© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Selecting Network Security Solutions

Evaluating Security Solutions for the Network

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Network Devices Supporting Integrated Security

- Cisoc IOS router security
- PIX security appliance
- Adaptive security appliance (ASA)
- VPN concentrator
- Intrusion prevention system
- Catalyst service modules
- Endpoint security

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Integrated Security for Cisco IOS Routers

- Cisco IOS Firewall
  - Stateful multiservice application-based filtering
- Cisco IOS IPS
  - In-line deep-packet inspection
- Cisco IOS IPsec
  - Data encryption at the IP packet level
- Cisco IOS trust and identity
  - AAA
  - PKI
  - SSH
  - SSL

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Example: Security Hardware Options for ISRs

- Built-in VPN acceleration
- Voice security options
- High-performance AIM
- Cisco IDS Network Module
- Cisco Content Engine Module
- Cisco Network Analysis Module

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Security Appliances

- VPN concentrator
  - IPsec and SSL VPN support
- PIX security appliance
  - Rich application and protocol inspection
  - Integrated site-to-site and remote access VPNs
- ASA, a multifunction security appliance
  - Stateful firewall of PIX appliance, plus
  - Adaptive threat defense capabilities
    - Application security
    - Anti-X defenses
    - IPS
  - Advanced integration modules

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Intrusion Prevention Systems

- In line (IPS) or passive (IDS)
- Multivector threat identification
- Network speeds from multiple T1s to 1 Gbps
  - IPS 4215 sensor protects up to 65 Mbps of traffic
  - IPS 4240 sensor protects up to 250 Mbps of traffic
  - IPS 4255 sensor protects up to 500 Mbps of traffic
  - IPS 4260 sensor protects up to 1 Gbps of traffic

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Cisco Catalyst Service Modules

- Cisco Firewall Services Module
- Cisco Intrusion Detection System Services Module
- Cisco SSL Services Module
- Cisco IPSec VPN SPA
- Cisco Traffic Anomaly Detector Module
- Cisco Anomaly Guard Module
- Cisco Network Analysis Module

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Cisco Security Agent

- Spyware and adware protection
- Protection against buffer overflows
- Distributed firewall capabilities
- Malicious mobile code protection
- Operating-system integrity assurance
- Application inventory
- Audit log consolidation

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Securing the Enterprise Network

- Embed Self-Defending Network features throughout the network in:
  - The enterprise campus
  - The enterprise data center
  - The enterprise edge
- Use Self-Defending Network technologies, including:
  - Identity and access control
  - Threat defense
  - Infrastructure protection
  - Security management

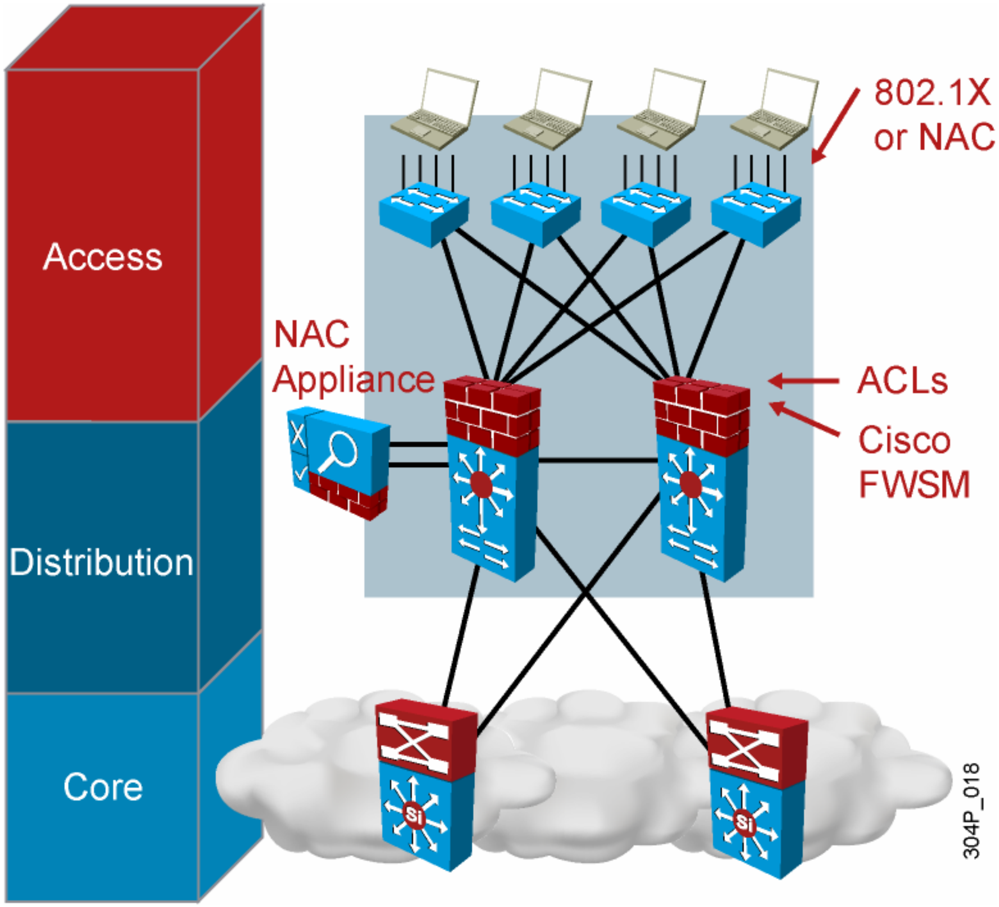
© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Deploying Security in the Enterprise Campus—Identity and Access Control



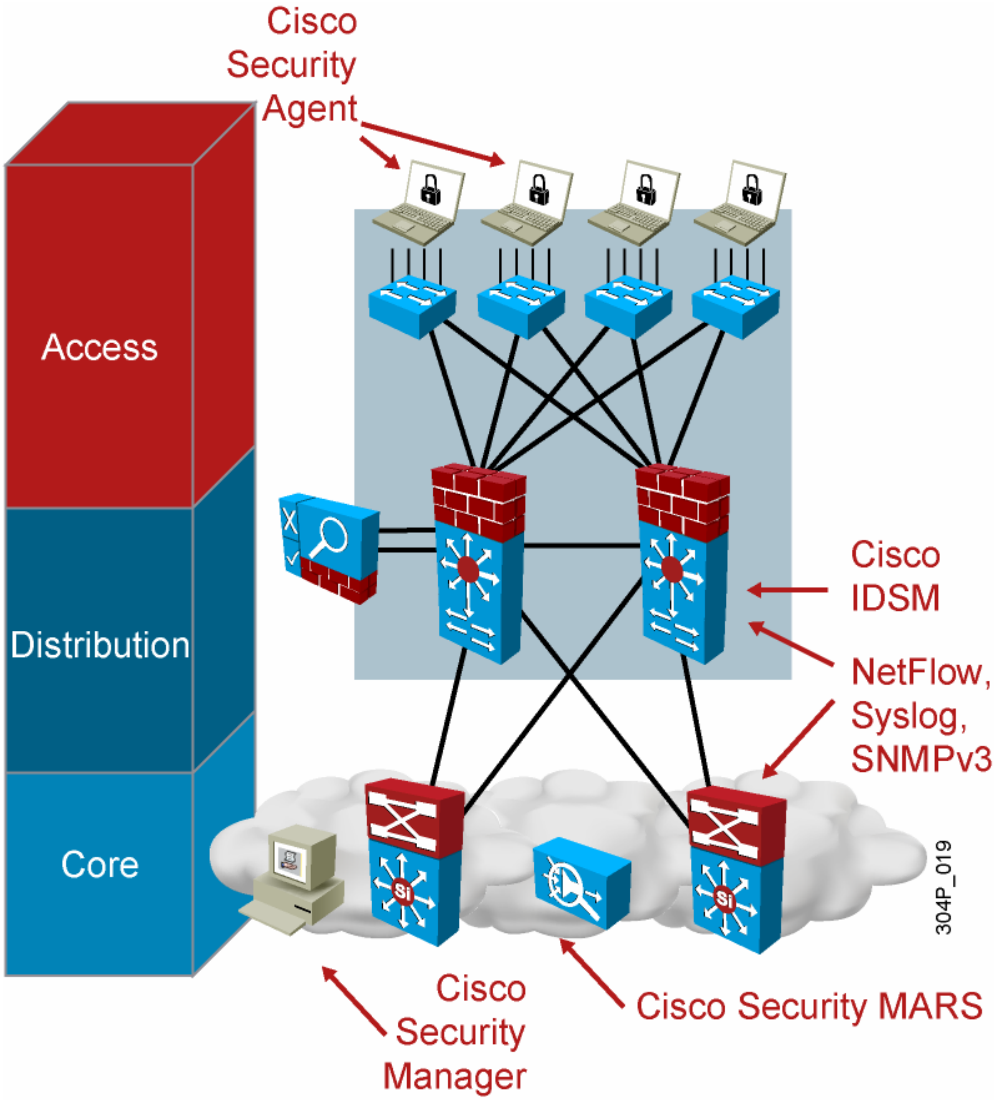
- 802.1X or NAC
- NAC appliance
- ACLs
- Firewall
  - Stateful inspection
  - Application inspection

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Campus—Threat Detection and Mitigation



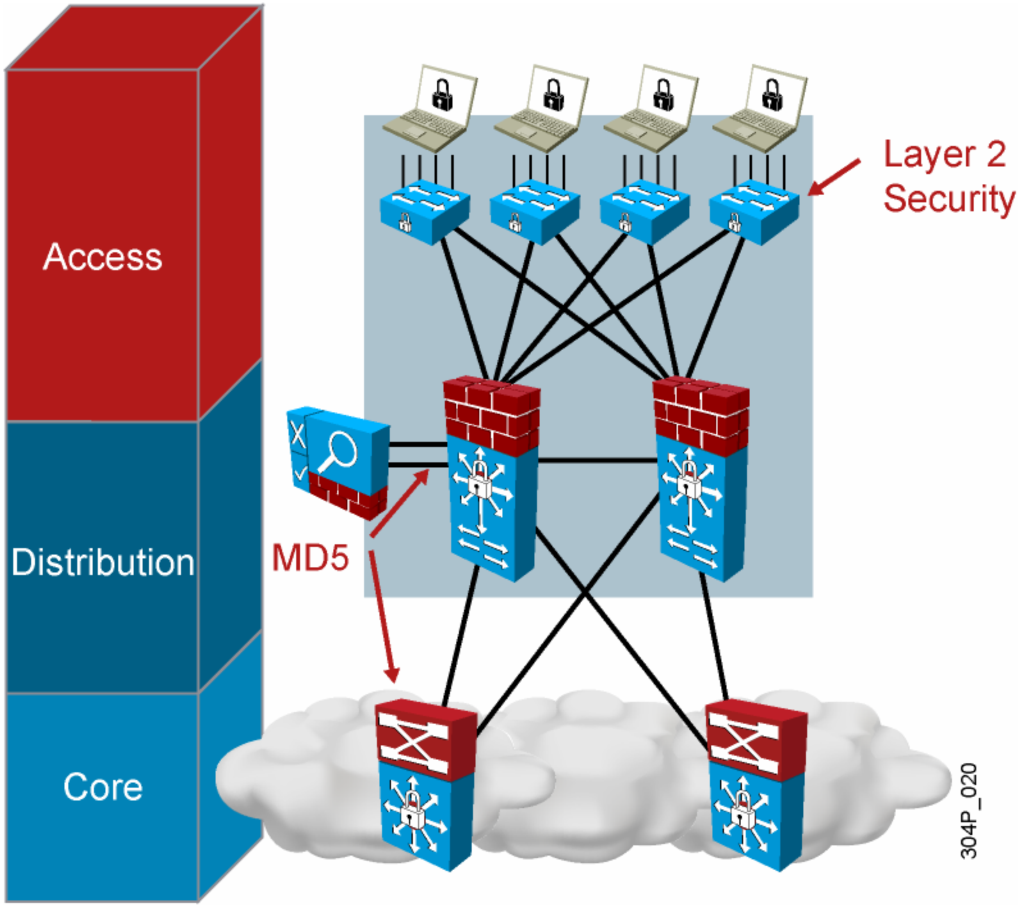
- NetFlow
- Syslog
- SNMP
- Host IPS (Cisco Security Agent)
- Network IPS
- Cisco Security MARS, Cisco Security Manager

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Campus – Infrastructure Protection



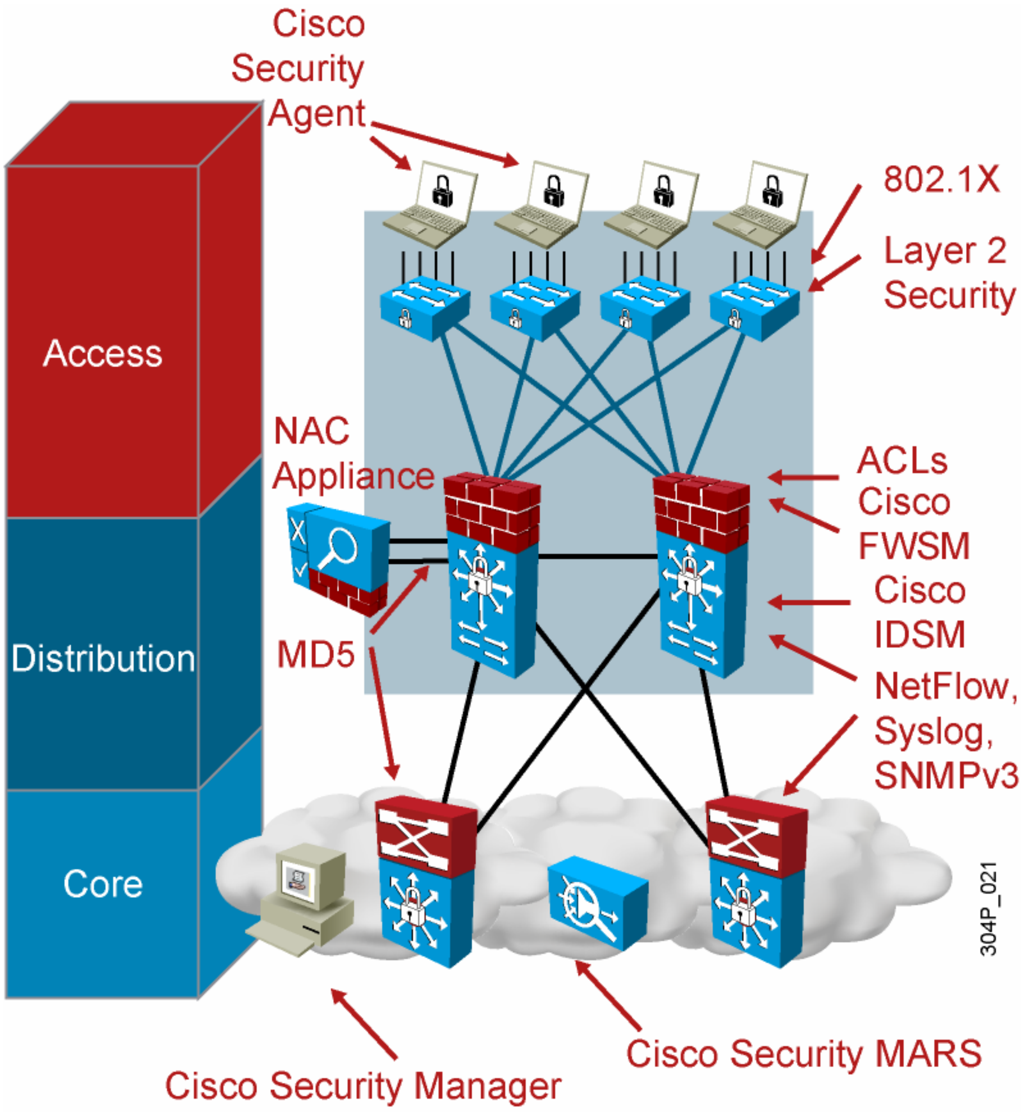
- AAA
- SSH
- SNMPv3
- IGP or EGP Message Digest 5
- Layer 2 security features

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Campus—Summary



Identity and access control:

- 802.1x, NAC, ACLs, firewalls

Threat detection and mitigation:

- NetFlow, syslog, SNMP, Cisco Security-MARS, Network IPS, Host IPS

Infrastructure protection:

- AAA, SSH, SNMPv3, IGP or EGP MD5, Layer 2 security features

Security management

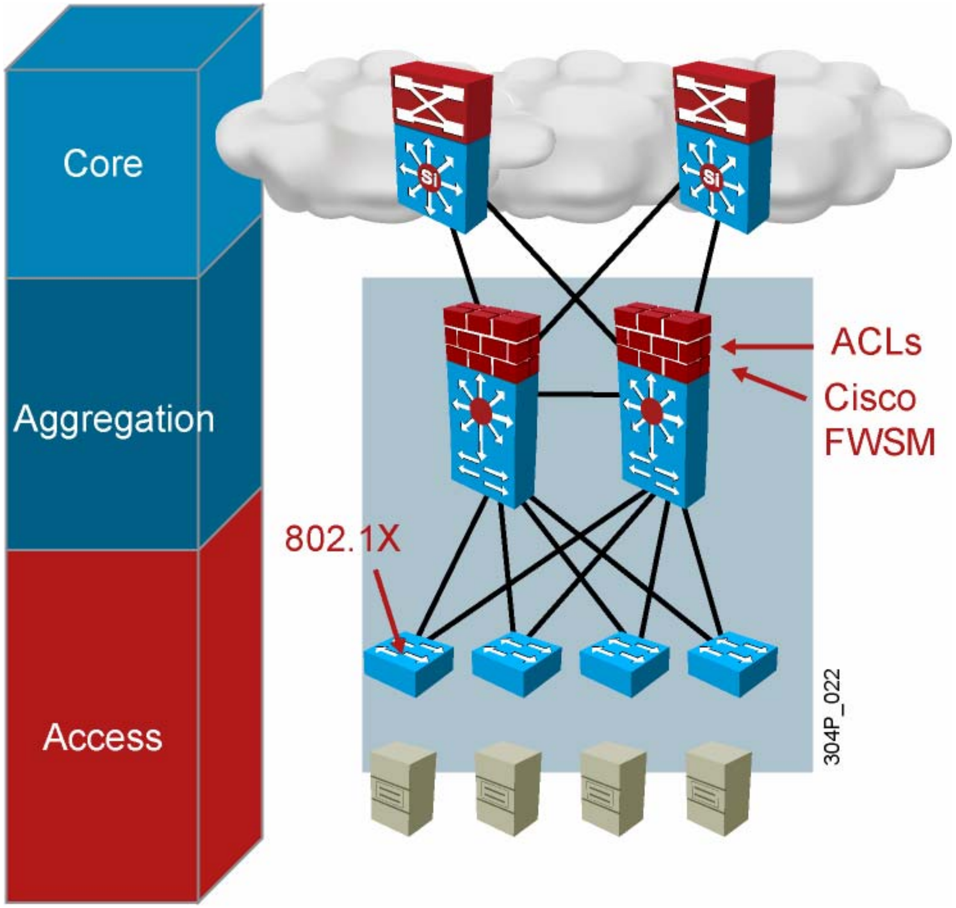
- Cisco Security Manager, Cisco Security MARS

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Data Center – Identity and Access Control



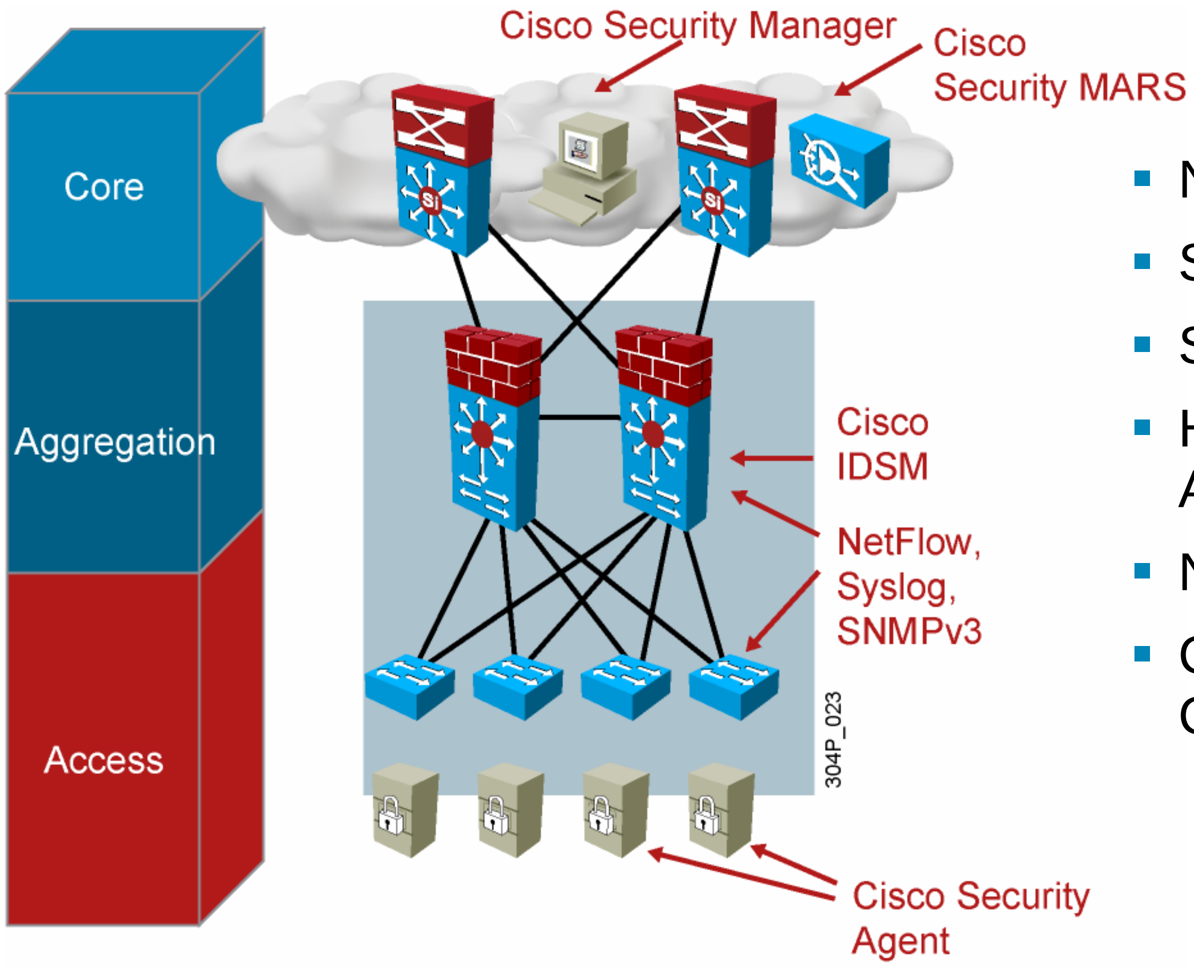
- 802.1X
- ACLs
- Firewalls

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Data Center—Threat Detection and Mitigation



- NetFlow
- Syslog
- SNMP
- Host IPS (Cisco Security Agent)
- Network IPS
- Cisco Security MARS, Cisco Security Manager

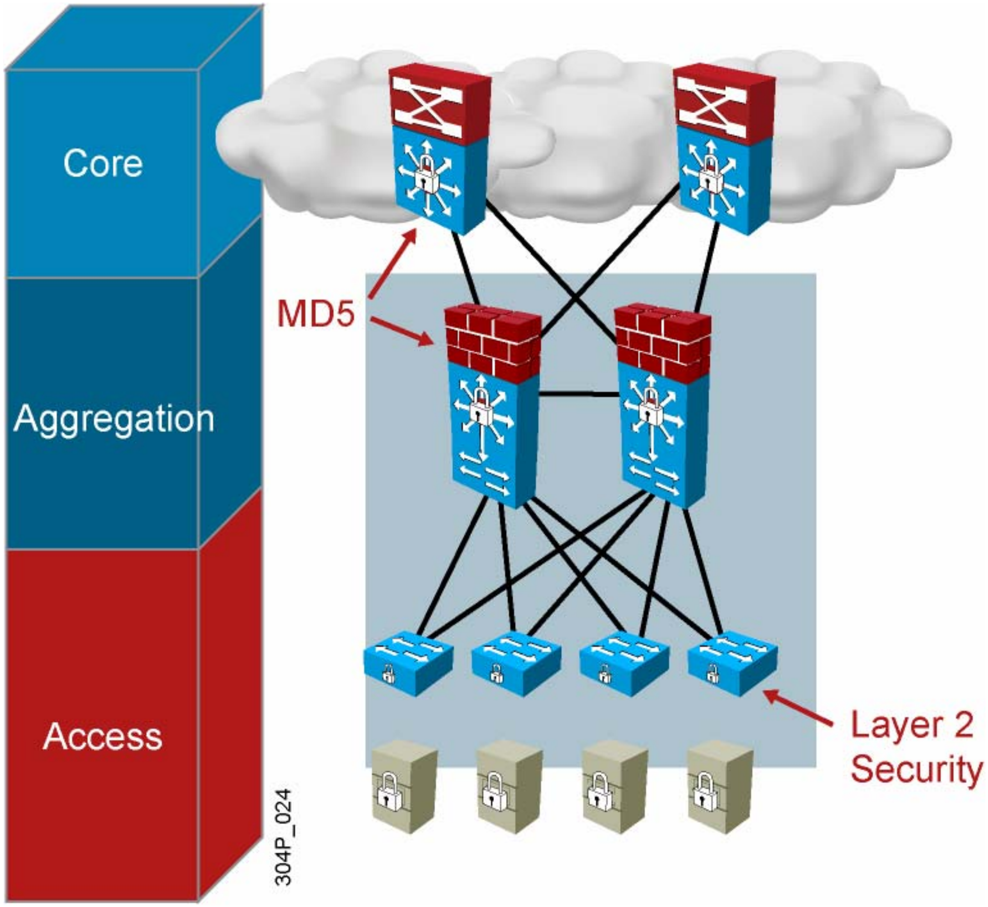
© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Deploying Security in the Enterprise Data Center—Infrastructure Protection



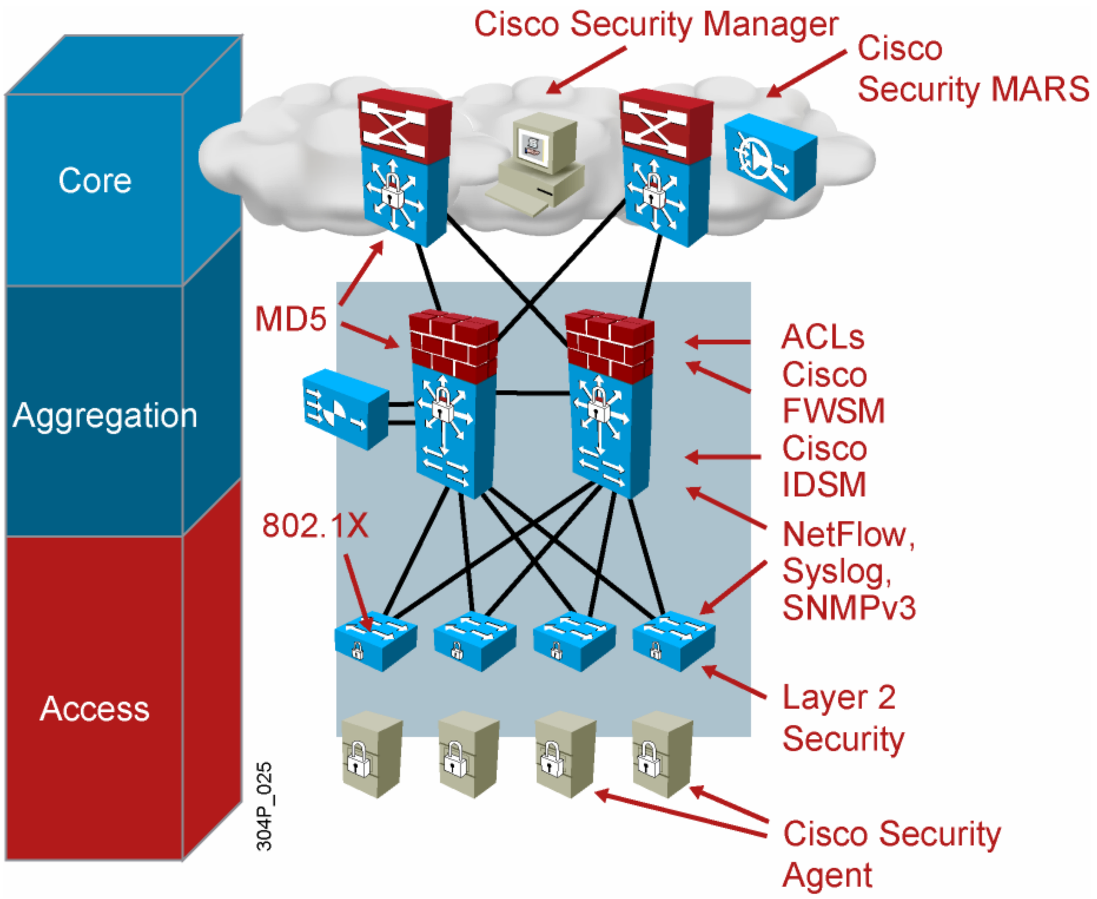
- AAA
- SNMPv3
- SSH
- IGP or EGP MD5
- Layer 2 security features

© 2007 Cisco Systems, Inc. All rights reserved.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

Deploying Security in the Enterprise Data Center—Summary



Identity and access control:

- 802.1X, ACLs, firewalls

Threat detection and mitigation:

- NetFlow, syslog, SNMP, Cisco SecurityMARS, Network IPS, Host IPS

Infrastructure protection:

- AAA, SSH, SNMPv3, IGP or EGP MD5, Layer 2 security features

Security management

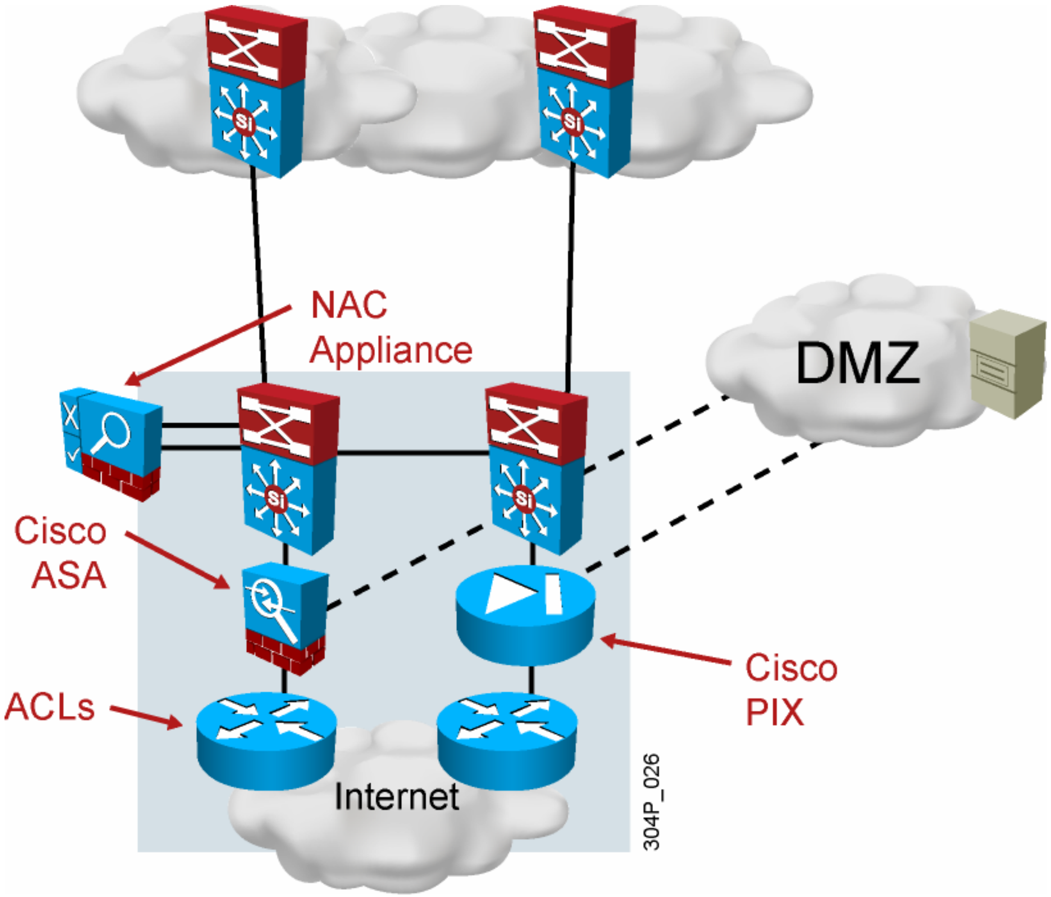
- Cisco Security Manager, Cisco Security MARS

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Edge—Identity and Access Control



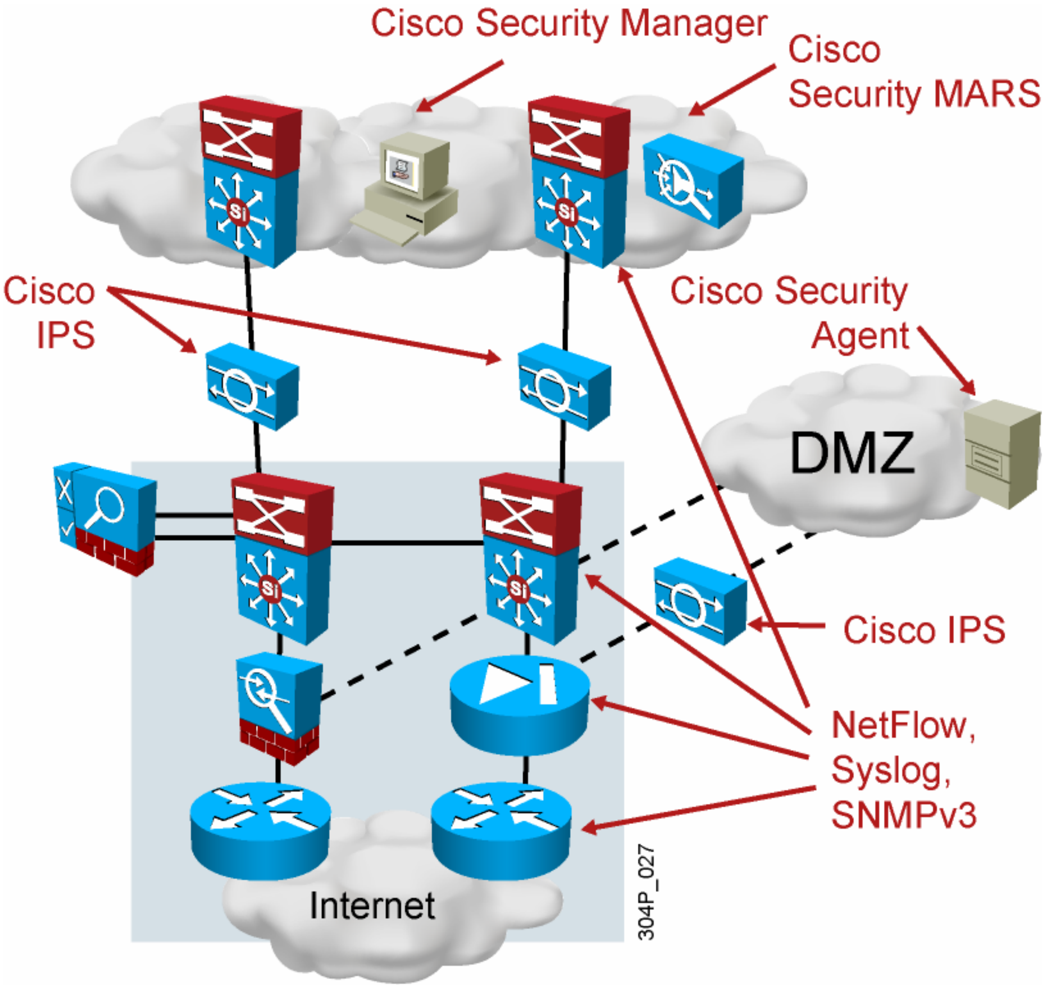
- ACLs
- Firewall
- IPSec or SSL VPN
- NAC appliance

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Edge—Threat Detection and Mitigation



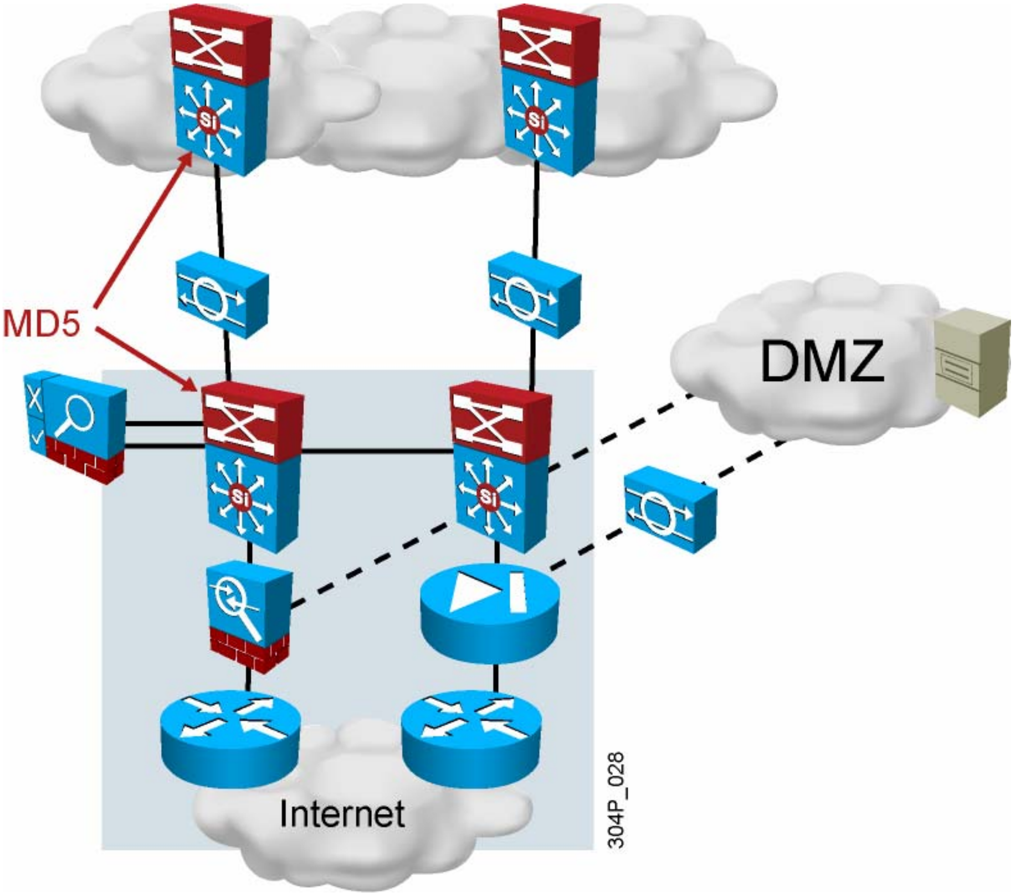
- NetFlow
- Syslog
- SNMP
- IPS (host or network)
- Cisco Security MARS, Cisco Security Manager

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Edge—Infrastructure Protection



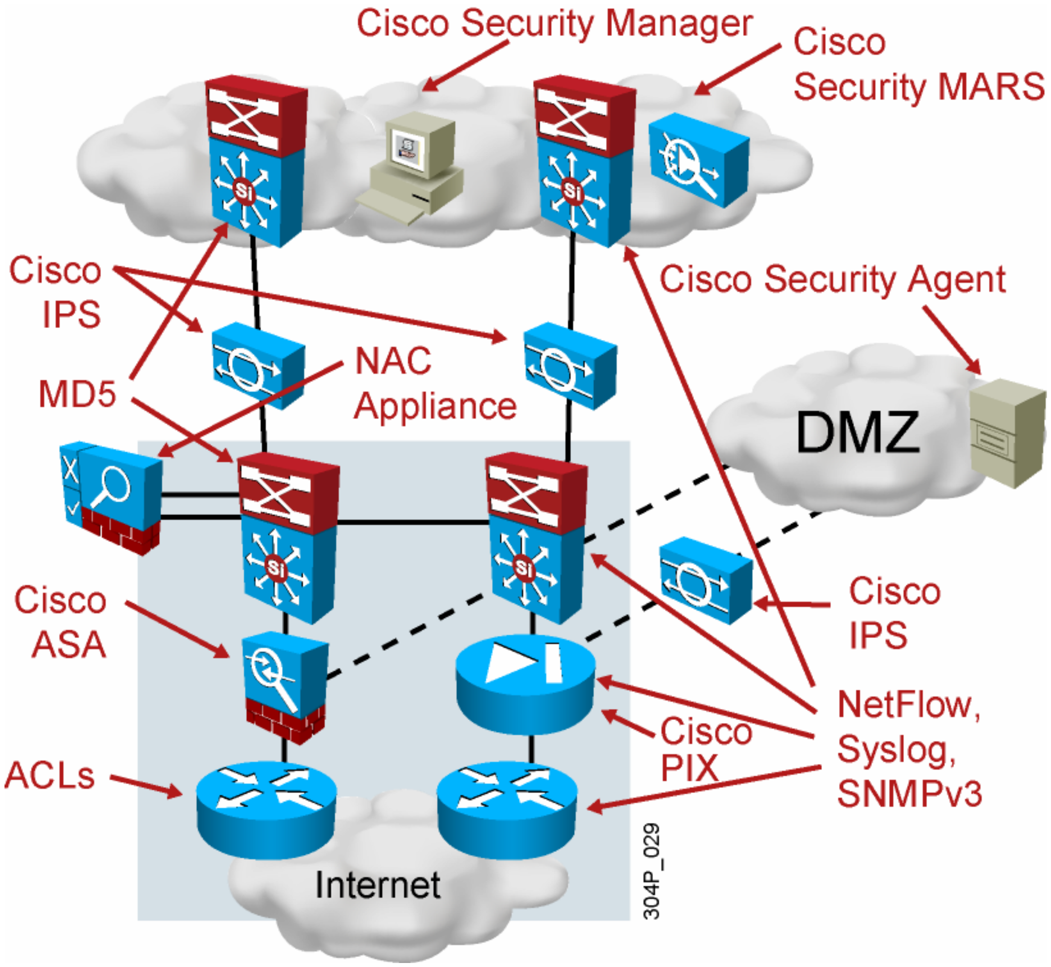
- SNMPv3
- AAA
- SSH
- IGP or EGP MD5

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Deploying Security in the Enterprise Edge – Summary



Identity and access control:

- Firewalls, IPSec, SSL VPN, ACLs

Threat detection and mitigation:

- NetFlow, syslog, SNMP, Cisco Security MARS, Network IPS, Host IPS

Infrastructure protection:

- AAA, CoPP, SSH, RFC 2827, SNMPv3, IGP/EGP MD5

Security management

- Cisco Security Manager, Cisco Security MARS

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

Summary

- Cisco has integrated security features into the network devices, including ACLs, firewall support, VPNs, IPS, and event logging.
- The Cisco Self-Defending Network elements and Cisco network devices with integrated security are deployed throughout the enterprise network.

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Security Design Review

- Define the security requirements.
- Define the security policy.
- Integrate security in the network design:
  - Implement trust and identity management to secure network access and admission.
  - Deploy threat defense to provide a defense against known and unknown attacks.
  - Use secure connectivity for encryption and authentication on untrusted networks.
  - Deploy security management to scale policy administration and enforcement.
- Select locations to deploy appropriate Cisco Self-Defending Network elements and Cisco network devices.

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc., for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.

www.CareerCert.info

Module Summary

- Network security is a continuous process built around a security policy and integrated with network design.
- The Cisco Self-Defending Network is based on a secure network platform and uses trust and identity management, threat defense, and secure connectivity to integrate security into the network.
- Cisco Self-Defending Network elements and Cisco network devices with integrated security are deployed throughout the enterprise network.

© 2007 Cisco Systems, Inc. All rights reserved.

Please purchase PDF Split-Merge on www.verypdf.com to remove this watermark.

The PDF files and any printed representation for this material are the property of Cisco Systems, Inc. for the sole use by Cisco employees for personal study. The files or printed representations may not be used in commercial training, and may not be distributed for purposes other than individual self-study.