



Cisco Security Solutions for Education



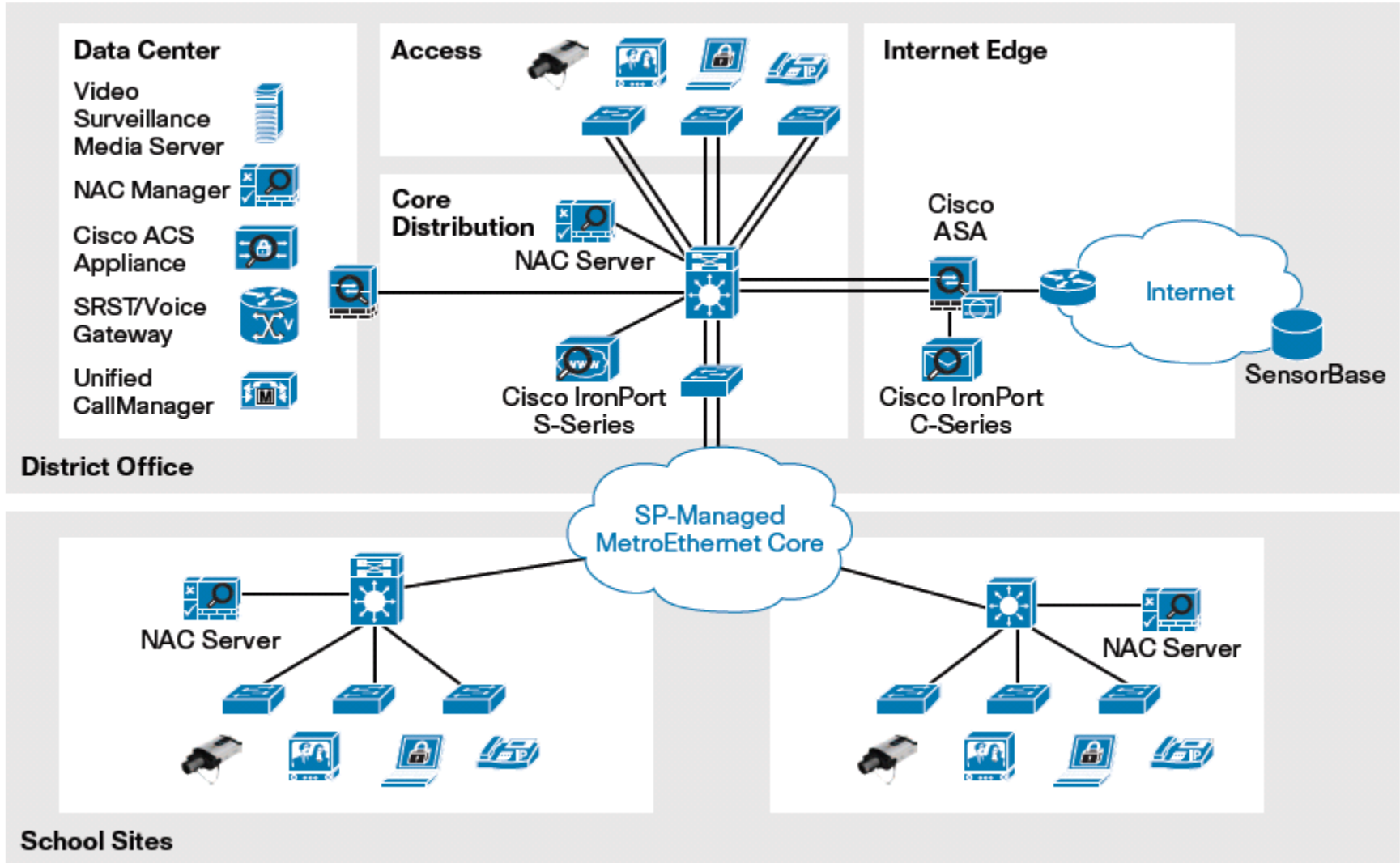
October 2009

Growing Need for Online Security

- 21st century education: a key for sustained economic growth and prosperity
- Internet technologies: foundation for education success
- Compliance, cyber crime



Cisco Validated Designs for Education



Layered Security

Security Needs



Student records and personal data

Protect critical resources and data



Safe online learning environment

Secure the web and school network



Policy and control

Provide enforcement and accountability

Goals

Technologies

- Firewall
- Web security
- Network admission control

Cisco Solutions

Technologies

- Firewall
- Web security
- Network admission control

Cisco Offers

- Cisco Adaptive Security Appliance (ASA)
- Cisco IronPort™ Web Security Appliance (WSA)
- Cisco Network Admission Control (NAC)

Cisco Advantage

- Industry-leading solutions
- Market success
- Customer validation
- World-class support and services

Cisco ASA for Education

Supporting 21st-Century Education

- Provides strong protection for the network by quickly detecting and responding to threats and risks
- Keeps sensitive and confidential information safe and prevents financial loss due to data breach or leakage
- Guards valuable assets and intellectual properties
- Prevents unauthorized access to certain website classifications
- Assists in compliance with regulatory requirements



Cisco ASA 5500 Series Adaptive Security Appliances

Delivering Leading Threat Defense and VPN Services

Provides Converged Threat Defense, Flexible Secure Connectivity,
Lower Operation Costs, and Unique Adaptive Design to Combat Future Threats

Market-Leading Firewall Services

- Integrates and extends the number-1 deployed firewall technology from Cisco PIX® security appliances
- Built on the experience of more than one million Cisco PIX devices deployed worldwide and more than 10 years of innovation

Market-Leading VPN Services

- Integrates and extends the number-1 deployed remote-access VPN technology from Cisco VPN 3000 Series Concentrator Software and Cisco PIX security appliances, offering both SSL and IPsec VPN services

Market-Leading IPS Services

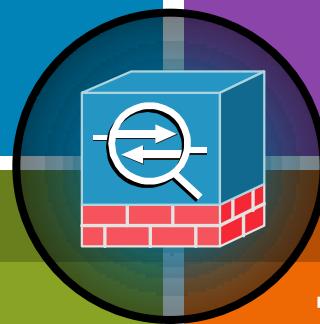
- Integrates and extends the number-1 deployed IPS and IDS technology from the Cisco® IPS 4200 Series
- Provides comprehensive security from directed attacks and many other threats

Market-Leading Content Security

- Integrates and extends the number-1 deployed gateway content security technology to protect from viruses, spyware, spam, phishing, and websites that may decrease employee productivity

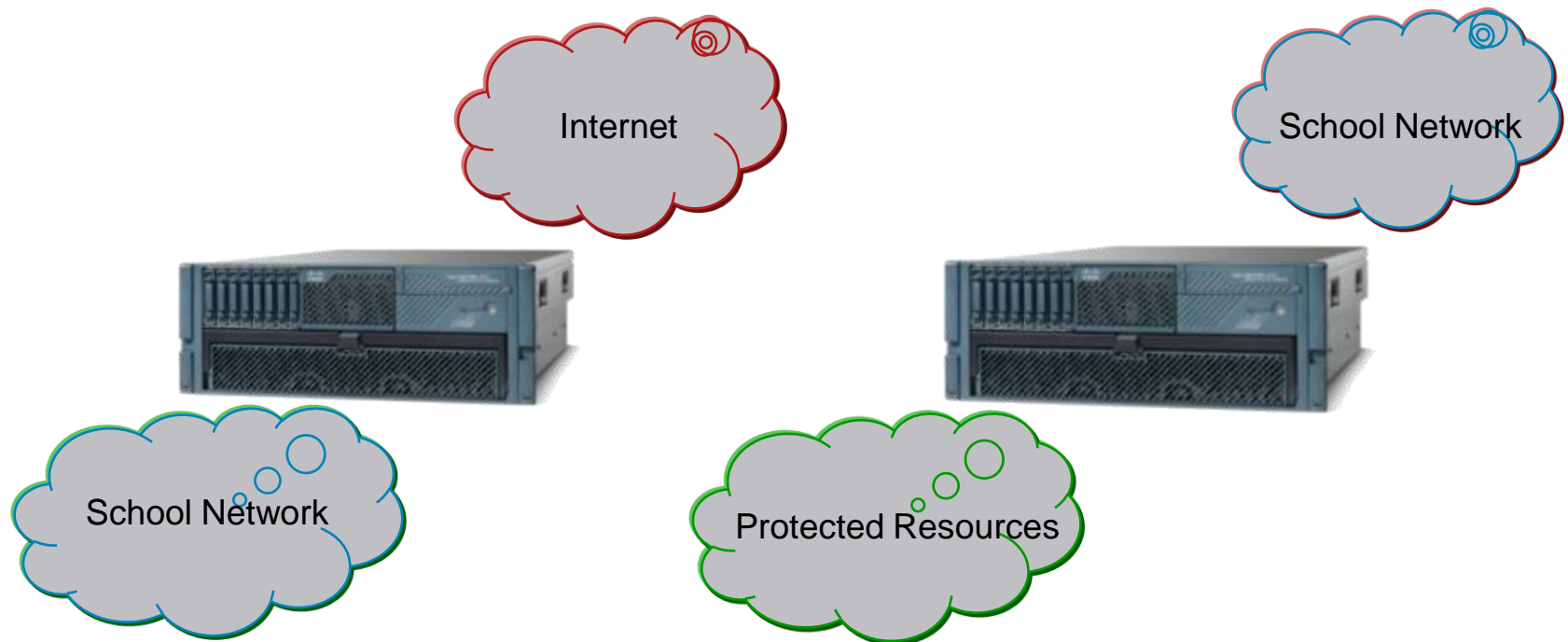
Market-Leading Secure Unified Communications

- Comprehensive access control, threat protection, network policies, service protection, and voice and video confidentiality for real-time unified communications traffic



Extended Firewall Deployability

- Performance enhancement for well-understood traffic
- Reduced processing load for asymmetric traffic flows
- Protect school networks and critical resources



Cisco IPS with Global Correlation

Customer Benefits

- Decrease organizational risk of data theft
 - Stop attacks with increasing accuracy
- Lower operational cost
- Increase security team productivity by automating threat response
- Optimize existing IPS and/or ASA investments



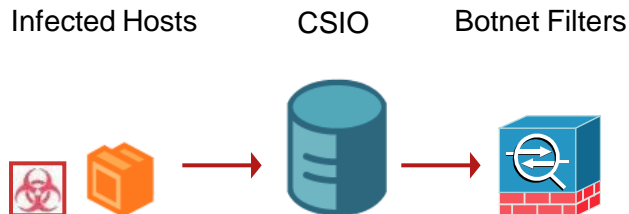
Cisco ASA Botnet Traffic Filter

Leveraging Comprehensive Threat Intelligence

Cisco ASA 5500 Series



Leveraging Comprehensive Threat Intelligence



- Provides real-time detection leveraging the Cisco SIO botnet list
- Detects infected client devices by monitoring bot activities

Cisco ASA

- Industry leader
- A complete, versatile security appliance that includes firewall, VPN, IPS, Content Security.
- Scalable solution with flexible deployment options
- Specific feature support for education



Cisco IronPort WSA for Education

Protecting Students from Harmful Content

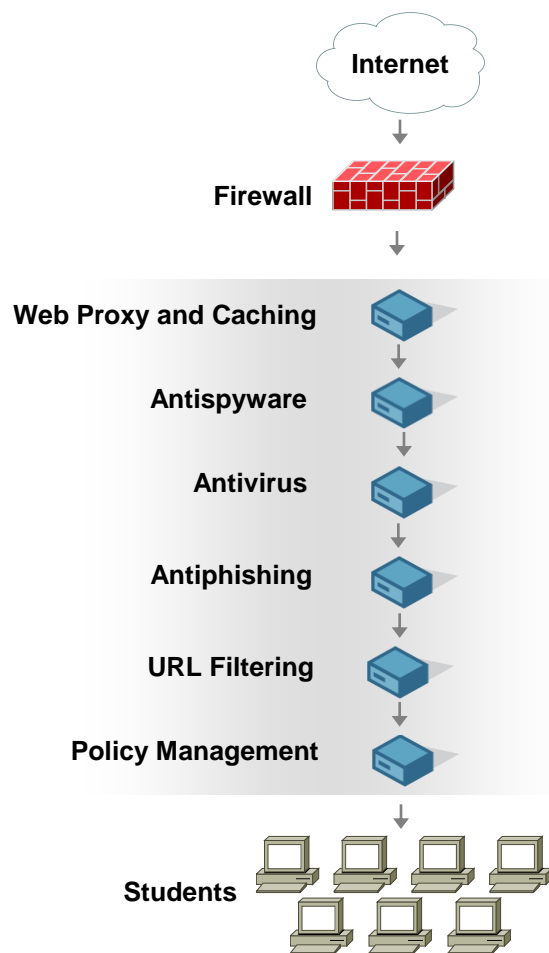
- Secure and control access to the Internet
- Protect against malware, spyware, and zero-day threats
- Enforce acceptable-use policies for Internet use, including role-based administration and access



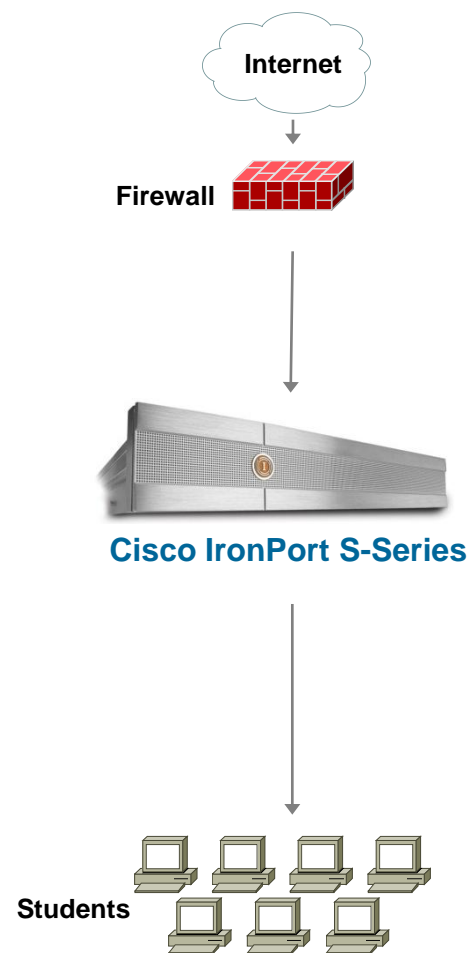
How Cisco IronPort WSA Works

Consolidation Fosters Operational Efficiency

Before Cisco



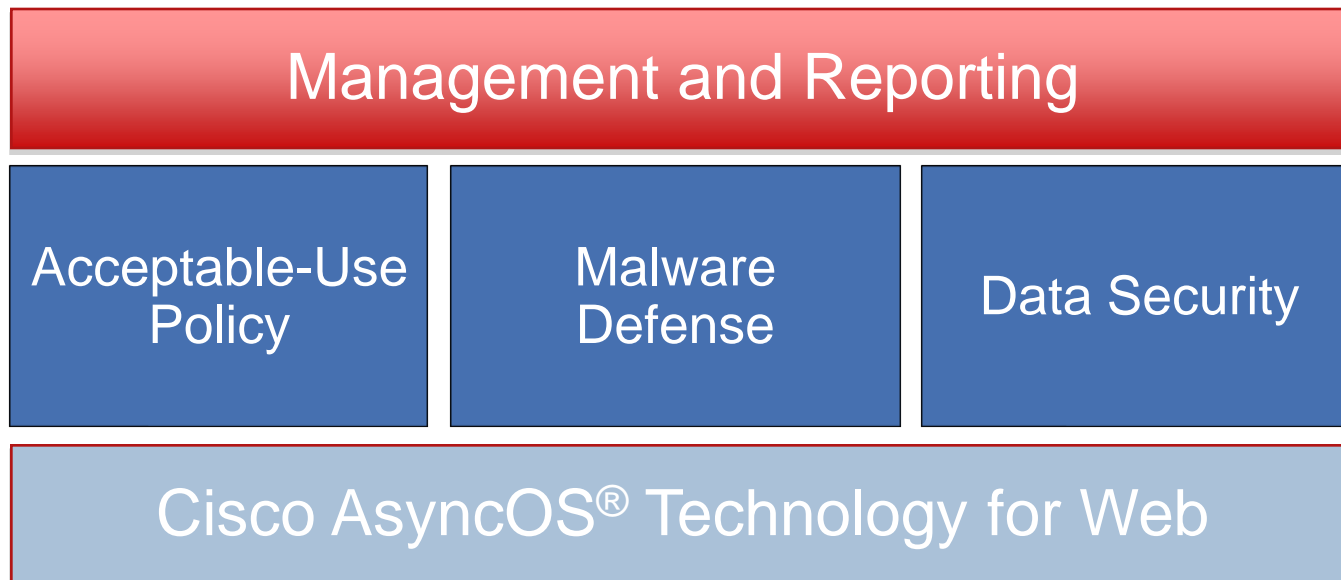
After Cisco



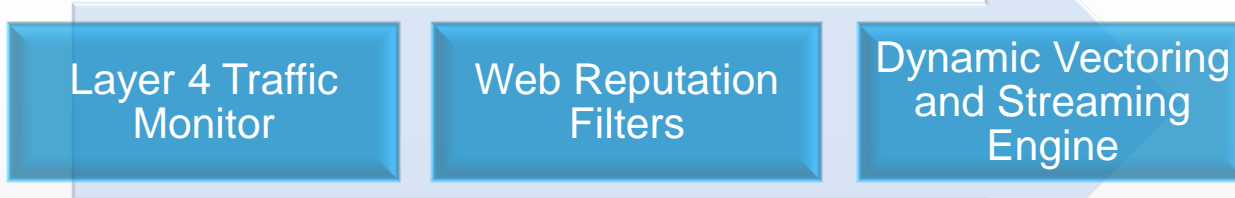
Cisco IronPort S-Series

Powerful, Secure Web Gateway Solution

- Most effective defense against web-based malware
- Visibility and control for acceptable use and data loss
- High performance to help ensure best end-user experience
- Integrated solution offering outstanding TCO



Cisco IronPort WSA Protects School Users



- Detects malicious botnet traffic across all ports
- Blocks 70% of known and unknown malware traffic at connection time
- Blocks malware based on deep content analysis



Cisco IronPort WSA Identifies Existing Malware Infections

Preventing Phone-Home Traffic

- Cisco IronPort Layer 4 Traffic Monitor

 - Scans all traffic, all ports, and all protocols

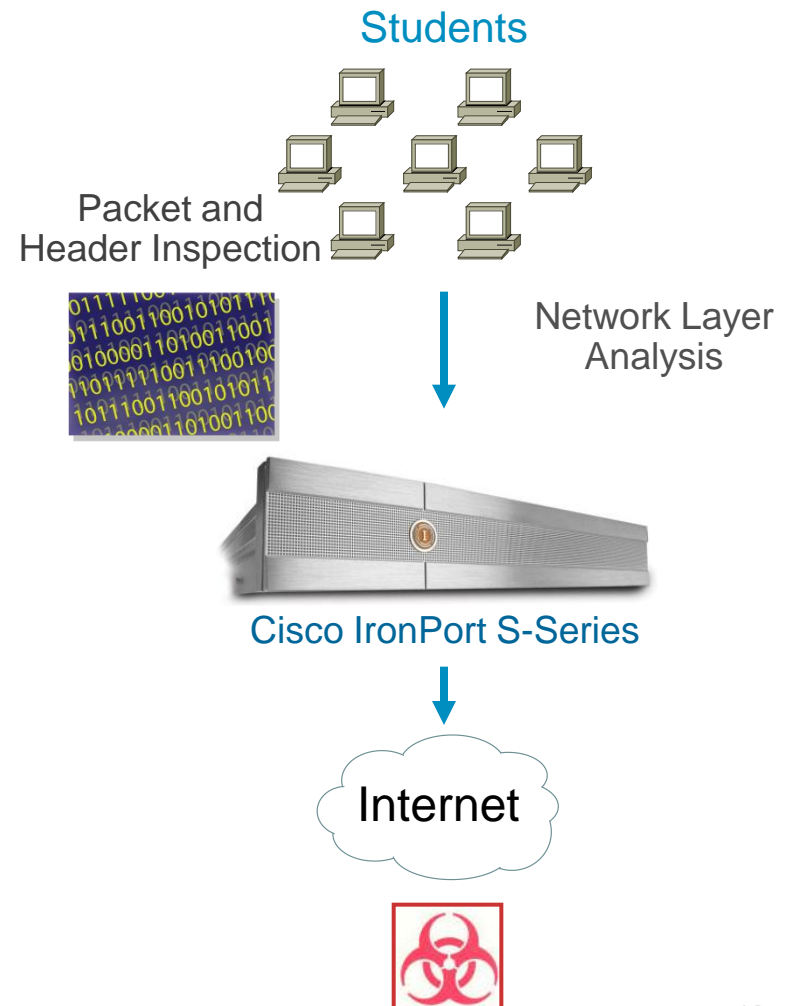
 - Detects malware bypassing port 80

 - Prevents botnet traffic

- Powerful anti-malware data

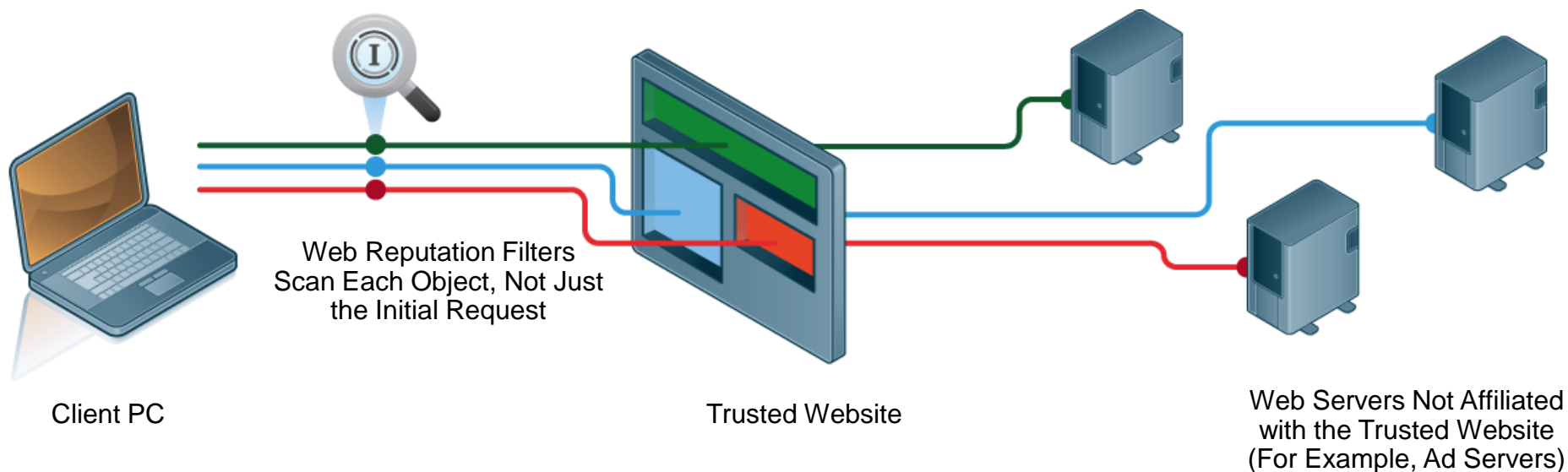
 - Automatically updates rules

 - Provides real-time rule generation using dynamic discovery



Protection for a Dynamic Web 2.0 World

Visibility Beyond the Initial Threat



- Web pages are made up of objects coming from different sources
- Objects can be images, executables, JavaScript, etc.
- Compromised websites often grab malicious objects from external sources
- Security requires looking at each object individually, not just the initial request

Cisco NAC for Education

Keeping Schools Safe and Secure

- Secure access to school network
- Protect against viruses and other network infections
- Prevent unauthorized access to personal data and academic records
- Assist in compliance with regulatory requirements



Cisco NAC Secures School Network



List of Roles	New Role	Traffic Control	Bandwidth	
Role Name	IPSec	Roam	VLAN	Description
Unauthenticated Role	deny	deny		Role for unauthenticated users
Temporary Role	deny	deny		Role for users to download requirements
Quarantine Role	deny	deny		Role for quarantined users
Allow All	deny	deny		Full Access
Guest Access	deny	deny	:666	guest privileges
consultant access	deny	deny	:55	consultant privileges

Cisco NAC Prevents Network Infections




Cisco NAC Web Agent

 Cisco NAC Web Agent

Host is not compliant with network security policy

Your device does not conform to the required security policies for this protected network. Your access to the network is refused or limited until you are able to comply with the security requirements listed below.
Please remediate by 12:57:59 AM, Fri Oct 05, 2007.

Security Compliance Summary

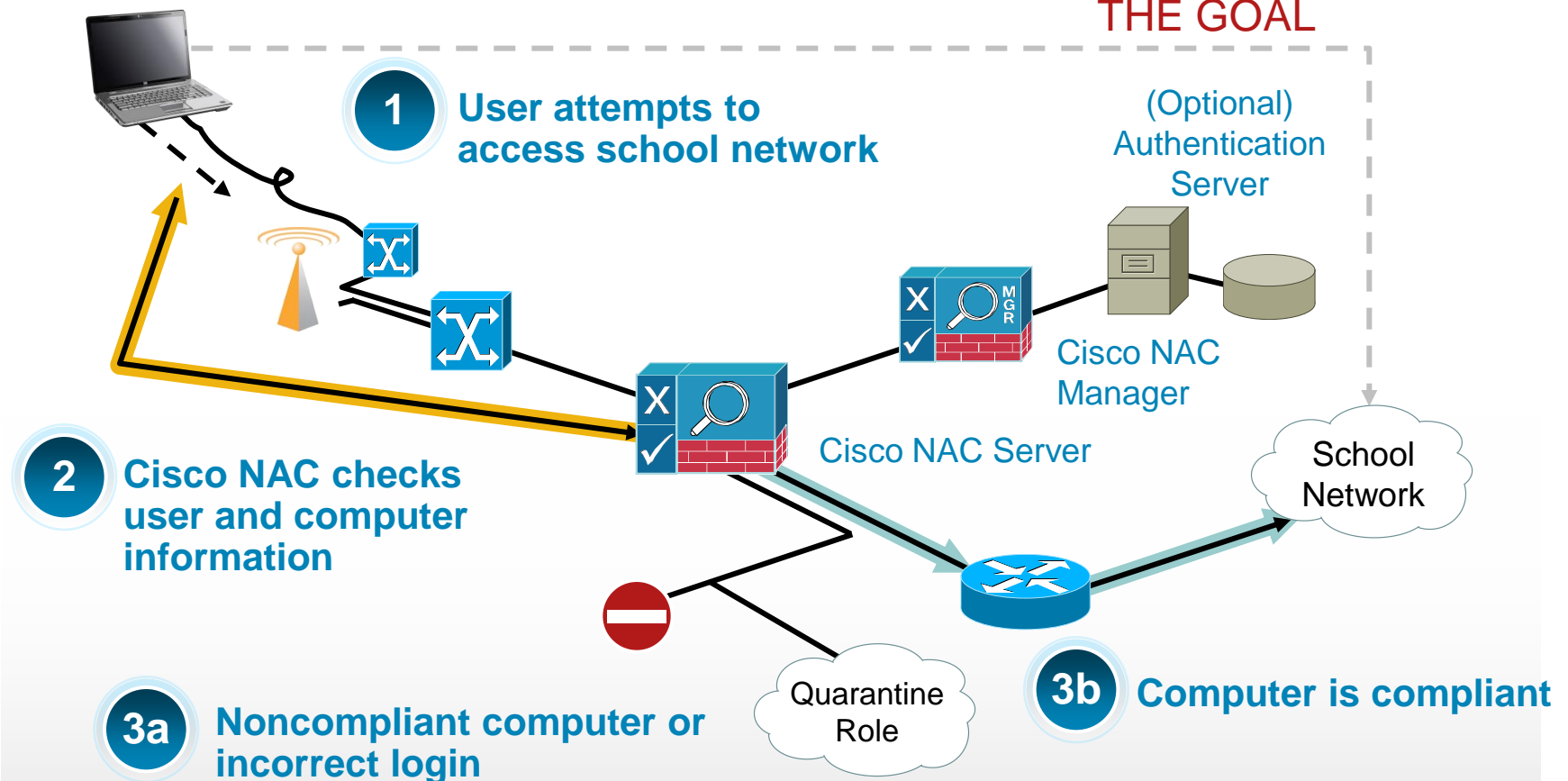
Result	Security Requirement	Remediation Suggestion
	McAfee-AV-Running	McAfee AV needs to be turned ON.
	CorporateAssetCheck	Only Corporate Assets Allowed
	McAfee AV Check	

Cisco NAC Web Agent Version 4.1.3.1 - Report Generated 12:43:00 AM, Fri Oct 05, 2007

00:14:35 Remaining

How Cisco NAC Works

THE GOAL



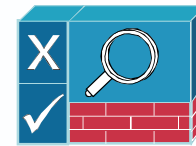
Cisco NAC Main Components

Cisco NAC Manager and Server (Required)



Cisco NAC Manager

Centralized management, configuration, reporting, and policy store



Cisco NAC Server

Posture, services, and enforcement

Cisco NAC Profiler, NAC Guest Server, and Secure ACS (Optional)



Cisco NAC Profiler

Profiles unmanaged devices



Cisco NAC Guest Server

Full-featured guest provisioning server



Cisco Secure ACS Server

Access policy system for IEEE 802.1x termination

Endpoint Components (Optional)



Cisco NAC Agent

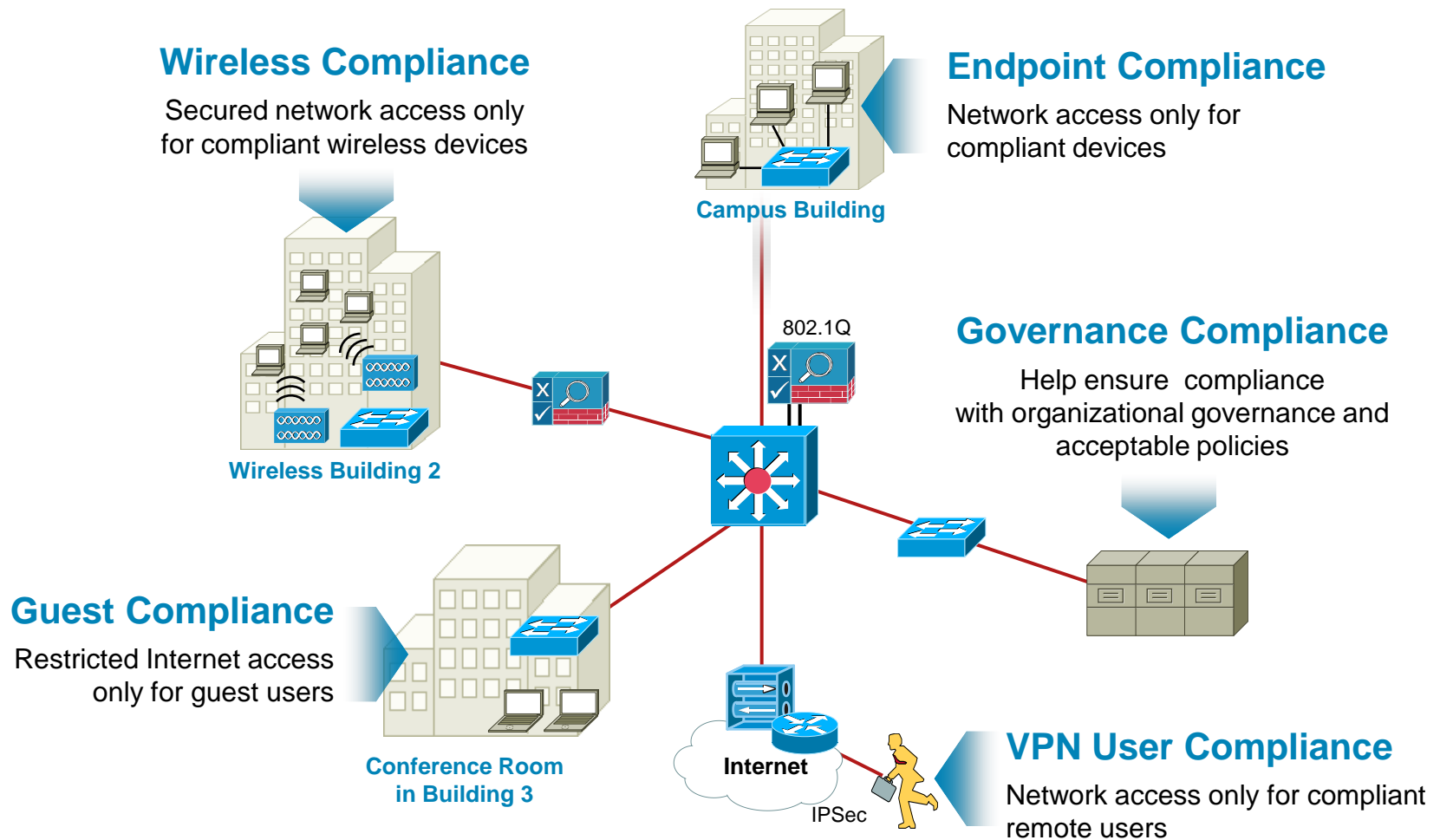
No-cost client: persistent, dissolvable, or web



IEEE 802.1x Supplicant

Cisco SSC or Vista embedded supplicant

Meeting Student and Faculty Needs



Cisco NAC Advantage

- Industry leader
- Comprehensive security protection and functions
- Scalable solution with flexible deployment options
- Specific feature support for education



Cisco NAC Return on Investment

Cisco NAC Benefits

Schools Gain

Threat containment

- Fewer infections
- Reduced interruptions to education
- More resilient school network

Access control

- Decline in incidents
- Less loss of personal data and school records

Compliance

- Improved security
- More reliable audit and enforcement

Summary

Cisco Security for Education

- Leading products, architecture-based approach
- Holistic security solutions
- Reduced risks; lower total cost of ownership
- Protect and support education

cisco.com/go/security





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