CISCO SYSTEMS

Delivering Business-Critical IP Multicast Applications Securely

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Agenda

- **Intelligent Information Network**

- **Challenges prior to Secure Multicast**

- **Secure IP Multicast Solution**

- **Benefits**

- **Summary**

The Intelligent Information Network

Individual Products

Integrated Systems

Technology Solutions

Business Solutions

Intelligent Information Network (IIN)

The Cisco® 3-5 year vision for the evolution of networking from connectivity to intelligent systems

- Goals:
    - Accelerate integration of innovation into the network
    - Embed intelligence to create a unified networking *system*

Intelligent Network Benefits

- ## Secure infrastructure

  - **Self-defending network mitigates threats, both known and unknown**

- ## Faster deployment of service and applications

  - **Integrated modular systems and management reduce custom integration**

  - **Granular policy controls couple network with business processes and services**

- ## Reduced complexity and lower TCO

  - **New capabilities and technologies are simpler to integrate**

  - **Integrated systems and management reduce OpEx and systems integration**

Information Security Objectives:
Security as a Business Enabler

On Demand	Adaptive Organization	Agile Organization

- **Align security practice and policy to business requirements**

- **Use IT investments to "go on the offense"**

- **Reduce complexity of the overall environment**

- **Gain protection, control, and visibility over incidents and threats**

- **The network touches all parts of the infrastructure**

- **It is uniquely positioned to help solve these issues**

Cisco IOS Secure Multicast
Delivering on the IIN Vision

- ## Secure infrastructure

  - **Network fabric seamlessly protects business applications and communications**

- ## Faster deployment of service and applications

  - **New applications come online with no or low touch**

  - **IT staff concentrates on productivity, NOT how to secure the application**

- ## Reduced complexity and lower TCO

  - **New security controls reduce total IT lifecycle**
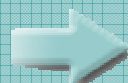
Cisco IOS Secure Multicast
Overcoming Existing IP Multicast Security Challenges

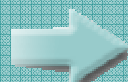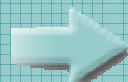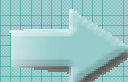| Tunnel Based		Secure Multicast
Bolted on	→	Built in
Complex architecture	→	Seamless integration
Wasted capital	→	Investment protection
Rigid design	→	Flexible design
Simple transport	→	Intelligent transport
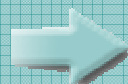
Fueled by demand for agility within a security framework

Cisco IOS Secure Multicast
Securing Business Intelligence

- **First in the industry to offer native IP Multicast encryption**

  - **Performs and scales well beyond existing tunnel-based solutions**

  - **Combines with industry-leading routing features**

- **New approach**

  - **Industry-standard encryption techniques**

  - **New group keying mechanism**

  - **Seamlessly integrates with mVPN**

- **Developed to overcome the current inefficiencies and inflexibility facing tunnel-based IP Multicast security today**

FINANCE
- **Stock trading**
- **Stock quotes**

ENTERPRISE
- **Video conferencing**
- **Corporate communications**
- **DB replication**

SURVEILLANCE
- **Security**
- **Childcare**

ENTERTAINMENT
- **Video games**
- **Animatronics**

INFORMATION SHARING
- **e-learning**
- **Software distribution**

MEDIA
- **Internet audio (Live)**
- **Video on demand**

Cisco IOS Secure Multicast
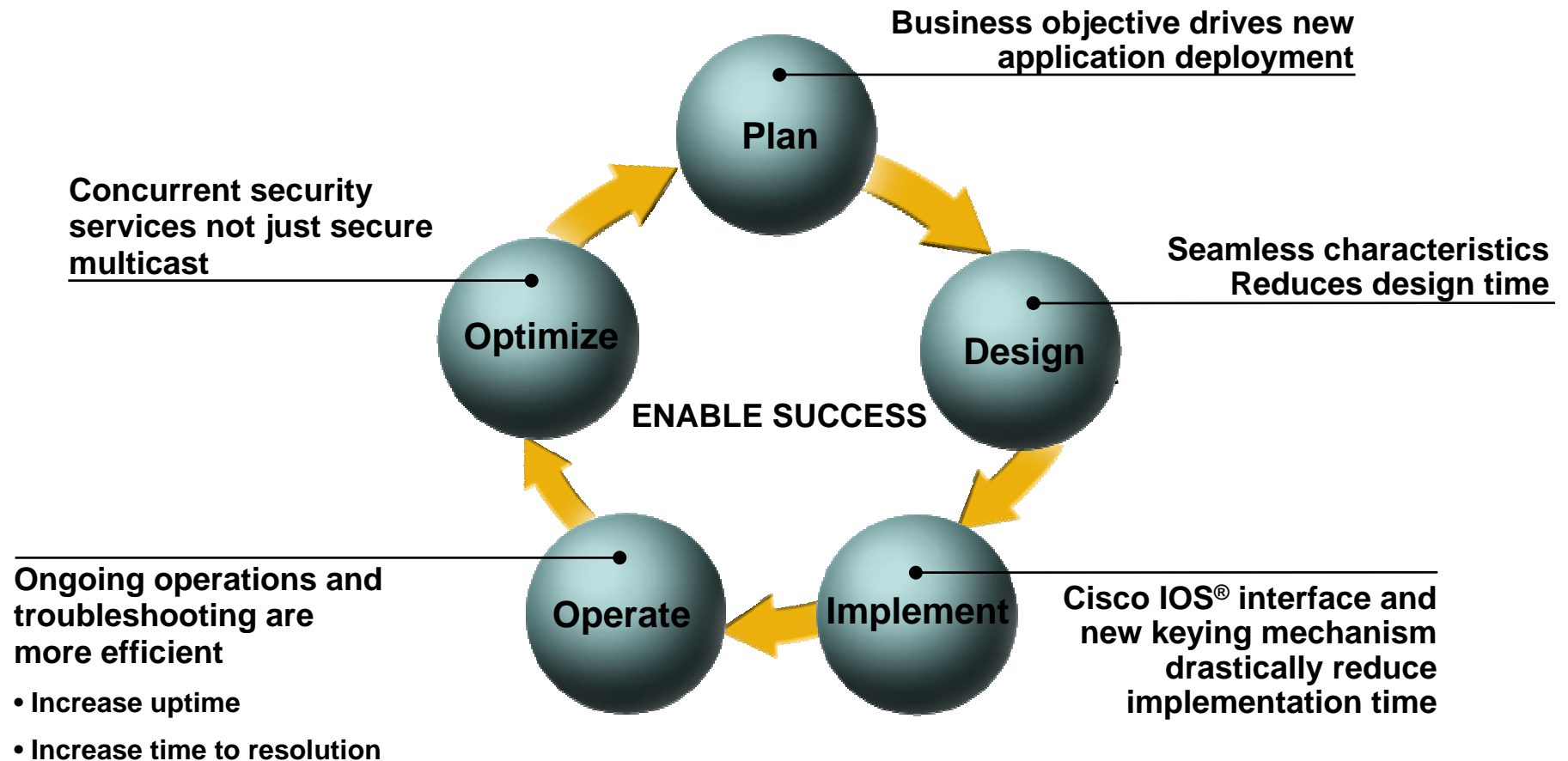# Technical Benefits for VPN Deployments

Previous Limitation	Solution and Associated Benefits

Multicast encryption through IPsec tunnels:
 	
Not scalable
 	
Difficult to troubleshoot
 	
Limited QoS support
	• **Extensible standards-based framework:**
	
	    Multicast today, extends to support Unicast in future
	
	• **Group mode encryption:**
	
	    Reduce configuration overhead
	
	    Higher scalability
	
	    Simplifies troubleshooting
	
	• **Group control key server:**
	
	    Centralized mechanism much more efficient

No optimal security in mVPN architectures	**Native multicast encryption** • **Seamlessly integrates into mVPN architectures** • **Day-one transparent interoperability between various core Cisco IOS® technologies e.g. native multicast encryption**
Overlay VPN Network **Overlay routing resulting in suboptimal convergence**	**Leverage core for multicast replication** • **Investment protection: New architecture leverages the core and investment costs spent on building core**

Secure Multicast
Reducing the Cost of the IT Lifecycle

Business objective drives new application deployment

Plan

Concurrent security services not just secure multicast

Optimize

Design

Seamless characteristics Reduces design time

ENABLE SUCCESS

Operate

Implement

Cisco IOS® interface and new keying mechanism drastically reduce implementation time

Ongoing operations and troubleshooting are more efficient

- **Increase uptime**
- **Increase time to resolution**

Cisco IOS Secure Multicast
Why Cisco Leads the Market

- **First to market**

- **Low total cost of ownership**

- **Investment protection**

- **Leader in technology innovation**

- **Sustained R&D spending**

- **Integration of advanced services**

- **Quality, service, and support**

Summary: *Only* Cisco Can Deliver the Total IPSec VPN Solution

- **Delivers the widest range of IPSec VPN solutions in the industry**

  Start with the solution that works best, knowing you can migrate between solutions without replacing hardware

- **Cisco® gives you the option of integrating services (e.g. voice, content, authentication) with our VPN solution**

- **The Cisco VPN solution is proven: Live networks over 10,000 locations *in production***

- **Our VPN solution is just one element of our broad security portfolio**

Secure Multicast Resources

- **www.cisco.com/go/multicast**