

# **The Full Service Branch Security & VPN**

*Advanced Applications, Integrated Solutions*

**Cisco Korea**

## **Branch Security**

**Issues for Integrated Security**

**Cisco Benefits**

**Summary**

# Security

# 가

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The collage features several elements: a terminal window with ASCII art and the text "design by j0hn"; a diagram showing a "Specified SYN Generator" sending "SYN packets carrying Target's source IP" to multiple "TCP Servers", which then send "SYN/ACK packets from servers responding to spoofed SYN packets"; a photo of a laptop with a spray can; a book cover for "Hackers' Handbook, Million Edition"; and a screenshot of a network device configuration showing "ip access-list extended 100" and "deny tcp 192.168.0.1:8080 any eq 8080 deny".

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## Branch Security

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The diagram illustrates Branch Security architecture. It shows an Internet cloud connected to a VPN tunnel, which then connects to a central router. The router is configured with various security features like IPSec, F/W, IDS, Password, NAT/PAT, Access List Control, AAA, and SSH. The diagram also shows a Server Farm connected to the Internet cloud.

Internet :

VPN

IPSec  
F/W  
IDS  
Password

NAT/PAT  
Access List Control  
AAA, SSH

Internet

Server Farm

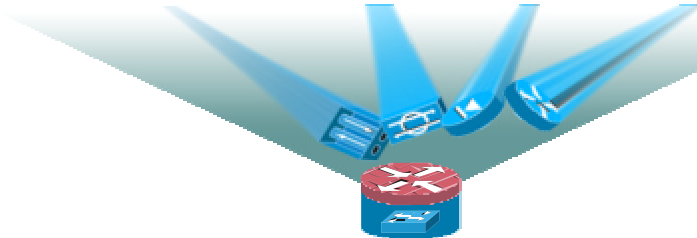
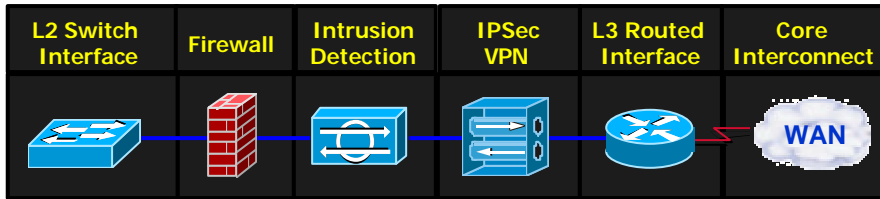
802.1x  
F/W  
IDS  
Password

uRPF(Anti Spoofing)  
Access List Control  
AAA

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# Integrated Security solution

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**Cisco IOS Security Router**  
VPN + Firewall + IDS + IP Routing

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Branch Security

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# Issue

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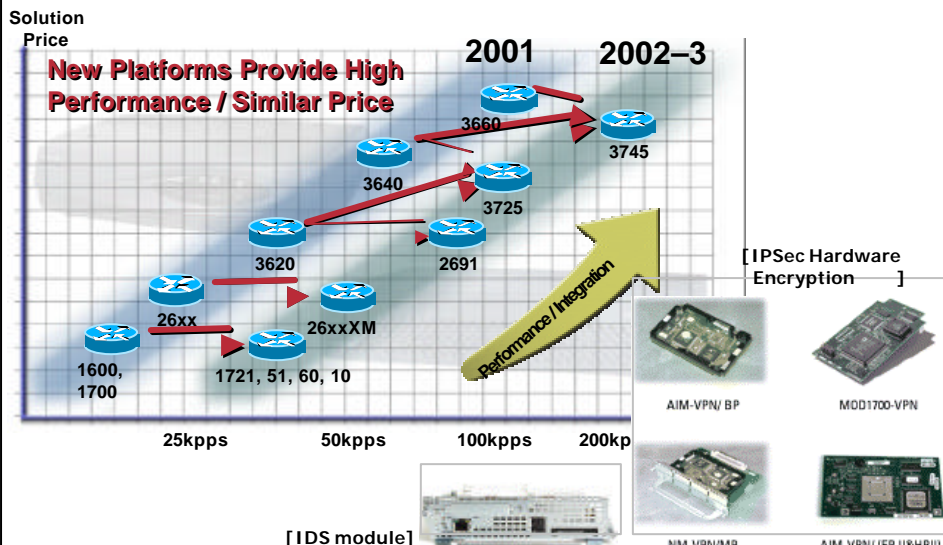
	Cisco VPN Routers	VPN Appliances
IPSec & PKI Support	✓	✓
Routing Across VPN	✓	✗
Multicast Across VPN	✓	✗
Multi-Protocol Support	✓	✗
Voice-Ready VPN	✓	✗
Application-Aware QoS	✓	Limited
Integrated Firewall	✓	Some
Integrated WAN Connectivity	✓	Limited
Single-Box Solution	✓	✗

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# Issue

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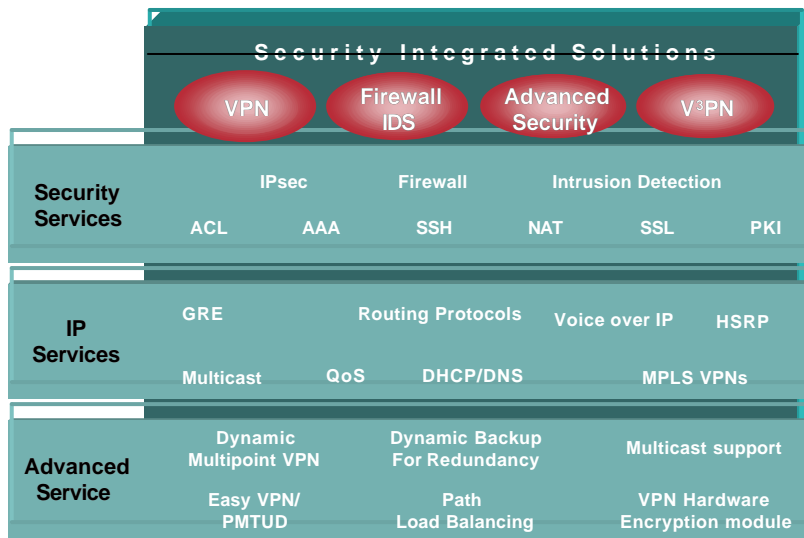
# Branch Security

## Issues for Integrated Security

### Cisco Benefits

### Summary

## Security in IOS – Advanced Service



# Advanced Service

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- ❑ 802.1x
- ❑ With Routing
  - Dynamic Backup for Redundancy
  - Traffic Type
  - Path Load Balancing
- ❑ Dynamic Multipoint VPN
- ❑ Multicast Support
- ❑ Advanced VPN feature
  - DF bit & PMTUD
  - Easy VPN
  - V<sup>3</sup>PN
- ❑ Management
  - SAA(Service Assurance Agent)
  - SDM(Security Device Manager)

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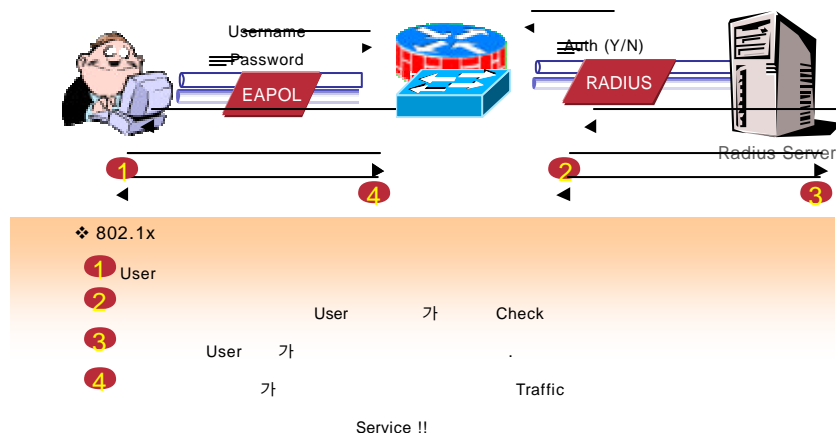
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## 802.1x – LAN Switch/Wireless LAN

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❖ User

– IEEE 802.1x Network Authentication

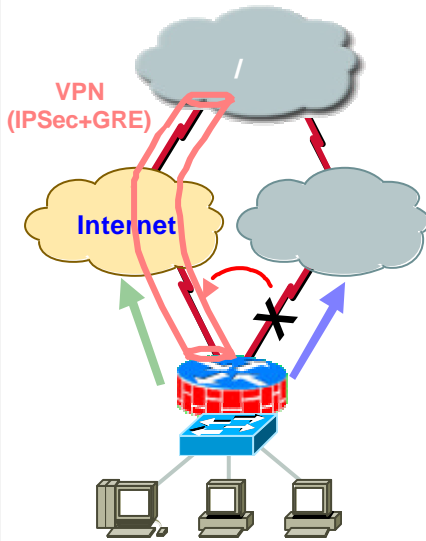


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# With Routing

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- ☐
- ☐
- ☐
- ☐ MHSRP
- ☐ Application

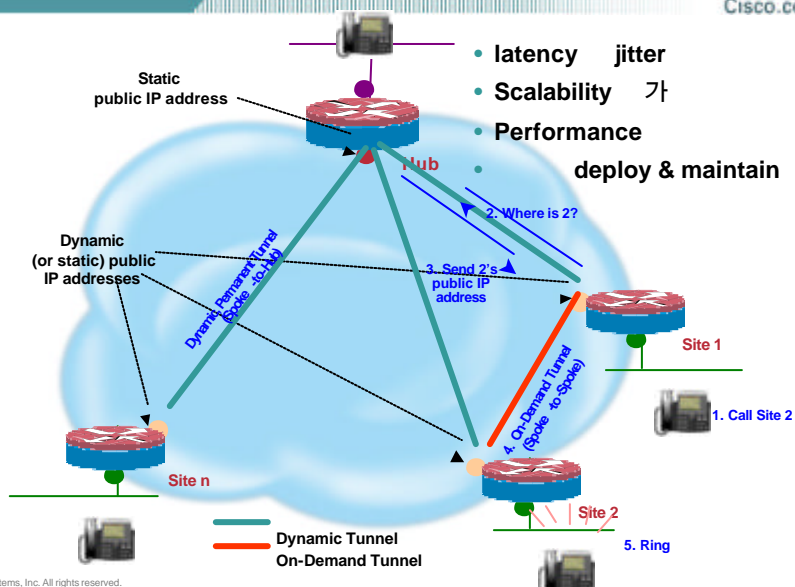
가  
Back-Up  
가

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# Dynamic Multipoint VPN

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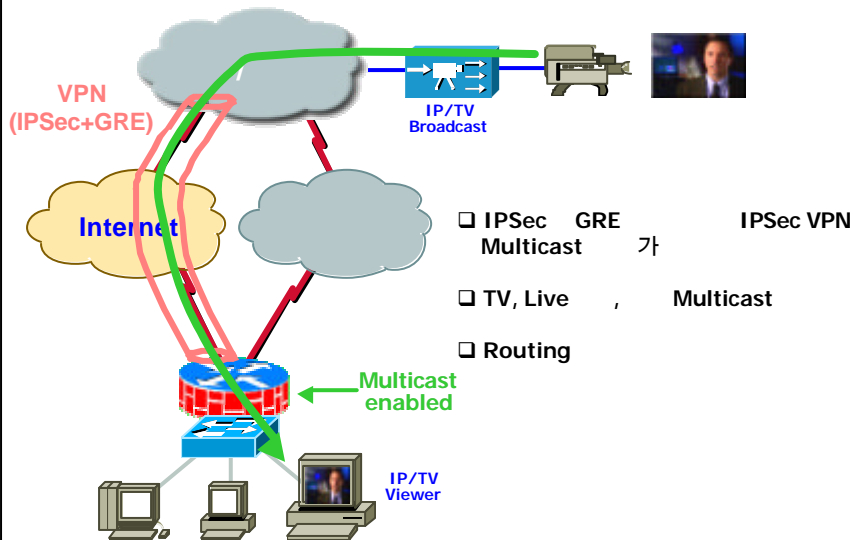


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# Multicast Support

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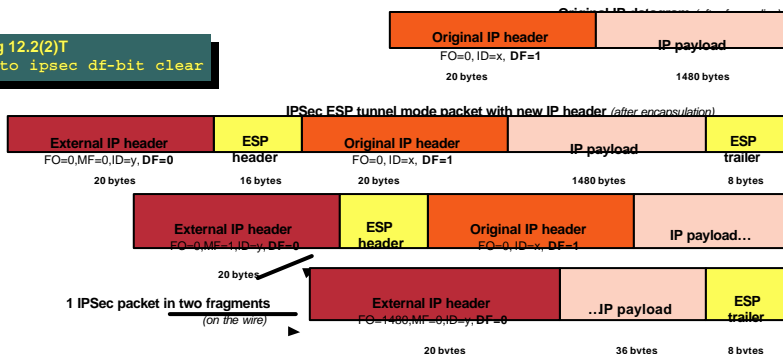
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# DF Bit & PMTUD

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Clearing DF : IPsec & PMTUD

Using 12.2(2)T  
crypto ipsec df-bit clear



IPsec	Application
IPsec Overhead	Fragmentation
Clear	DF Bit가 Setting
Application	DF bit Setting

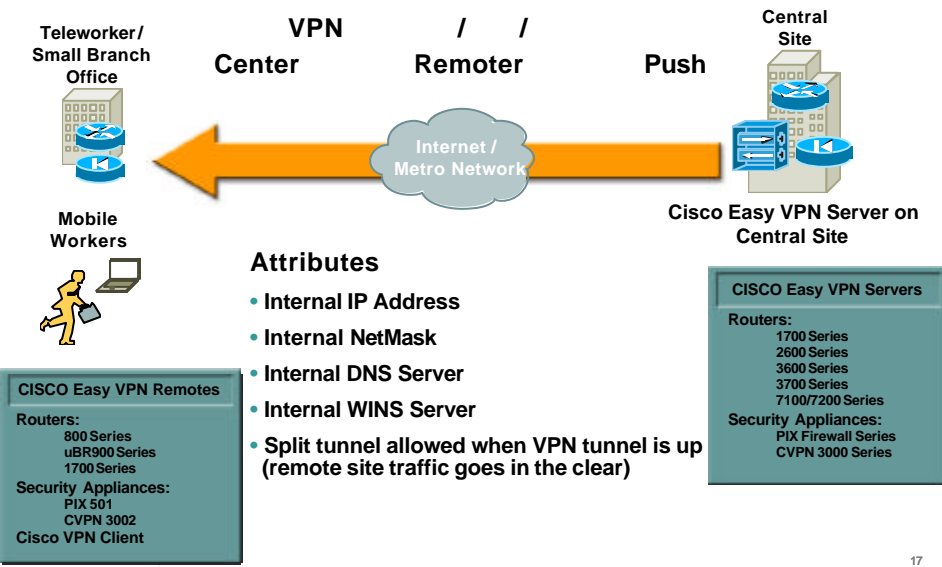
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# Easy VPN

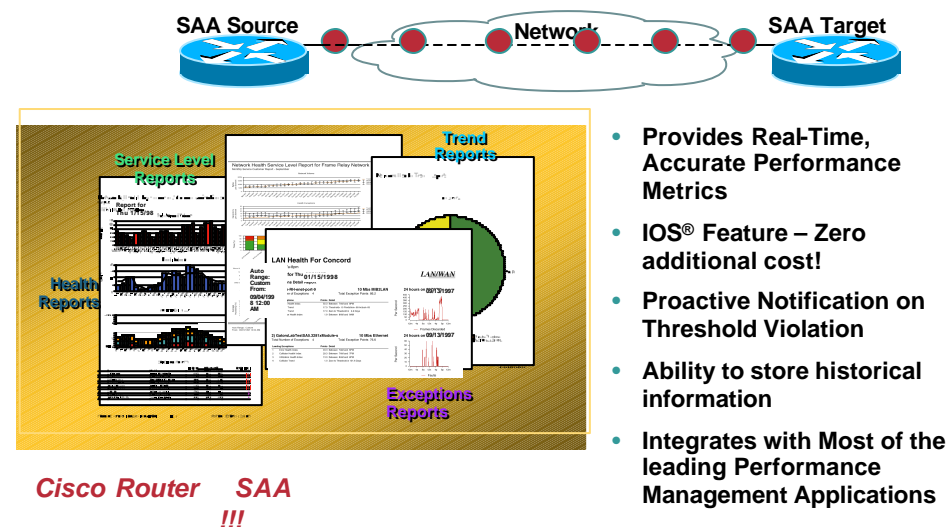
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# High Class Management - SAA

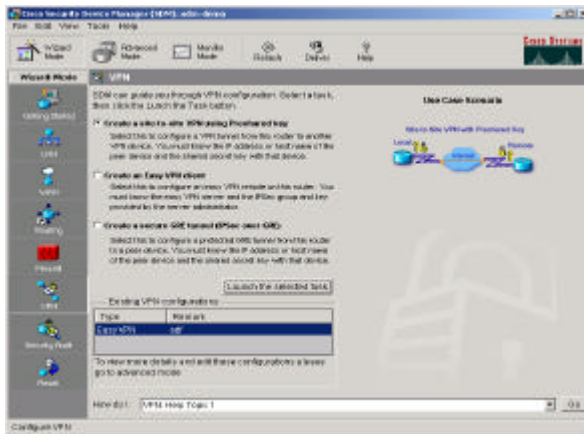
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# SDM(Security Device Manager)

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- ❑ Easy to Use
- ❑ Element manager
- ❑ Focused on Security
- ❑ For IOS Platform (Router C800 ~ C3700)

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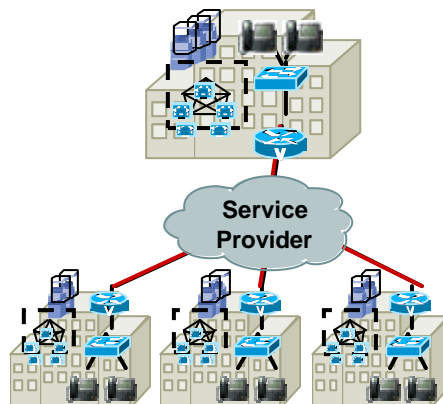
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## V<sup>3</sup>PN

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### Voice and Video Enabled IPsec VPNs (V<sup>3</sup>PN)

- Cisco Powered Network (CPN) Service Provider Partners carry Voice/Video with toll quality SLAs
- New offerings provide lower WAN circuit costs/higher BW
- Nomadic branch– allows rapid deployment and provisioning
- Same network connectivity at home as in corp office (Voice, Video and data)



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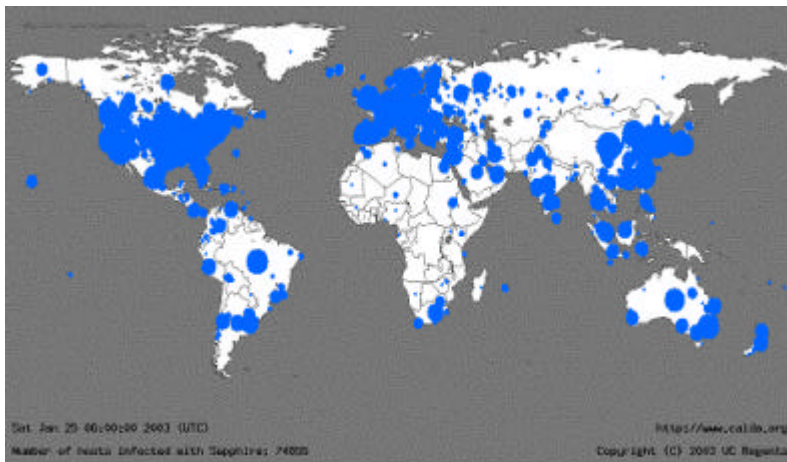
# Branch Security

## Issues for Integrated Security

### Cisco Benefits

### Summary

## Security Impact for Business : The SQL Slammer Worm



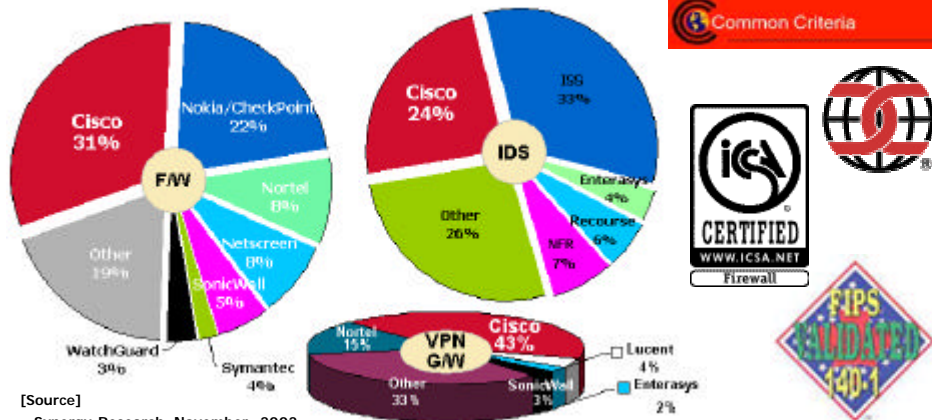
- Infections doubled every 8.5 seconds
- Spread 100X faster than Code Red
- At peak, scanned 55 million hosts per second

# Integration of **BEST** Security Solutions

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[2002 Q3 Security Market Share]

[Security Certification]



[Source]

- Synergy Research, November, 2002
- Infonetics Research, November, 2002

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## CISCO SYSTEMS



EMPOWERING THE  
INTERNET GENERATION