

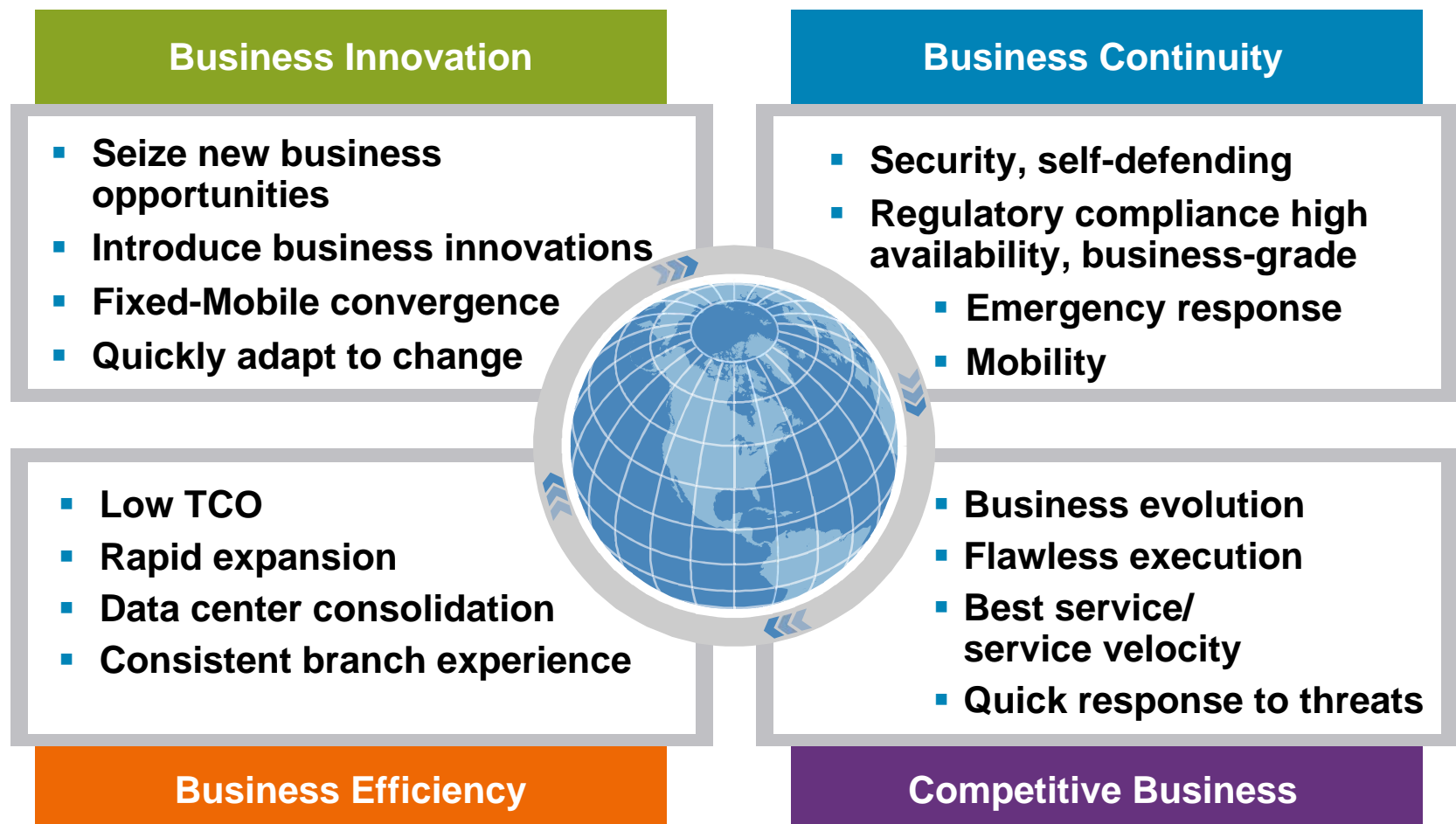


Business Unlimited

Empowered Branch, Unified Enterprise



Enterprise's Business Goals



New Business Realities

Technology Innovation

Point-to-point	↔	Multipoint
Voice-only	↔	Rich-media
Phone	↔	PC/PDA
Wired	↔	Wireless
Non-real-time	↔	Real-time
Scheduled	↔	Ad hoc



- Business decisions are increasingly localized
 - Branches consume 70–90% of resources
 - Surveys show more than 35% of all employees are in branches, and the percentage is growing

Most employees **CANNOT** take full advantage of these innovations today unless network infrastructure keeps up

New Branch Realities

Traditional Branch



Aging, overlapping, and disparate IT infrastructure



Constrained bandwidth; inconsistent WAN



One-off point appliance and server deployments



Behind on latest security enhancements



Limited disaster recovery; no mobility



Inconsistent branches; inferior performance

Empowered Branch

Simplified, integrated solution with latest security, voice, video, data technologies

WAN flexibility; complete WAN optimization solution

Critical assets centralized. guaranteed performance, simplified operations

Pervasive security, integrated VPN, firewall, IPS, NAC, more

Seamless wireless-wireline integration

Branch blueprint, consistent branch-HQ services, features, and performance

Empowered Branch: The Value of Integrated Services



- Security
- IP voice and video
- WAN/app optimization
- Mobility
- Monitoring
- Robust management

User Applications



WAN/LAN Access

Raising the Bar

WAAS and NAM



Integrated WAN and application optimization

Services engine



2.5x performance, Linux-based engine

Tunnel-less VPN, with Group Encrypted Transport (GET)



Scalable, any-to-any, tunnel-less VPN technology with encrypted payload routing

Voice/video enhancements



Voice/video optimization, SIP, VXML, SRST

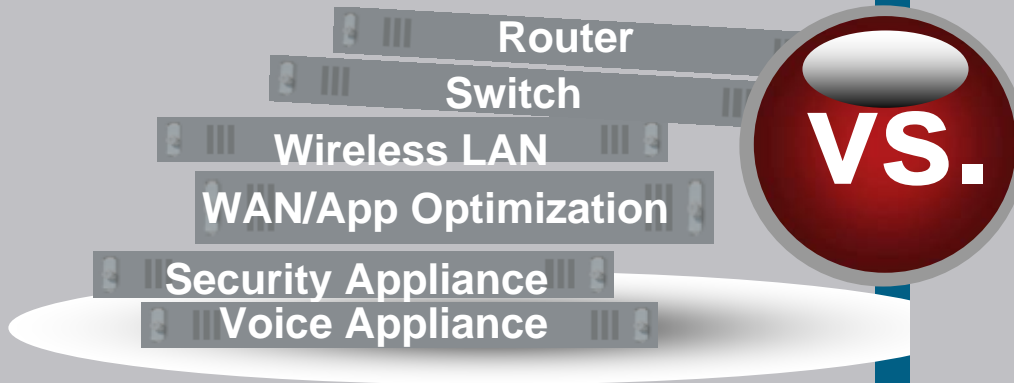
Flexible WAN interfaces



Ethernet, cable, G.SHDSL

Overlay vs. Integrated

Overlay Appliances



Integrated Services Router



Cisco® ISR 3845 with integrated voice, wireless, video, WAN optimization, and switch

Service Interoperability

- Consistency
- Interoperability
- Tested
- High availability

System Support

- Vendor accountability: network partner
- Fewer maintenance contracts

Operational Efficiency

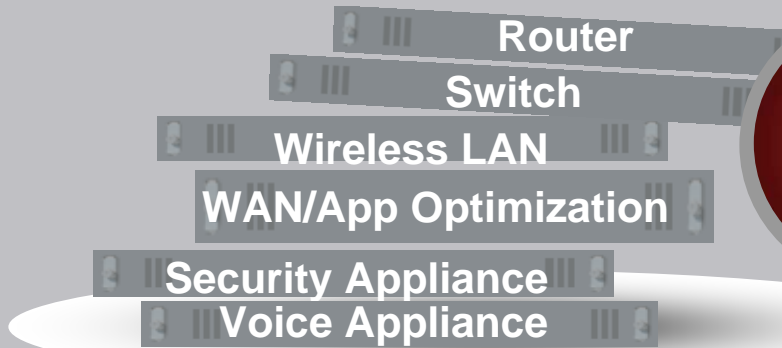
- Fewer devices, management systems, user interfaces
- Simplified troubleshooting

Investment Protection

- Flexibility to evolve through system modularity

Overlay vs. Integrated

Overlay Appliances



VS.

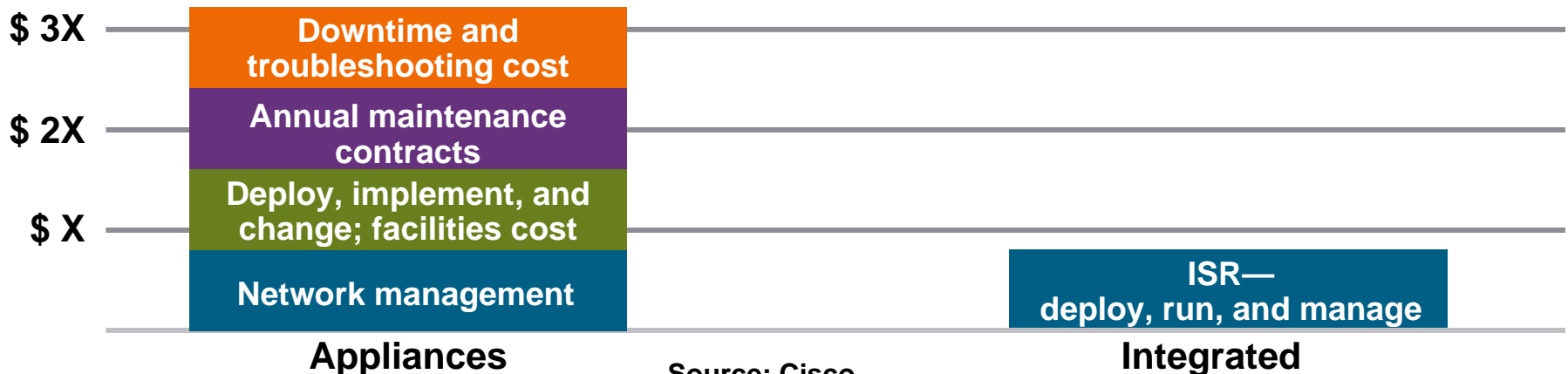
Integrated Services Router



Cisco® ISR 3845 with integrated voice, wireless, video, WAN optimization, and switch

70% OpEx Reduction per Branch per Year

Total Cost of Ownership



Appliances

Source: Cisco

Integrated

Strong Market Acceptance

2 million integrated services routers

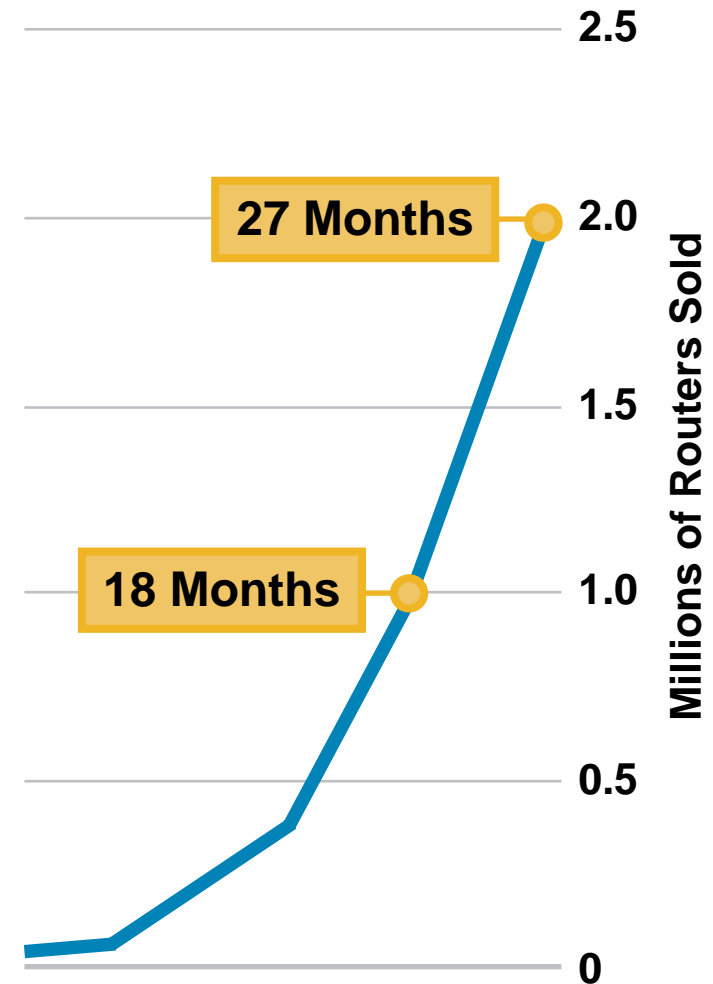
1 million routers
in 18 months

2 million routers
9 months later

More than 50%
shipped with
Advanced Services

3x higher service
attach rate over
previous generation

Customers adopting integrated services

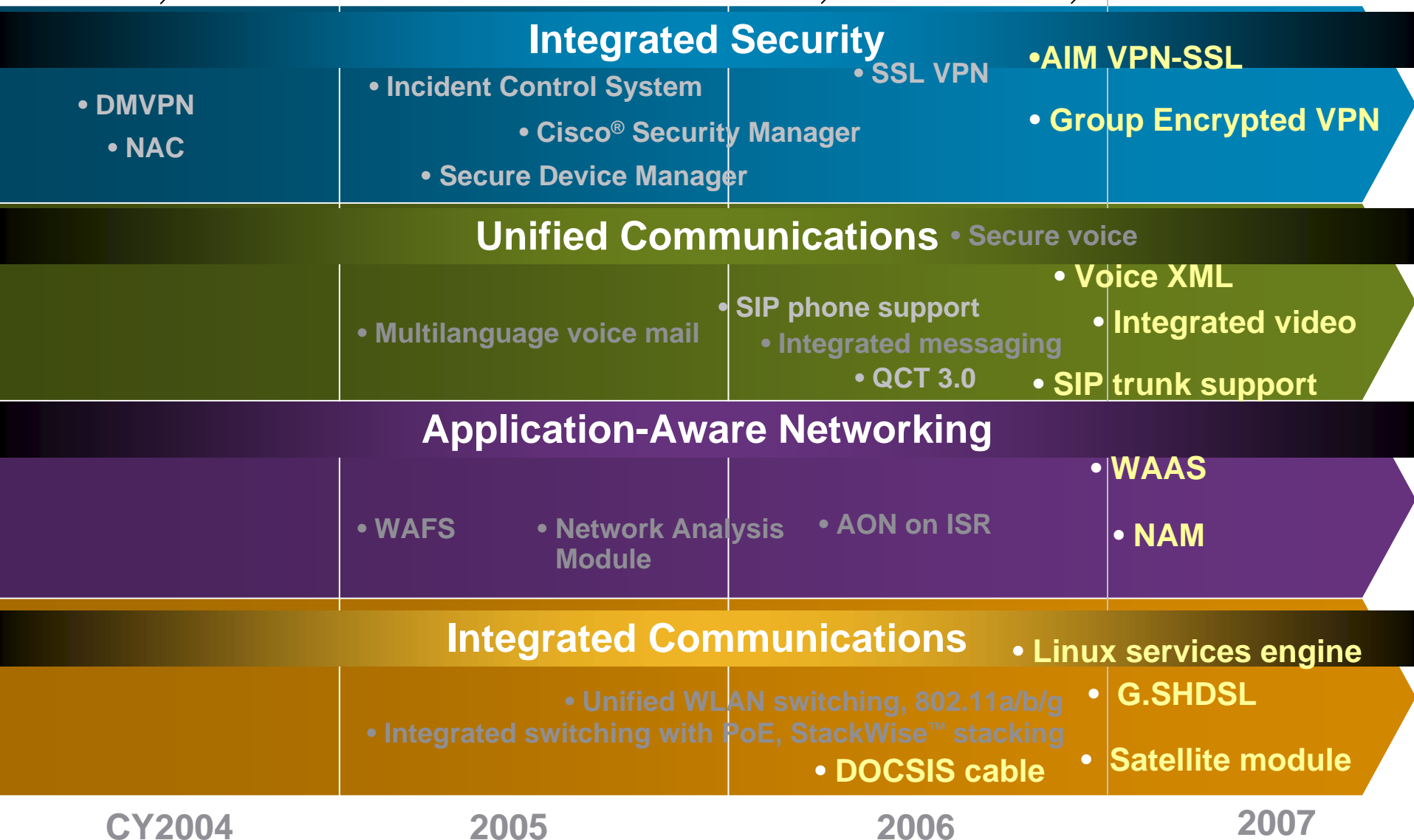


Continuous Innovation

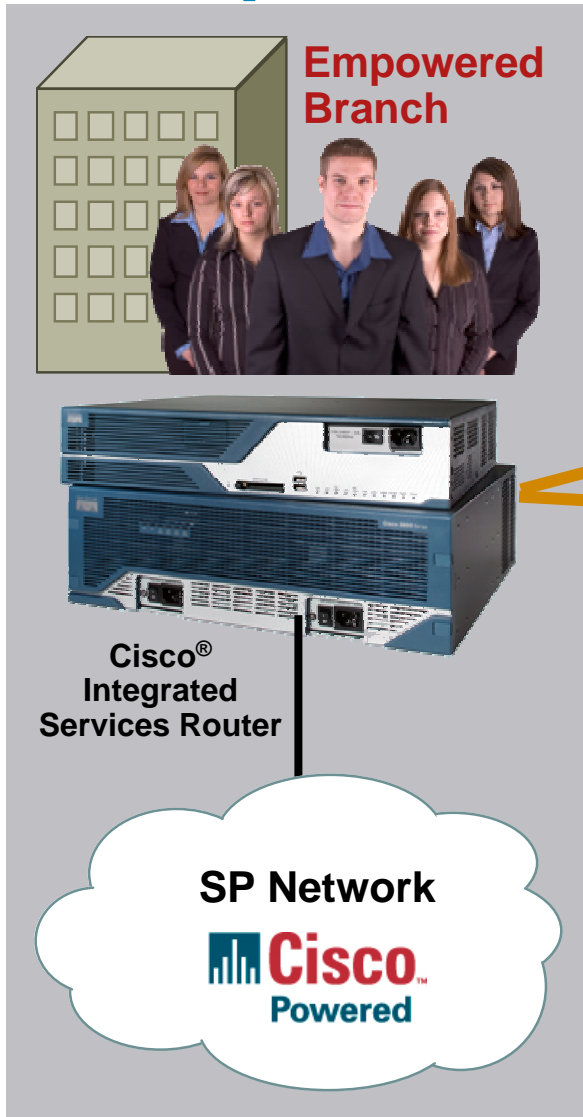
ISR introduced

1 million sold

2 million sold



Empowered Branch Architecture



Empowered Branch

Simplified, integrated solution, with latest security, voice, video, data technologies

WAN flexibility, complete WAN-optimization solution

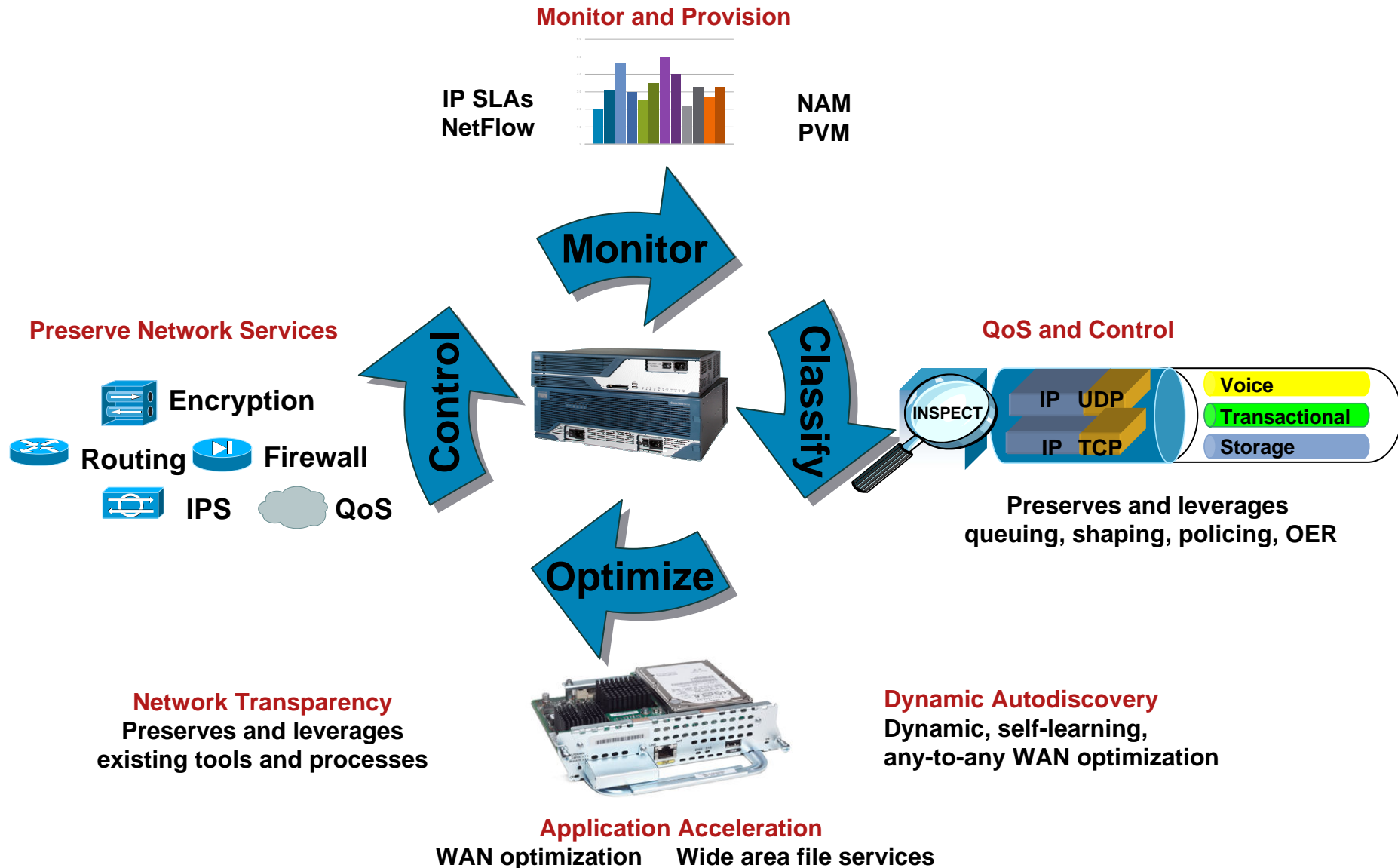
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System Approach to Application Optimization



Getting the Most from Your WAN

- **WAN and Application Optimization**
 - Sophisticated **compression** techniques to make the most of your limited WAN bandwidth
 - **Caching** to store commonly used data close to the end user
- **Solving application response time**
 - **TCP optimization** overcomes network latency
 - **Application specific optimizations**
 - **Quality of service** to prioritize important applications
- **Enabling server consolidation and virtualization**
 - **IT gains efficiency**
 - **Maintains end-user response time**

OpEx

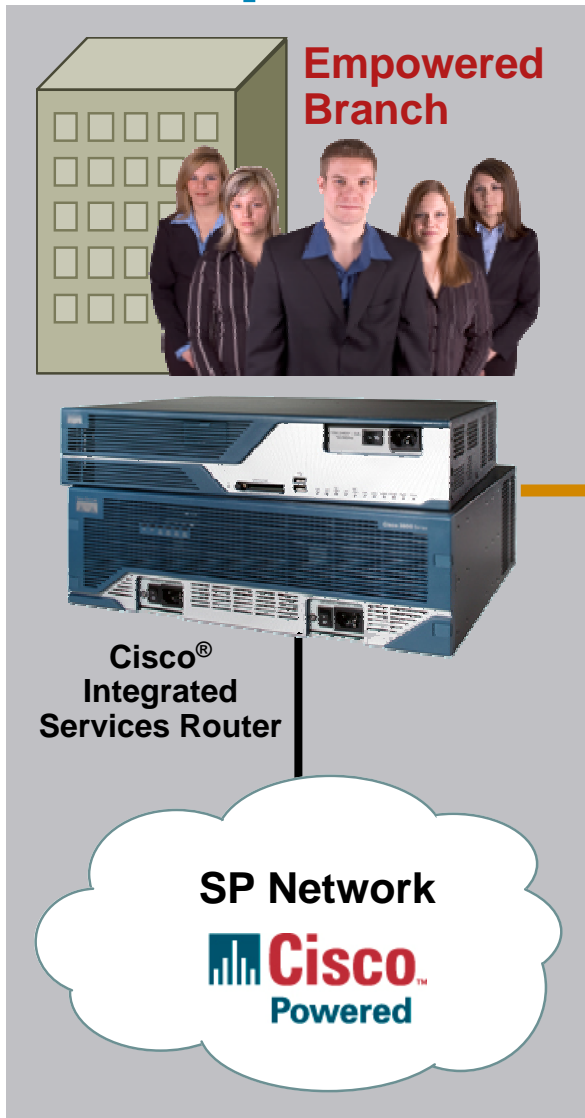


Productivity



Compliance

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Cisco Network Analysis Module (NAM)

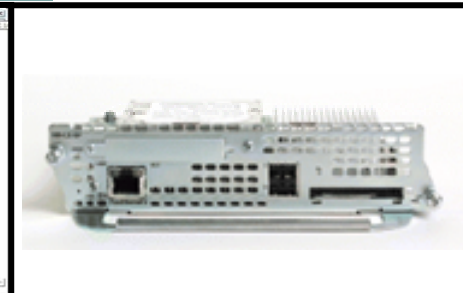
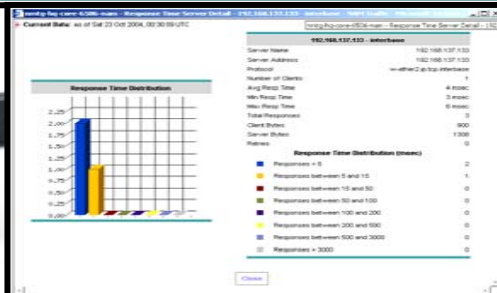
Cisco® NAM Feature

- **Traffic analysis integrated in the network**
Critical points, Web-based GUI
- **Real-time and historical monitoring**
Applications, hosts, conversations
- **Application response-time monitoring**
User's experience of the network
- **Troubleshooting**
Packet capture and decode



Benefits

- **Eases deployment, management, and support**
- **Detects how applications and users use the network and receive services**
- **Reveals how applications are performing**
- **Isolates problems before they affect users**



Network Analysis Module

Increasing Business Agility Through Visibility



- Higher performance, more storage for performance data
- New NAM software release v3.6—feature parity with NAM on Cisco® Catalyst® 6500
- Provides **global** visibility into current WAN traffic conditions, with detailed per-user, per-application visibility
- Immediately identifies the **source** of WAN performance issues, supported by detailed per-user, per-application analysis of traffic over time.
- Enables detailed analysis of traffic patterns both before AND after deployment of WAAS

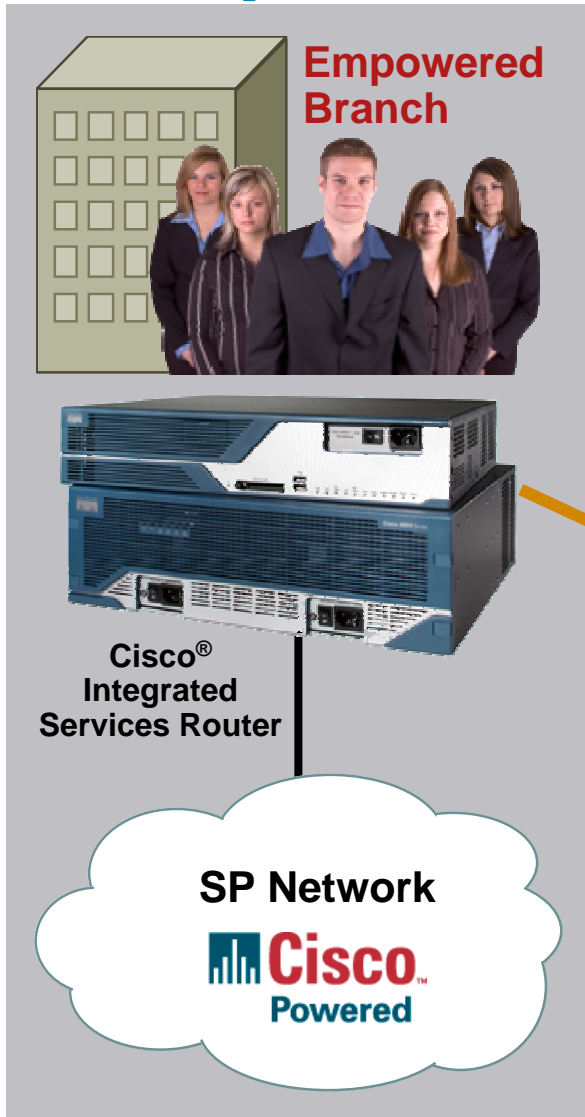
Services Engine

High-Performance Service Engine for 2800, 3800 Series Integrated Services Routers



- 2.5x the performance of first-generation network module
- Linux-based solution enables service convergence and flexibility
- High-performance engine supports high-touch services starting with NME-WAE, NME-NAM
- Available in multiple configurations, varying memory, CPU speed, and hard-drive capacity

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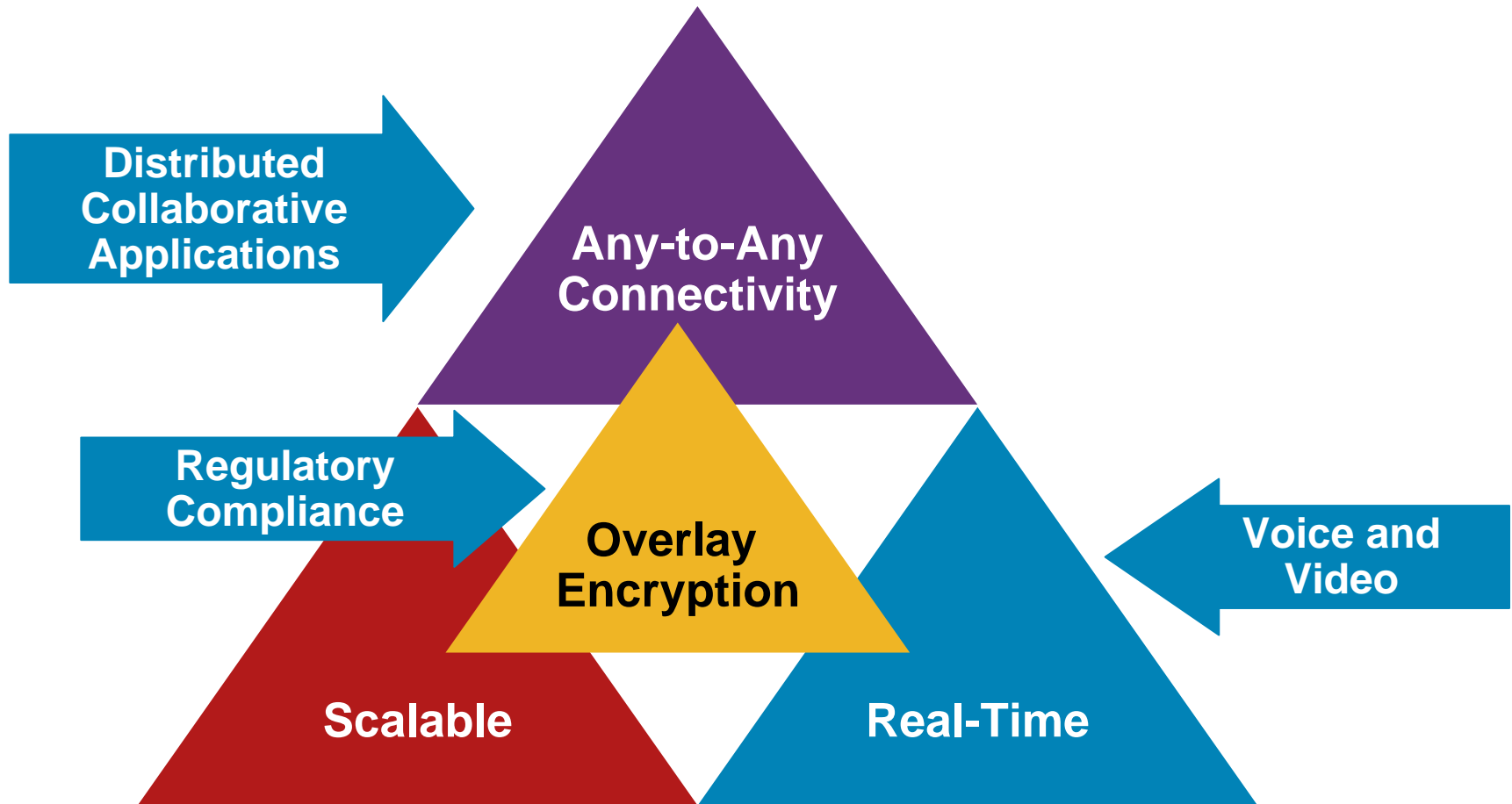
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The Business Challenge: Resolving Collaboration-Security Trade-offs

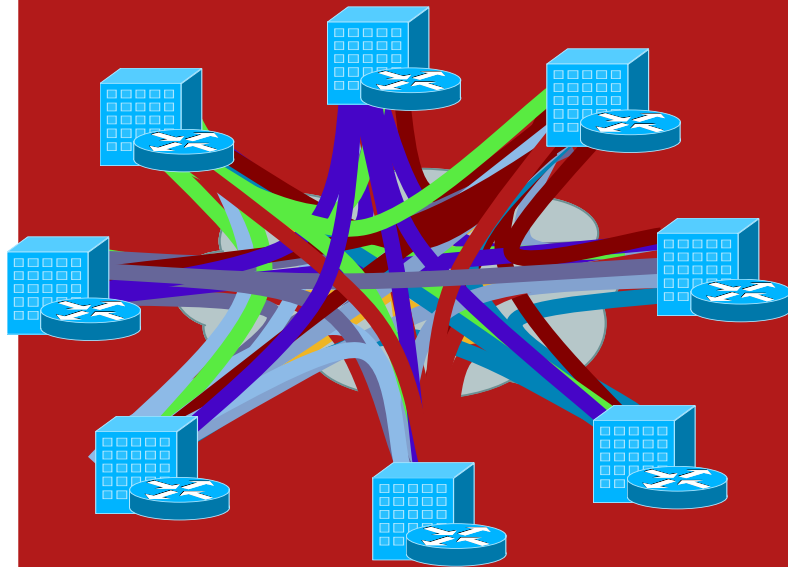


Today's enterprise WAN technologies force a trade-off between collaborative branch applications and security

Tunnel-less VPN—A New Security Model

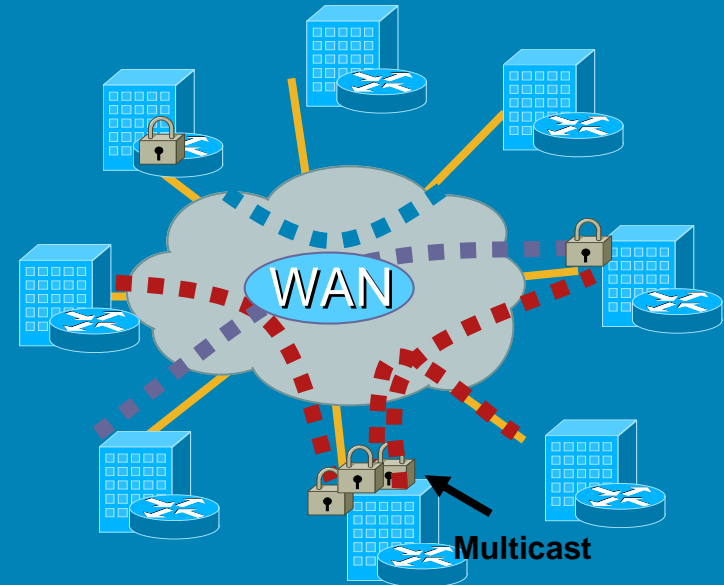
Peer-Based vs. Group-Based Security Models

IPSec Point-to-Point Tunnels



- Scalability—an issue (N^2 problem)
- Overlay routing
- Any-to-any instant connectivity can't be done to scale
- Limited advanced QoS
- Multicast replication inefficient

Tunnel-less VPN



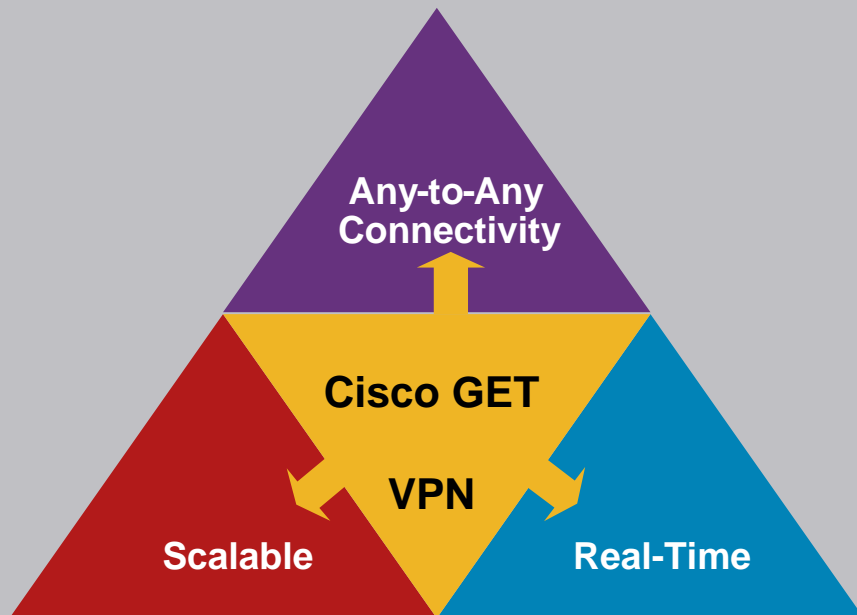
Data is encrypted without need for tunnel overlay—scalable any-to-any
Routing/multicast/QoS integration is optimal—native routing

Encryption can be managed by either subscribers or service providers

Enables customized, per-application encryption

Announcing Cisco Group-Encrypted Transport (GET) VPN—Solution for Tunnel-less VPNs

Cisco® GET VPN delivers a revolutionary solution for tunnel-less, any-to-any branch confidential communications

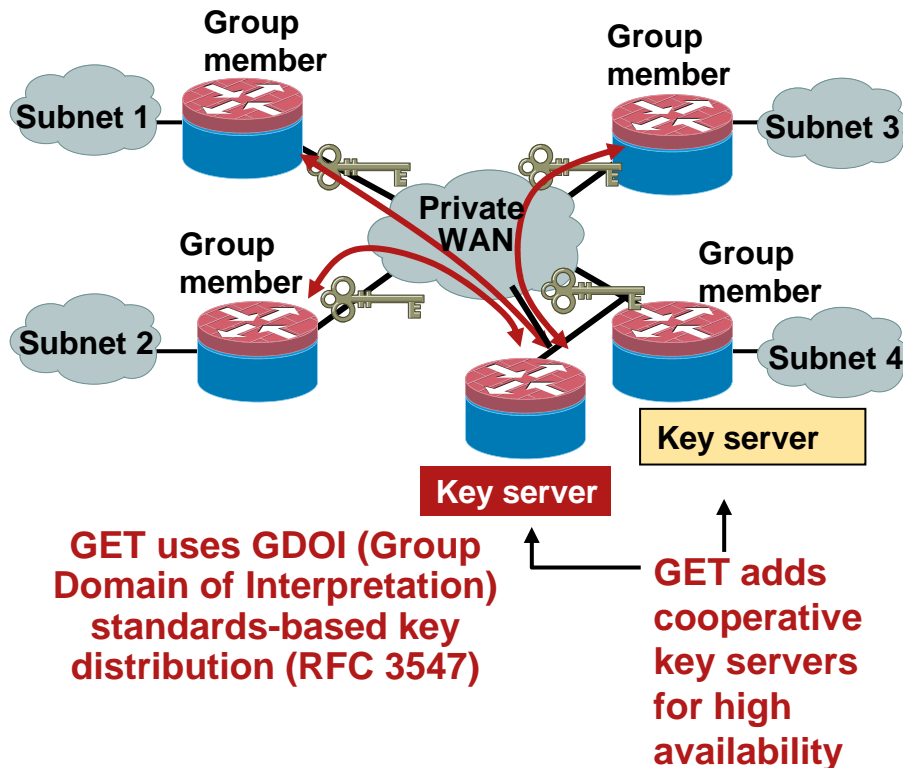


Key Benefits

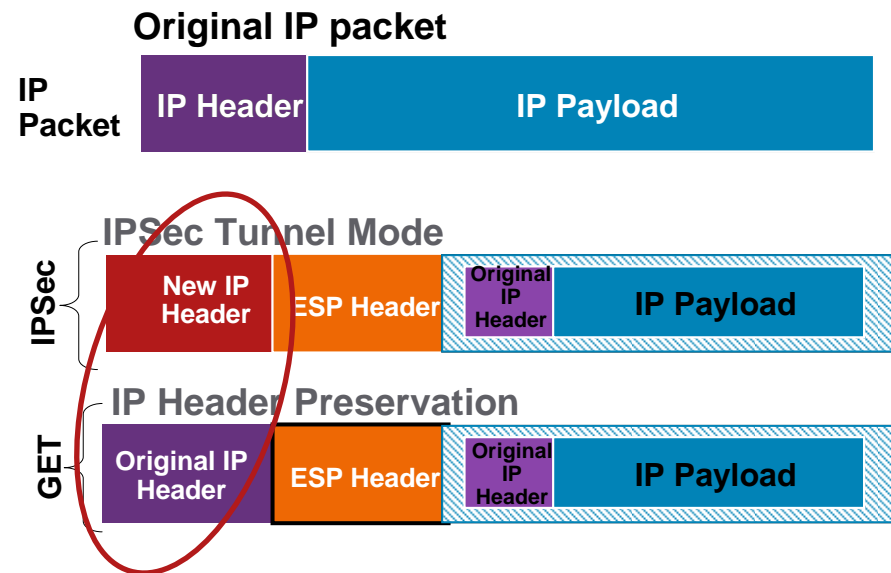
- Large-scale any-to-any encrypted communications
- Native routing infrastructure without overlay
- Optimal for QoS and multicast—improves application performance
- Transport agnostic—private LAN/WAN, FR/AATM, IP, MPLS
- Offers flexible span of control among subscribers and providers
- Available on Cisco Integrated Services Routers: Cisco 7200 and Cisco 7301 with Cisco IOS® 12.4(11)T

Cisco Group-Encrypted Transport VPN

GET simplifies security policy and key distribution

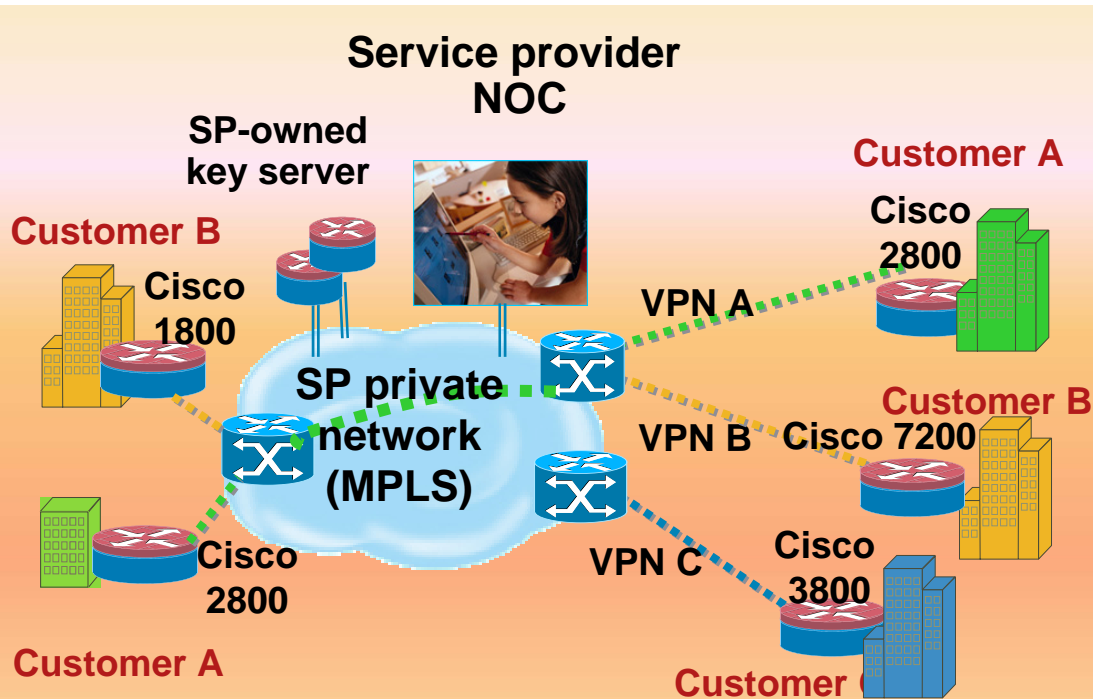


GET uses IP header preservation to mitigate routing overlay



Key server: Authenticates and distributes keys and policies; group member provisioning is minimized; application traffic is encrypted by group members

Managed Tunnel-less VPN Services



- Encrypted traffic is demand-driven
- ISR can have “VRF-aware contexts”
- Centrally managed key servers enable group encryption

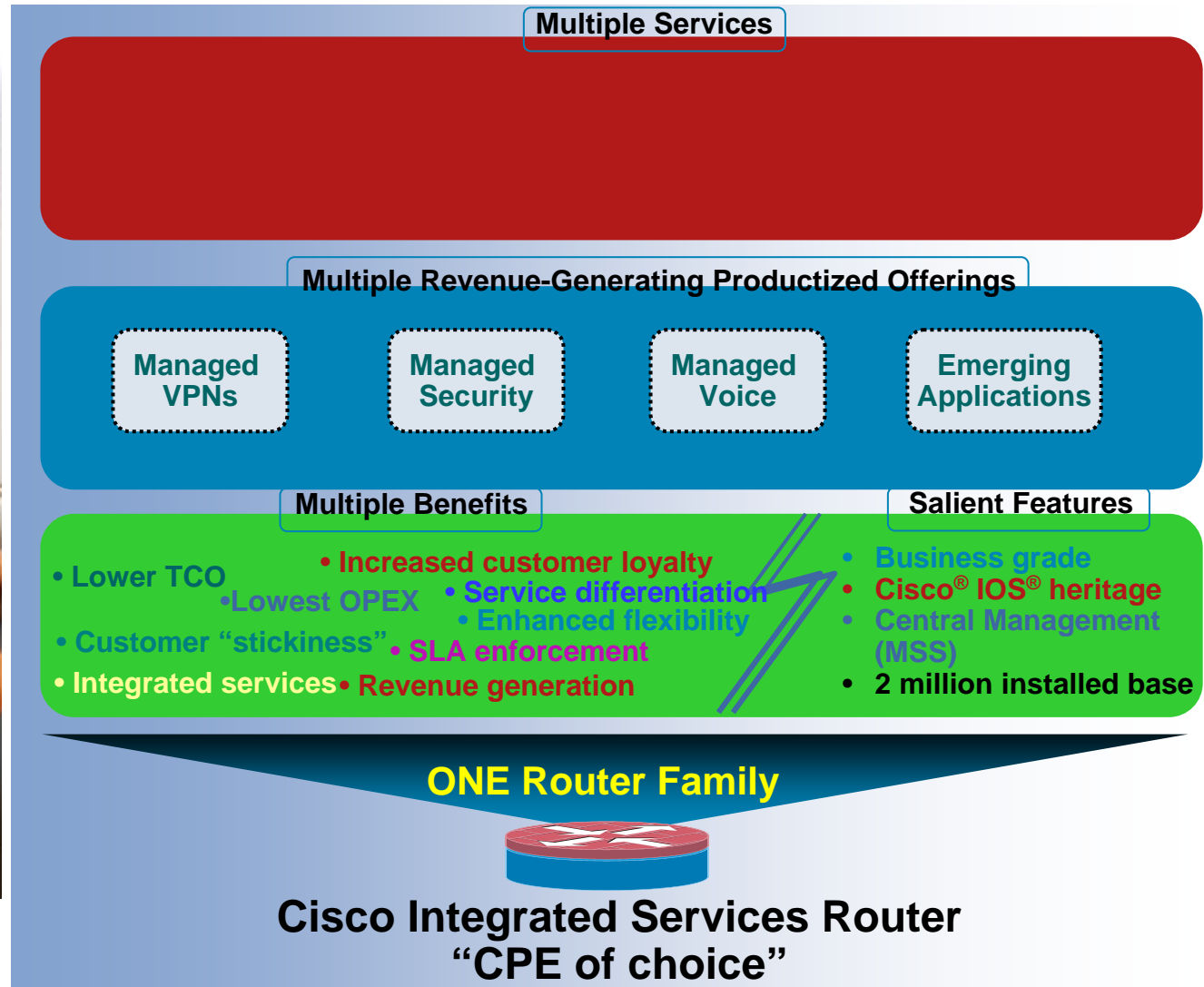
- **Service integration delivers greater value, stronger branding**
- **Increased security**
 - Helps businesses comply with regulations: HIPAA, PCI
- **Operational simplicity**
 - Centralized key server reduces complexity
 - Easy service rollout
- **Optimized network utilization**
- **Service innovation, unique offering**
- **Services upsell**

Service Provider-Managed Services

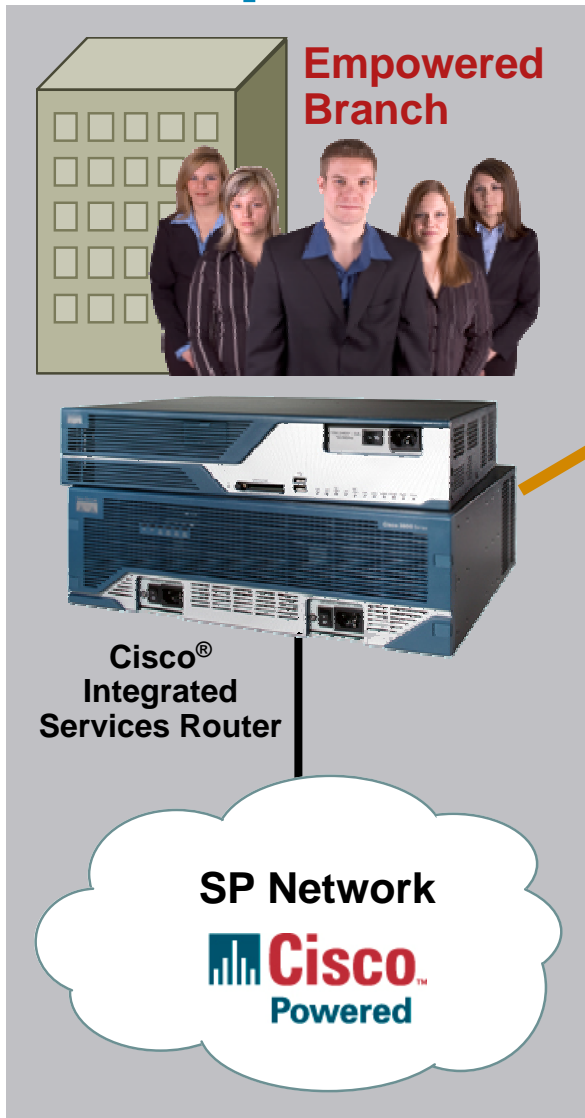
ISR Provides Simplified Choice, Enhanced Flexibility



Service Provider



Empowered Branch Architecture



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New Voice and Video Capabilities

Cost optimization

- Enhanced SIP trunking
- Consolidates voice, video and data on a single PRI



Secure communications

- Secure SRST in network outages
- Secure CME—encryption of media and signaling
- Secure SIP gateways



Advanced applications

- Voice XML
- Session border controller
- Integrated SIP

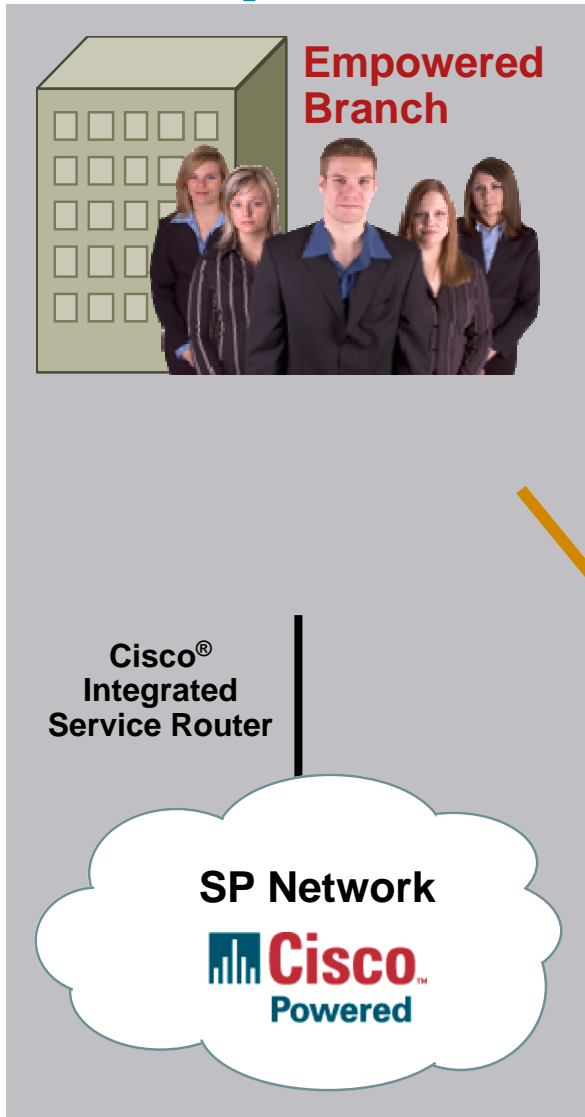


Increased availability

- Video SRST—preserves video calling during outage
- Cisco® CallManager Express autoregistration
- Higher-density CallManager Express DSP-based conferencing



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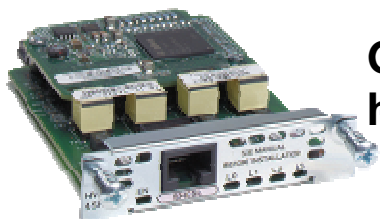
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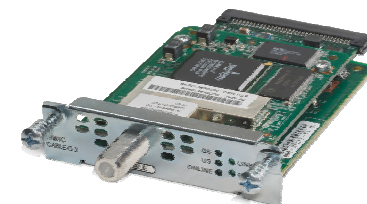
Unmatched WAN Flexibility



G.SHDSL symmetric high-bit rate DSL HWICs

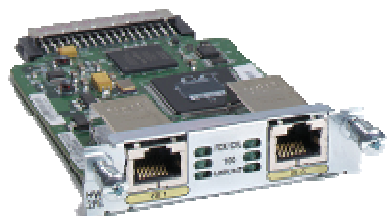
- Symmetric bandwidth = E1/T1 replacement
- 2-pair/4-wire and 4-pair/8-wire versions available
- Flexible bonding and wire pairing (IMA or M-pair)
- Scalable service provisioning from 2.3–16 Mbps
- Extensive ATM CoS and IP QoS support

Cable Modem HWIC (U.S./Canada, Europe, Japan)



- Integrated DOCSIS/Euro-DOCSIS WAN interface
- Up to 40 Mbps throughput
- Behaves just like a cable modem to provider
- Advanced QoS and WAN traffic management
- Enables managed services for SMB market

- Frees network module slot
- Enables Metro Ethernet services delivery
- Up to 8 additional secure, routed Fast Ethernet ports



1- and 2-port routed Fast Ethernet HWICs

- Encrypts both IPsec and SSL VPN
- Supported on Cisco® 1841, 2800, 3800 routers
- Accelerates IPsec, ideal for GET VPN, DMVPN
- Increases IPsec VPN Performance in Cisco 3800
- Doubles SSL VPN throughput and user count

IPsec and SSL VPN acceleration AIM





McHenry Savings Bank

Your Bank... Your kind of People!



**A full-service financial institution
serving McHenry, Illinois, since 1955.**

- **McHenry upgraded its Cisco® Multi-Service routers to Cisco 2800 and 3800 series Integrated Services Routers to increase network reliability, performance, and services capabilities**
- **McHenry's converged voice, video, and data network reduced operating costs by \$46,000 in the first year of deployment**
- **McHenry uses the ISR with Cisco Unified CallManager. The ISR voice gateway (PSTN access) and remote branch PBX survivability features (SRST) have dramatically simplified McHenry's network operations while increasing network uptime**
- **The ISR empowers McHenry's networks, enabling it to compete on equal ground with much larger, multinational banks**

"With our Cisco network, we can operate with half the IT staff of banks of comparable size and can offer more services than they do." —Bryan Nash, Senior VP, IT, McHenry Savings Bank

The Empowered Branch



- **The widest selection of integrated services and applications—and more are added all the time—to address all business infrastructure needs**
- **Optimized WAN, services, and application execution for consistent branch experience**
 - Service and application interoperability
 - WAN and application optimization
- **Service innovation enabled by true integration**
- **True WAN flexibility**

Business unlimited starts here...

