



Cisco Integrated Networks: The Critical Advantage

With the Integrated Networks model, Cisco tightens the connection between every aspect of the network to create a more cohesive whole that provides even greater IT and business value. Here, Cisco combines the following two state-of-the-art network design principles:

- **Systems Approach**—Cisco’s high-performance network hardware platforms are combined with the service-rich Cisco® IOS software to form a truly high-value networking system.
- **Service Integration**—Multiservice devices allow IT managers to readily activate new networking services, allowing for zero-touch provisioning, investment protection, simplified operations, and continual network innovation.

Here, Cisco takes on the challenge of optimizing the resulting network solutions, easing implementation, operation, and innovation for network operators.



Cisco Integrated Networks: Features and Fit

Specific capabilities serve to highlight the positive impact of the Integrated Networks model across four critical execution fronts:

Network Deployment

Success is determined by the speed and accuracy of execution. The following highlights specific Cisco capabilities at work here:

- **Embedded Event Manager (EEM)**—Define/Automate actions
- **Cisco Discovery Protocol (CDP)**—Advertise/Learn devices
- **AutoQoS**—Provision/Manage large-scale QoS deployments

Network Operations

Success is determined by efficient execution that increases network effectiveness and frees staff time for high-value innovation. The following highlights specific Cisco capabilities at work here:

- **In-Service Software Upgrade (ISSU)**—Transparent updates
- **MPLS VPNs**—Dynamic and secure network segmentation
- **Network Analysis Modules (NAM)**—Network monitoring

Problem Resolution

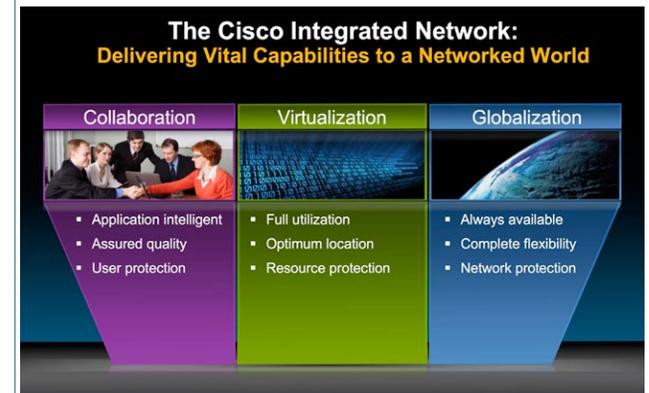
Success is first and foremost determined by identifying and remedying an issue before it affects the network. Failing that, rapid resolution is critical. The following highlights specific Cisco capabilities at work here:

- **Generic Online Diagnostics (GOLD)**—Fault analysis, triggers
- **IP SLA**—Tracks and analyzes IP net and app service levels
- **Cisco Security MARS**—Monitoring, analysis, and response

Network Innovation

Success is determined looking beyond what the network is doing now and focusing on what it has the potential to provide. The following highlights specific Cisco capabilities at work here:

- **Application eXtension Platform (AXP)**—ISR-hosted apps
- **QuantumFlow Processor (QFP)**—Service intelligence, scale
- **Stateful App Intelligence (SAI)**—Deep-packet inspection



What is Driving the Integrated Networks Model?

Many organizations have inadvertently created an “accidental architecture” of network components. These components connect, but do not operate in concert. They require complex integration and interactions. They drive system and service inconsistencies across the network. They restrain the value of the network to the business—now and into the future. To increase network efficiency and meet business needs more effectively, the network must operate as a single entity, instead of the accidental collection of hardware and software pieces in an already-intricate IT puzzle. You can address this challenge by transitioning to an IT model that is based on a single, integrated network.



Is Your Network Failing to Deliver on its Promise?

There are many warning signs that point to your need to move to the Integrated Networks model. Sample problems include:

Impact Zone	Warning Signs of Failed Delivery
Business	<ul style="list-style-type: none"> • Inability to accommodate business shifts • High network and IT capital and operating costs • IT-driven innovation and compliance
IT	<ul style="list-style-type: none"> • Failure to meet service-level commitments • High-touch integration, installation, maintenance • Limited research and application of new services
End User	<ul style="list-style-type: none"> • Low productivity and satisfaction levels • Limited or lack of access to needed resources • Partners, customers not included in end user mix

The Cisco Integrated Network: Impact and Import

Today's successful IT leaders are consolidating technologies, aligning business and IT efforts, simplifying operations, incorporating innovative technologies, and demanding service-level accountability. The Cisco Integrated Network incorporates these best practices into a network system that operates as a unified network infrastructure, providing for a consistent operating environment and set of high-value network services. Here, IT managers are able to

- Deploy new systems and services faster and more accurately
- Maintain the network and resolve problems more efficiently
- Explore innovations that create ongoing business benefits.

These IT improvements drive direct benefits to the business and the networked end user—whether internal or external.

For the Business React readily to business shifts
Reduce costs and exposure to loss/risk
Drive process and profit improvements

For the End User Consistent service levels, capabilities
Rapid response to new work demands
Improved productivity and satisfaction

Place in the Network (PIN) Solution Design

In order to facilitate the adoption and implementation of the Integrated Networks model, Cisco has developed a number of specific solutions aimed at particular network segments—Campus, Branch/WAN, and Data Center. Here, optimum systems, services, and configurations are applied to the unique challenges and requirements of these critical network segments. Cisco Validated Designs (CVD) play a key role in helping ensure that our customers gain the most benefit from Cisco Integrated Networks solutions. Here, proven network designs are documented and provided to our field, partners, and customers for ready and rapid implementation within customer networks.

Integrated Networks in Action

Here are two common scenarios drawn from Cisco's experience in supporting small and large networks across all industries.

Scenario #1—Medical Center: Boost Service, Compliance

Critical requirements included: improve response time for patient care; increase network reliability to support critical healthcare applications; and enhance network security to comply with privacy regulations. The solution was built using the Cisco Catalyst® 6500 switch. Network administrators use statistics provided by Cisco GOLD to continually monitor the health of the network. Integrated security services support regulatory compliance

and safeguard the network and patient information. Additionally, virtualization services separate traffic and secure data.

Scenario #2—International Airport: Flexibility, Utilization

Escalating demands for heightened security, cost containment, and improved services drove the need for a "common use model" across the airport infrastructure. The resulting integrated network consolidated 14 separate networks owned by different entities into a single, easy-to-manage, infrastructure providing voice, data, video, security, wireless, and other services.

Why Cisco for Integrated Networks?

Cisco is uniquely positioned to deliver the greatest value with the Integrated Networks model. As both technology provider and business partner, Cisco is unmatched in the industry.

- **Technology**—Breadth or product portfolio combined with advanced network service intelligence lead the industry.
- **Support**—Experience and execution combine to consistently drive high customer satisfaction and key industry awards.
- **Eco-Systems**—Helping ensure that IT and network systems deliver the greatest value to business today and tomorrow.
- **Business**—Leasing programs, strategic consulting, and partnering practices all contribute to customer success.

For More Information

Refer to the following links...

- [Cisco Systems—Network Systems Solutions](#)
- [Ensuring Success with Cisco Validated Designs](#)