firewalls, and Cisco ACE Web Application Firewall.
- **Utility compliance:** Improve risk management and satisfy compliance and regulatory requirements such as NERC-CIP with assessment, design, and deployment services.
- **Security monitoring and management:** Identify, manage, and counter information security threats and maintain compliance through ongoing monitoring of cyberevents. Cisco products supported include Cisco Security Monitoring, Analysis, and Response System (MARS); Cisco Security Manager; and Cisco LAN Management System.



- **Physical safety and security:** Provide physical security to utility environments with access control and video surveillance for real-time monitoring. Cisco products supported include Cisco Physical Access Gateways, Cisco Physical Access Manager, Video Surveillance (media servers, IP cameras, video storage, and video operations), and Cisco IP Interoperability and Collaboration System (IPICS).
- **Professional services:** Engage Cisco experts in building end-to-end secure architectures to help plan, build, and run grid security solutions that help meet regulatory compliance requirements and provide protection from cybersecurity and physical security threats.

Cisco Services for Grid Security

Cisco Services for Grid Security deliver network and physical security to the grid by assisting utilities in defining security requirements, developing future-state grid security architectures, coordinating the deployment and integration of security solutions, and then delivering ongoing optimization and managed services. These services, available from Cisco and smart grid ecosystem partners, are based on industry best practices and proven methodologies for planning, building, and running end-to-end security infrastructures.

Planning Services

These services help prepare a grid security transformational plan through assessments, requirements development, and architecture design and include:

- **Security strategy and architecture assessment:** Provides a grid security infrastructure strategy and plan that include an assessment of your business's requirements for grid security and development of a security architecture and roadmap.
- **Utility compliance assessment for NERC-CIP:** Analyzes internal controls and procedures for NERC-CIP compliance, identifies gaps in security controls, and provides recommendations to address high-priority vulnerabilities.
- **Physical security site vulnerability assessment:** Analyzes requirements for access control, surveillance, and operations and provides recommendations to improve physical security.

- **Data center facilities assessment:** Provides a data center site security assessment to improve physical infrastructure security.
- **Data center virtualization assessment:** Analyzes information security requirements and provides recommendations to improve data center security.
- **Security technical requirements development:** Develops detailed technical requirements based on your business's physical and information security strategy and architecture.
- **Security technical architecture design:** Develops a detailed security design that meets your requirements for physical and information security.

Build Services

These services help facilitate the rapid deployment of grid security solutions within the utility control center, generation plant, and transmission and distribution network environments that meet requirements for regulatory compliance and reliable physical and information security and include:

- **Physical security solution design:** Develops detailed designs for rich media collaboration, access control, video surveillance, and command and control solutions.
- **Network security solution design:** Develops detailed designs for data center security, identity management, threat defense, and security management.
- **Data center virtualization design:** Provides a detailed design and implementation plan for virtualized data center environment, including security requirements for network, storage, and compute resources.
- **Grid security deployment:** Provides implementation plans and custom deployment and integration of physical and information security solutions.

Run Services

These services can help a utility company operate and optimize its grid security solutions to lower operating costs while maintaining the highest level of security and include:

- **Remote management and monitoring:** Provide operational support for security incident monitoring, fault and performance management, problem resolution, security infrastructure tuning, and secure network access control support.
- **Security optimization:** Strengthens your security infrastructure through strategic planning, architectural assessments, design, performance tuning, and ongoing optimization support.
- **Security architecture assessment:** Identifies vulnerabilities and recommends improvements to align your security architecture with industry security models, best practices, and business policy.
- **Cisco Services for IPS:** Deliver timely security intelligence information, signature file updates, and comprehensive support for Cisco IPS solutions.

Cisco and Smart Grid Ecosystem Partner Expertise

Engineers from Cisco and Cisco smart grid ecosystem partners are among the energy industry's elite in providing integrated, collaborative, adaptive grid security solutions. Cisco and partners work together closely to deliver services to support your grid security solution requirements. Cisco engineers typically hold one or more Cisco or industry certifications and have planned, deployed, secured, operated, and optimized the performance of many of the largest and most successful energy networks in the world. Cisco smart grid ecosystem partners are recognized for their prominence and expertise in the energy industry.

Availability

Cisco Grid Security products and services are available globally. Service delivery details might vary by region.

Further Information

For more information about Cisco Smart Grid Security solutions, contact your local Cisco account representative or visit www.cisco.com/go/smartgrid.

For more information about Cisco Services for Grid Security, please visit www.cisco.com/go/smartgridservices.

Cisco Services.
Making Networks Work.
Better Together.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**

Printed in USA C22-558792-00 09/09