



Tendencias en Redes Multiservicio para el Sector Educativo



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La Evolución de las aplicaciones

Centralizadas

- Client-to-Server
- Data only
- Delays are OK
- Server-Centric

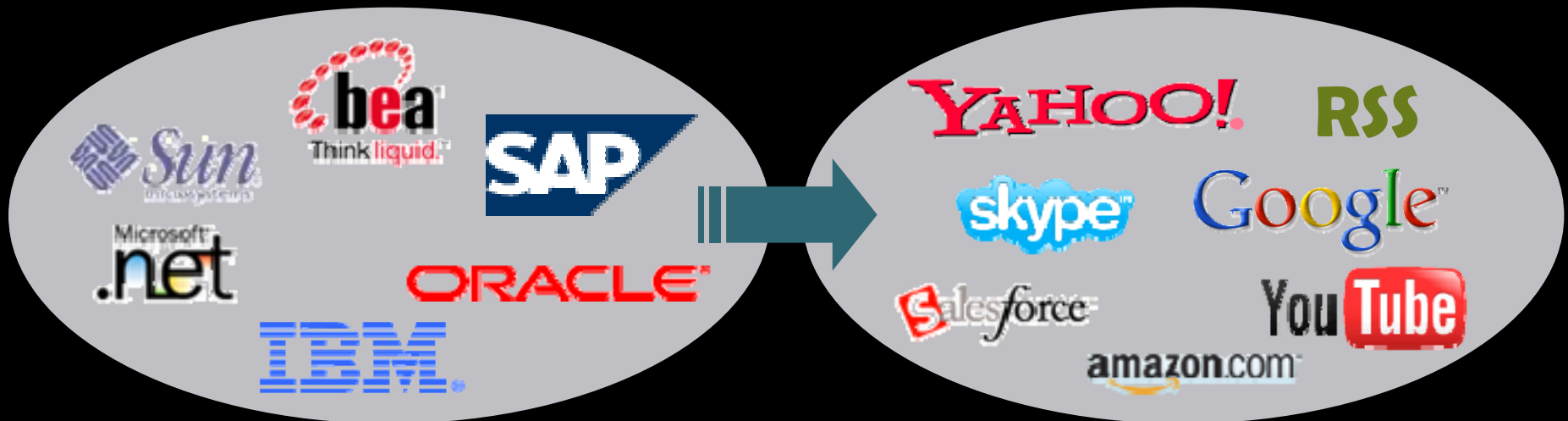
- Static documents
- Static repository
- Wired devices



Colaborativo

- Any-to-Any
- Multimedia
- Real-time
- Server-Less or Server-Assisted
- Shared information
- Dynamic sharing
- Wired and Wireless devices

Evolución de las aplicaciones de negocio



- Basadas en Arquitecturas ambiente controlado

- Programación libre/no controladas

- Adopción con la Internet

Ambos tipos de aplicaciones conviven en la red de manera simultanea!

La red como plataforma de servicios

Business Agility

Company Differentiation

Process Simplification

Business

“SONA es una arquitectura de referencia para conectar los servicios de red con las aplicaciones para poder entregar soluciones de negocios.”

Technology
Architecture

Consolidation

Virtualization

Automation

Inteligencia de la Red

La inteligencia en la red permite la reutilización de los recursos



Applications

Firewall

SBC

Call IDg

Email

ERP

Voice Mail

WRSS

Anti-SPAM

Patch Backup Updates

Replication

Mobile Multicast Email

NCRSB

Wireless Mgmt

OS

Disaster Management

Load Balancing

Web Virtualization

Network Systems

Campus

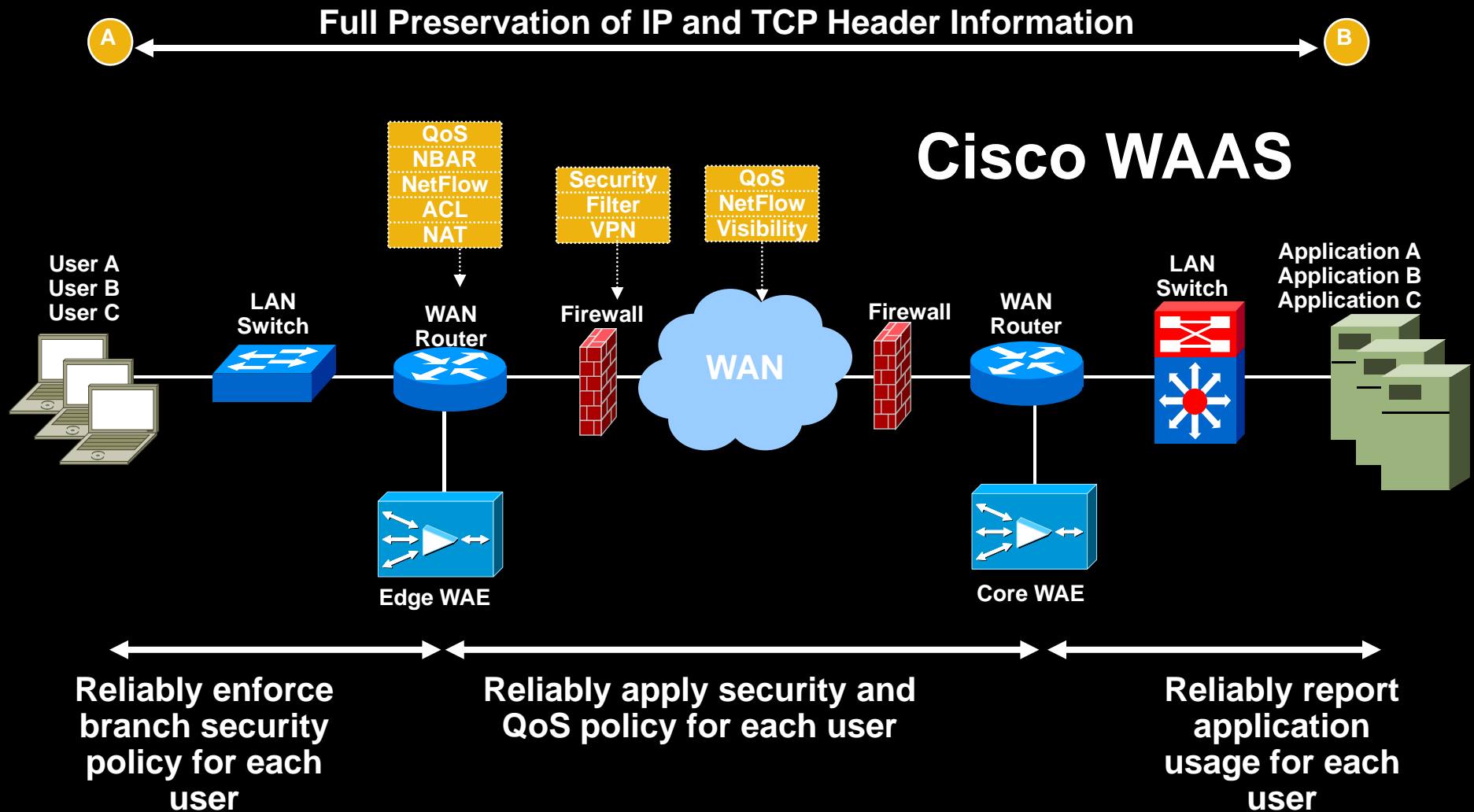
Data Center

Branch













Tendencias en conectividad WAN (WAAS)



Wide Area Application Systems (WAAS)

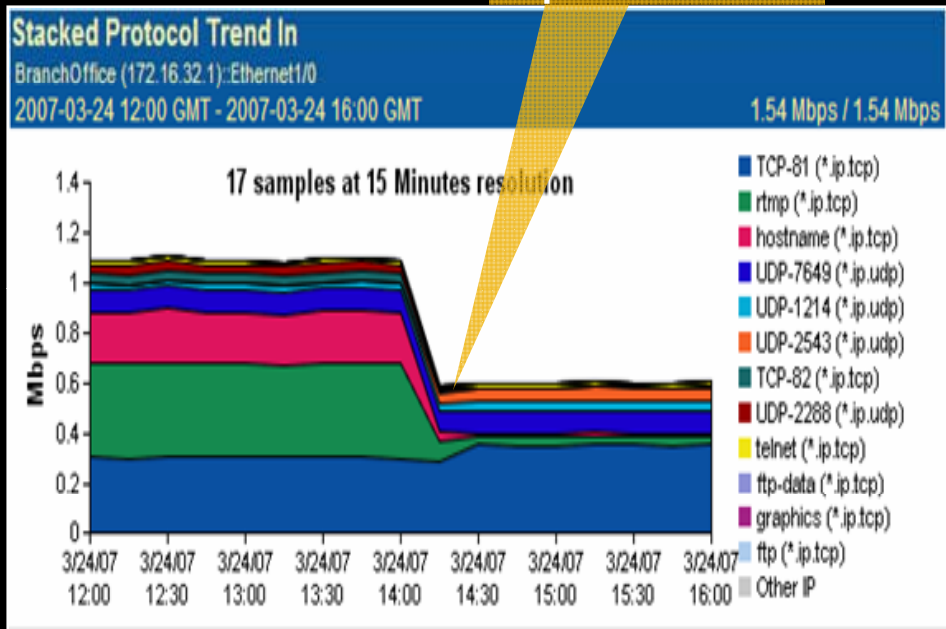


Application Acceleration

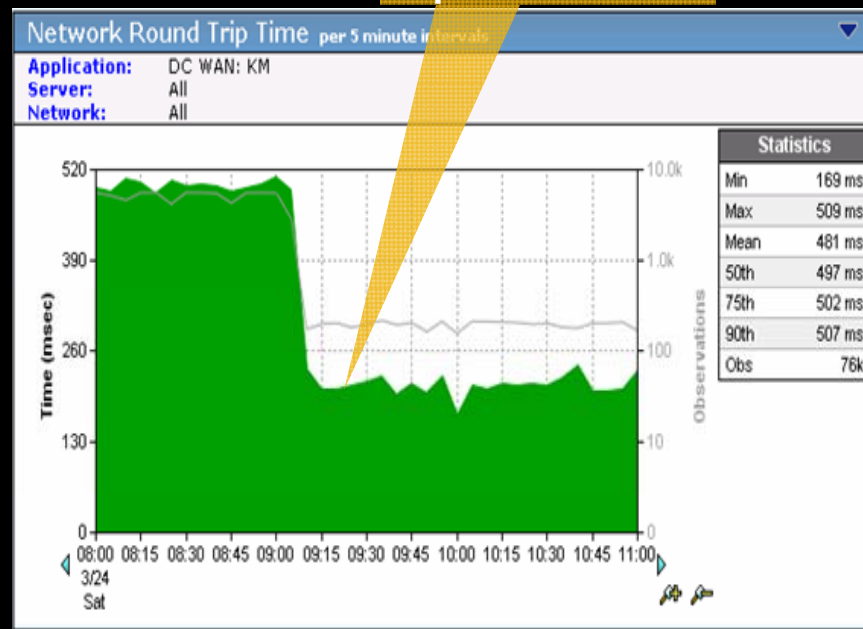
Category	Applications	2X	5X	10X	25X	50X	100X+	
File Sharing	CIFS NFS 	2-20X Avg			>100X Peak			
Email	Microsoft Exchange Lotus Notes Internet Mail 	2-5X Avg		20X Peak				
Web and Collaboration	HTTP WebDAV FTP Microsoft Sharepoint   	2-10X Avg			100X Peak			
Software Distribution	Microsoft SMS Altiris HP Radia 	2-20X Avg			>100X Peak			
Enterprise Applications	Microsoft SQL Oracle, SAP Lotus Notes    	2-5X Avg		20X Peak				
Backup Applications	Microsoft NTBackup Legato Networker Veritas Netbackup CommVault Galaxy  	2-10X Avg			50X Peak			
Data Replication	EMC SRDF/A EMC IP Replicator NetApp SnapMirror Data Domain Double-Take Veritas Vol Replicator	2-10X Avg			50X Peak			

WAN Bandwidth Optimization

Optimization On



Optimization On



Bandwidth Usage Reduction

- Up to 95% savings
- Avoid bandwidth upgrade
- De-commission bandwidth

Improve VoIP Quality

- More room
- Better quality & reliability
- Use existing QoS policies

Improved Application Perf. Management

- Report Apps SLA accurately
- Find bottlenecks quickly
- Invest confidently

Caso Practico

```
C:\WINDOWS\system32\cmd.exe - ftp 200.4.1.2
*****
226 File upload OK
ftp: 85649469 bytes sent in 474.97Seconds 180.32Kbytes/sec.
ftp>
```

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 5.1.2600]
Copyright (c) 2001 Microsoft Corp.

C:\Settings\Administrator>cd desktop
C:\Settings\Administrator\Desktop>dir
.
.
C has no label.
Volume Serial Number is 9478-2653

C:\Documents and Settings\Administrator\Desktop>dir
.
.
AM <DIR>
AM <DIR>
PM 787 Cisco Remote Player.lr
PM 85,649,469 drv-pics.zip
PM 688 FreeFlow.INK
PM 1,529,856 Meeting_in_a_box_FVe7
AM 6,098,022 Skycaptain%20System%2
PM 13,304,320 SP-1.ppt
File(s) 106,583,239 bytes
Dir(s) 31,597,146,112 bytes free

C:\Settings\Administrator\Desktop>
```

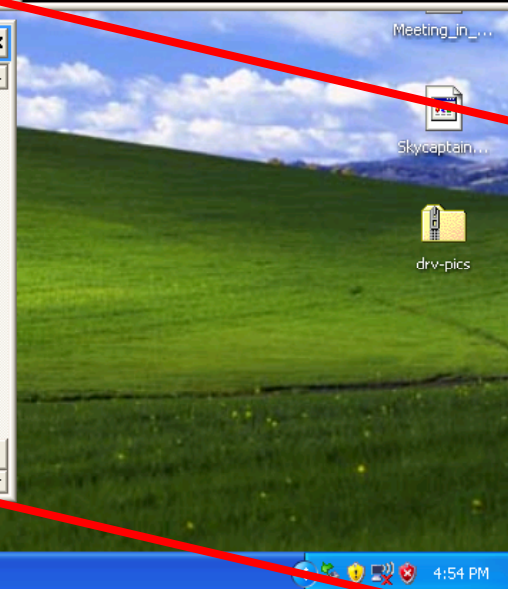
85,649,469 drv-pics.zip

File to be transferred

```
C:\WINDOWS\system32\cmd.exe - ftp 200.4.1.2
*****
226 File upload OK
ftp: 85649469 bytes sent in 11.35Seconds 7548.87Kbytes/sec.
ftp>
```

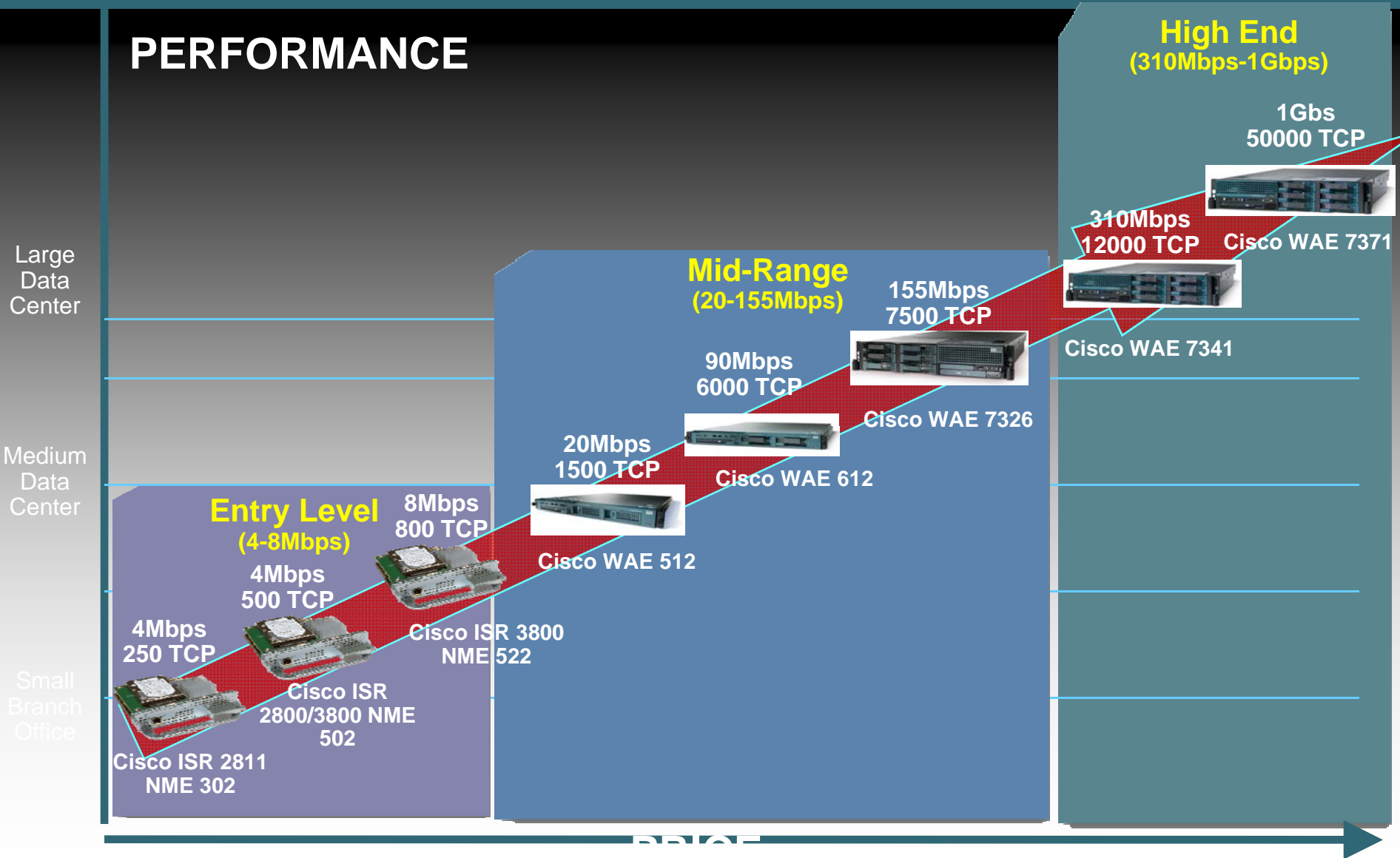
1st try 474.97sec

2nd try 11.35sec



Cisco WAE Model Line Up

PERFORMANCE



PRICE



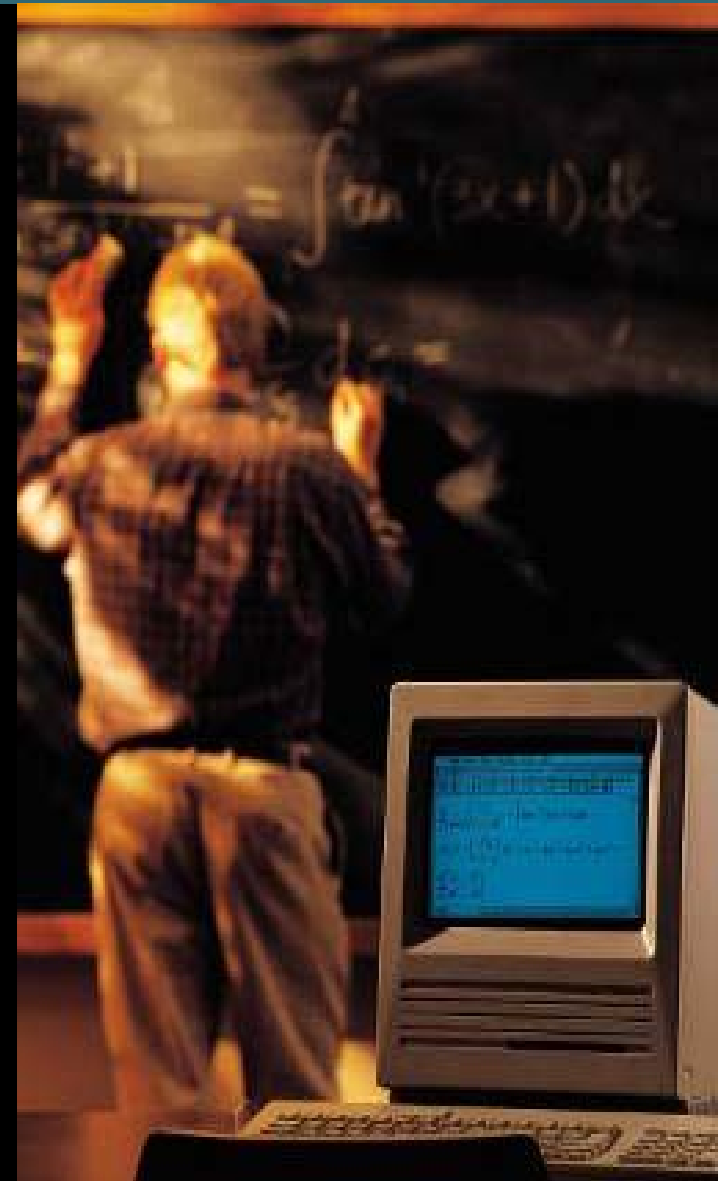
Tendencias en Tecnologías de Control de Acceso (NAC)



Cisco NAC Demo

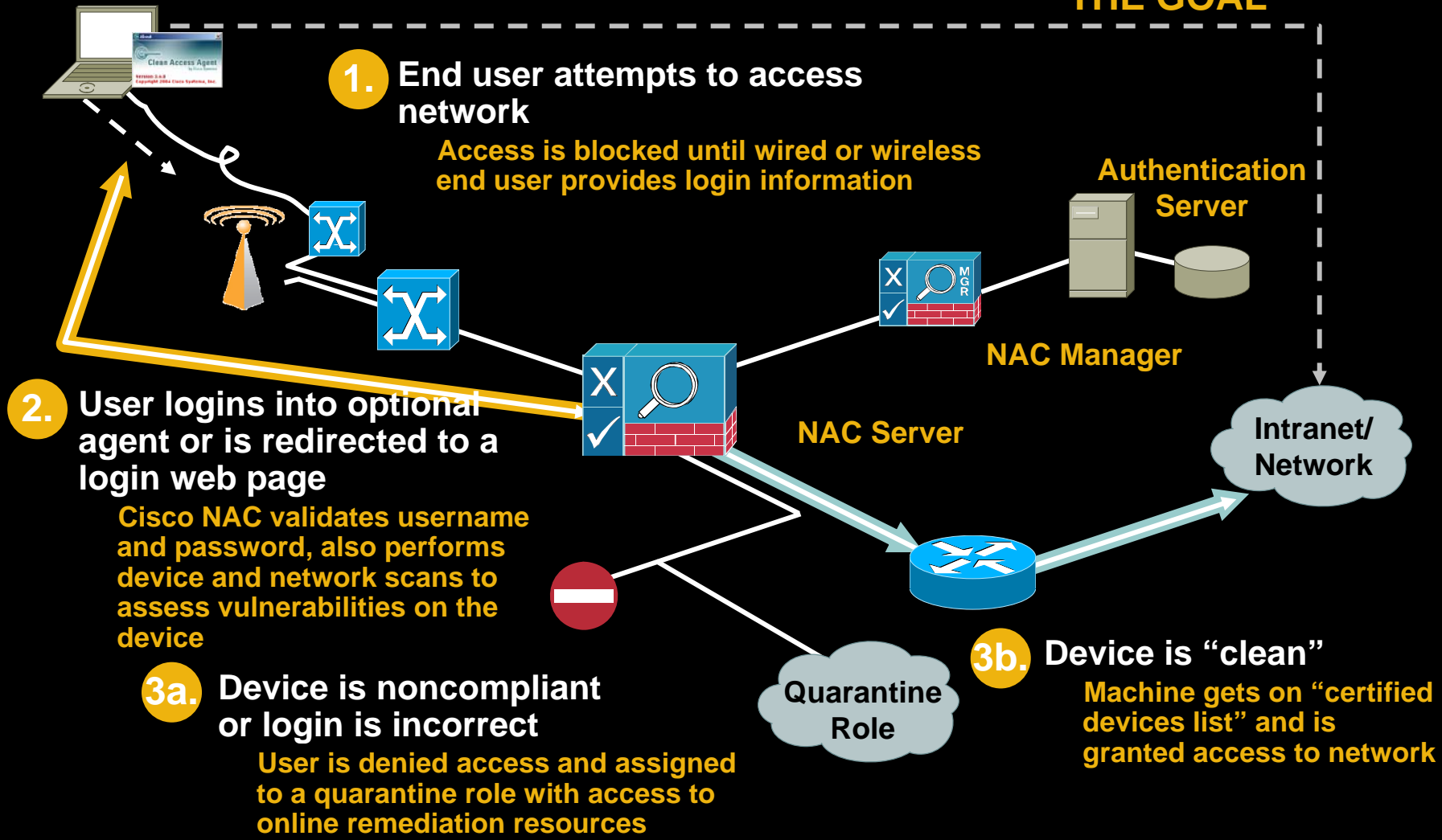


CISCO



Cisco NAC Appliance Overview

THE GOAL



NAC Appliance Components

- **Cisco NAC Manager**

Centralizes management for administrators, support personnel, and operators



- **Cisco NAC Server**

Serves as posture, remediation and enforcement access control



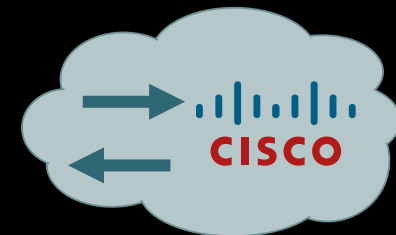
- **Cisco NAC Agent**

Optional lightweight client for device-based registry scans in unmanaged environments



- **Rule-set Updates**

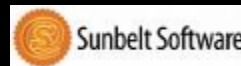
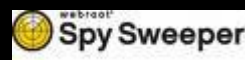
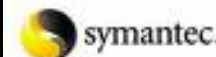
Scheduled automatic updates for anti-virus, critical hot-fixes and other applications



Cisco NAC Appliance Partnerships

Cisco NAC is committed to protecting customer's investments in partner applications

NAC Appliance Supports Policies for 300+ Applications, Including these Vendors:



Tendencias en Aplicaciones de Video sobre IP



Videovigilancia- El problema de CCTV tradicional

- **Monitor larger physical areas**
- **Mandatory digital video archiving**
- **Access surveillance information from multiple locations simultaneously**
- **Real time information**
- **Share video information between organizations**
- **Integration of surveillance with other data/voice/sensor applications**



El Video y la Seguridad Fisica



New

IP Cameras

Analog

New

New

Video Surveillance Manager

Multiservices Platform

Legacy Integration

New

Web Client

Integrated Comms

Policy Engine

New

Access Control

Network as the Platform

New

Cisco Video Surveillance Manager

Capture



Analog and IP Cameras

Manage



Video Management
(Media Server and Encoding Server)

- Video Collection
- Video Routing
- Storage and Retrieval
- Event management
- Rules Engine
- C3/4 Integration

Archive



Video Storage
(Storage Systems)

- DAS, SAN, NAS
- Local and Remote
- Loops and Events
- Redundant Archives
- Optional Clustering
- Hardware Agnostic

View



User Portal
(Operations Manager)

- Video Viewing
- PTZ and Presets
- System Configuration
- User Management
- Reporting
- Event Display

Distribute



Virtual Matrix Switch
(Virtual Matrix)

- Single Control
- Multiple Displays
- Video Switching
- Video Wall

Common API



Video Analytics



Custom Interface



Access Control



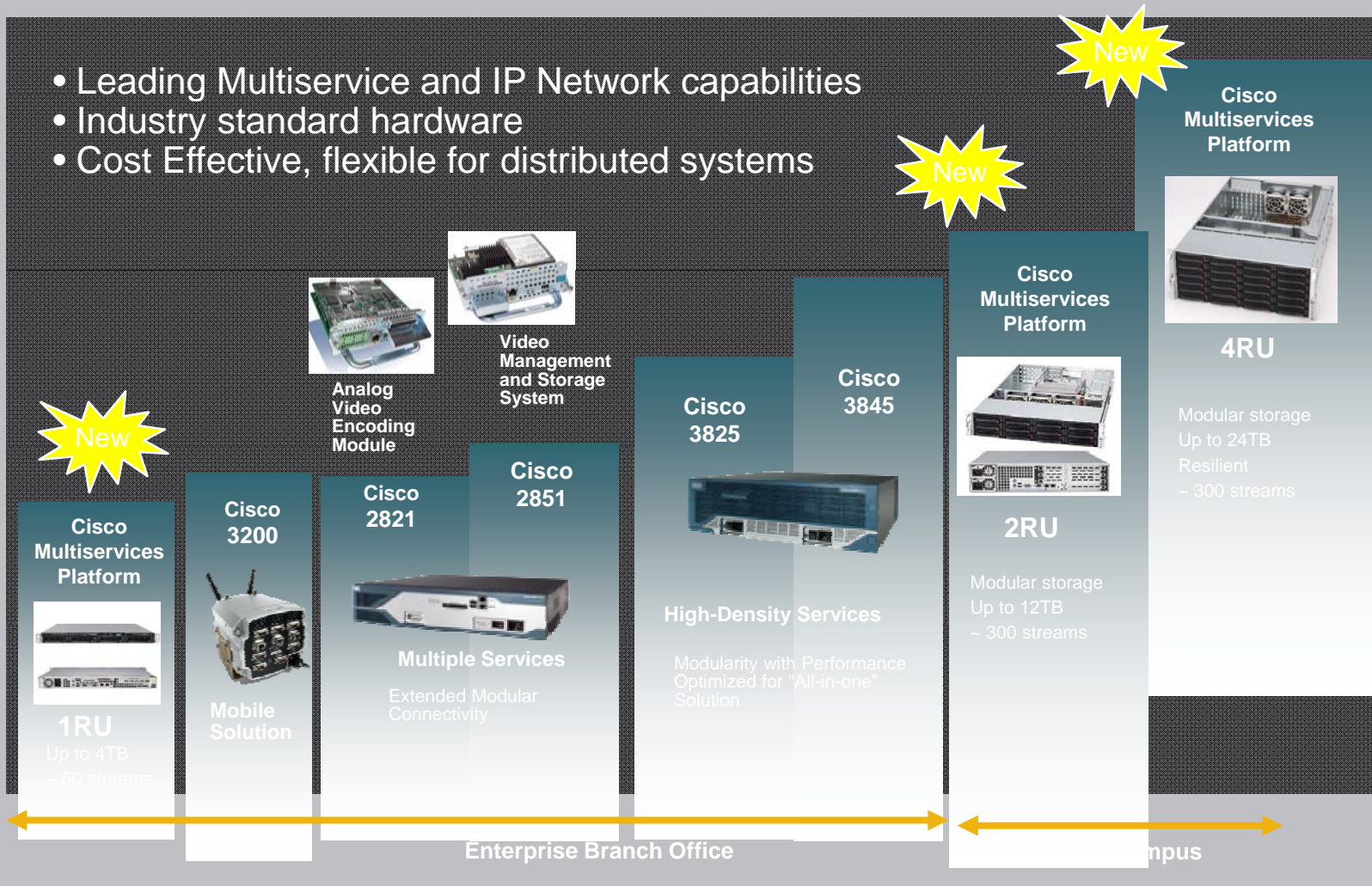
Video Wall



Back Office

New line of Video and Multiservice Platforms

- Leading Multiservice and IP Network capabilities
- Industry standard hardware
- Cost Effective, flexible for distributed systems



Scalability, Resiliency, Serviceability

Como se puede mejorar la efectividad y seguridad de un sistema de Video vigilancia mediante el uso de la red IP

Areas de Transito

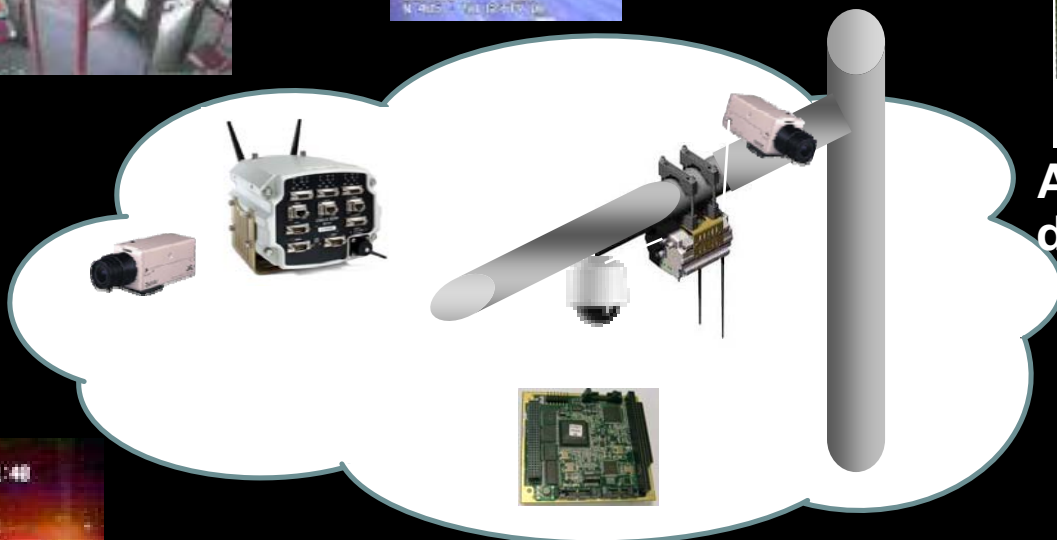


Vias de Acceso



Almacenamiento del Video

Oficiales a pie



Contacto con Autoridades

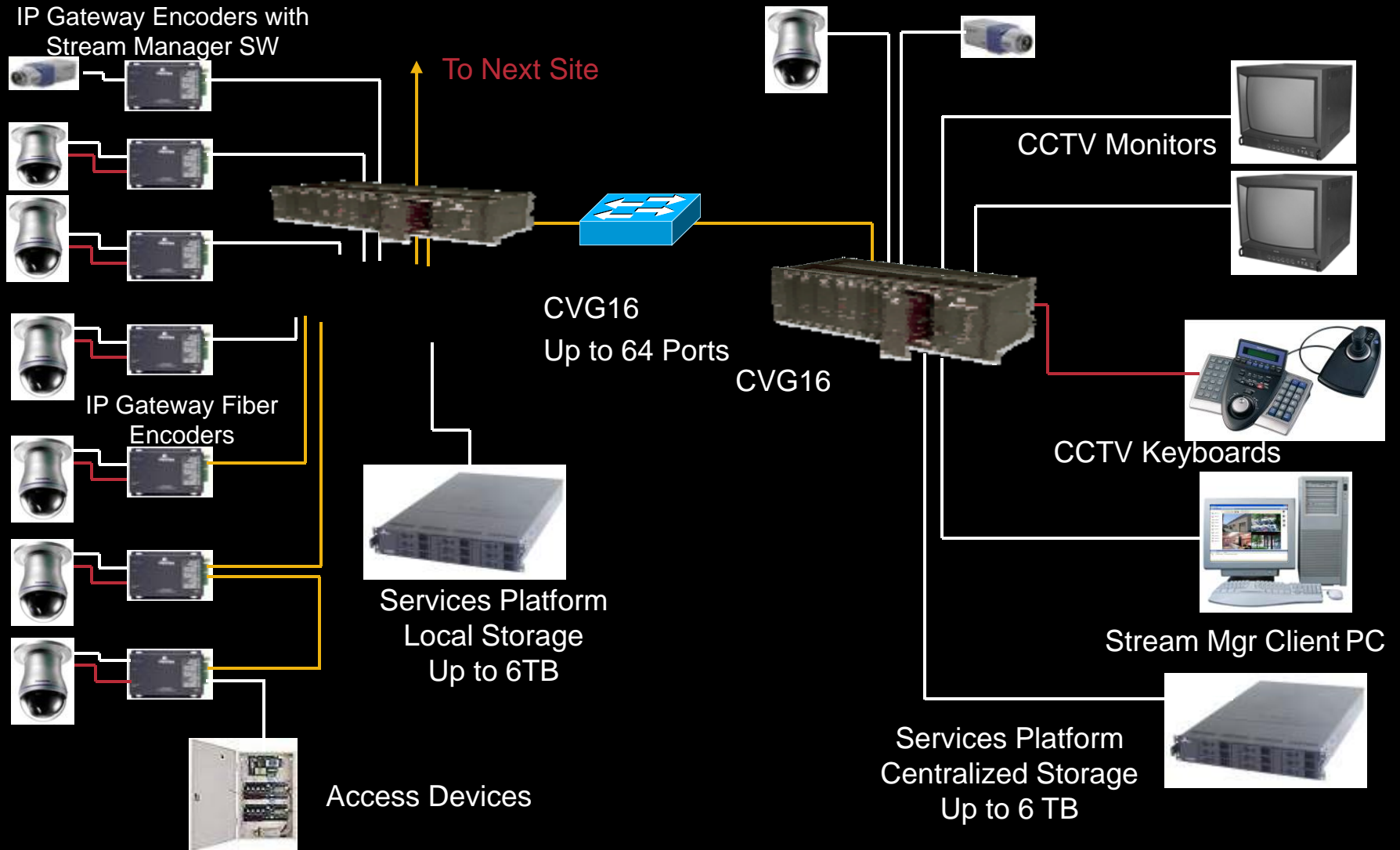
Estacionamientos



**Seguridad Escolar
(aulas, áreas comunes, etc.)**



Cisco Stream Manager Video Surveillance Solution



Camaras IP para Videovigilancia

• High-Resolution, Video Surveillance IP Cameras



Standard Definition



High Definition

Resolution, Features, Network/storage Flexibility

Beneficios Imagen Optima en condiciones criticas de iluminación

Cisco Imager



Typical Imager



Cisco imager can pick up details in extreme lighting conditions a common in warehouse applications

Análisis Inteligente de video Western Datacom (Cisco Partner para Video vigilancia)

Reunión 10
CUDI 2009
del 21 al 24 de abril



Cisco Digital Media System Demo

Videoportales y Video Push



Media Creation

Media Management

Media Access

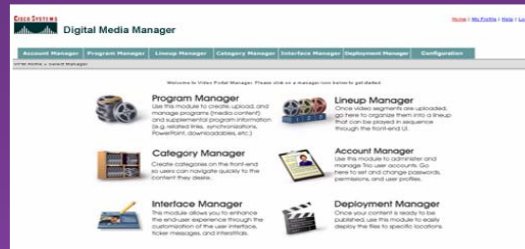


Digital Media Encoder 1000

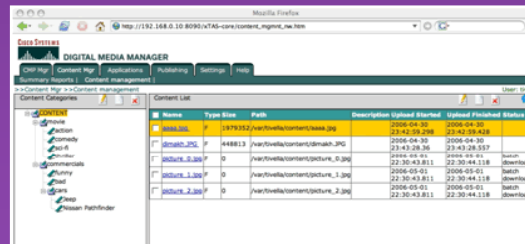


Digital Media Encoder 2000

Digital Media Manager



Video Portal Module



Digital Signage Module



Cisco Video Portal



Cisco Digital Media Player

Solution that Spans Across the Digital Media Value Chain

Desktop Video: Deliver Live and On-Demand Video to Students, Faculty and Staff

Classroom Video/Distance Learning

Replace “Pushcart VCRs” with the Video Portal—extend the classroom and use video for College prep courses, missed classes, specialized virtual classes



Administration/Community Communication

Video on-demand for staff communication and community updates/information

School Event Broadcasts

Broadcasting videos of sporting events, graduation, theatrical production, school board meetings



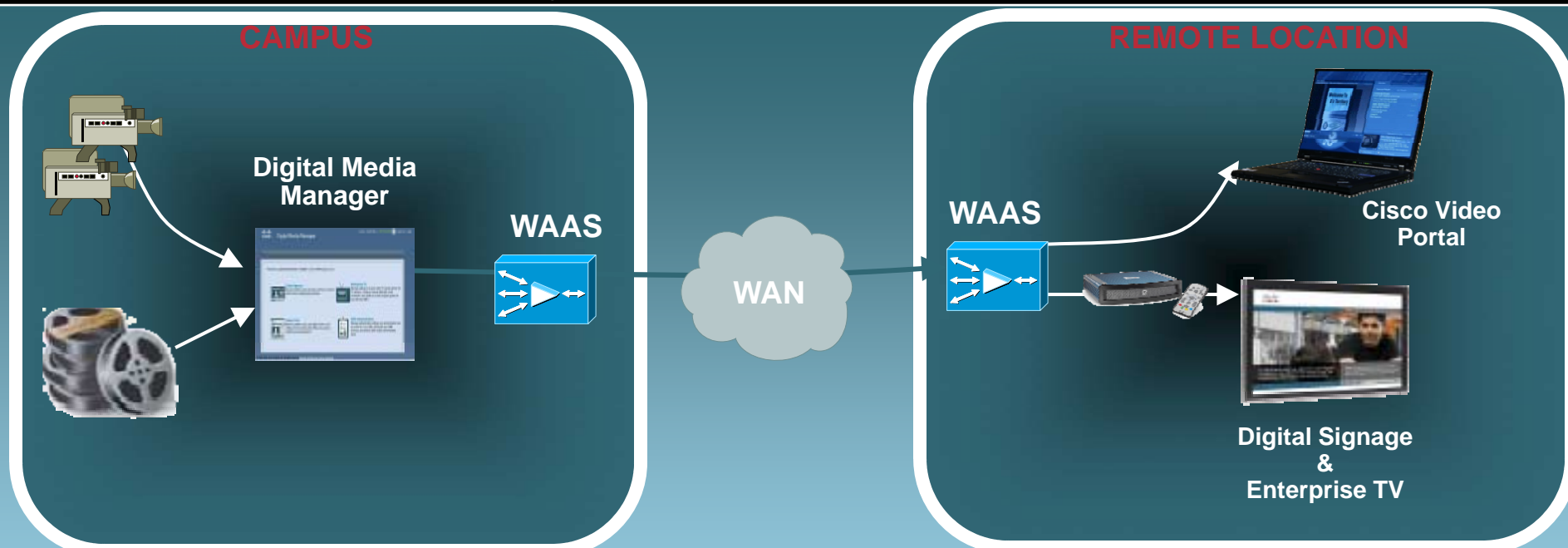
External Marketing

Provide video on-demand for potential students, donors, etc. to learn more about the school offerings and to position as a leader in technology

DMS 5.1 – DMS + CIFS/WAAS

- WAAS - optimize business applications + global video/media delivery
- Desktop video – Supported with WAAS 4.1
- Signage – With DMS 5.1

One CIFS mount only – all or no DMPs

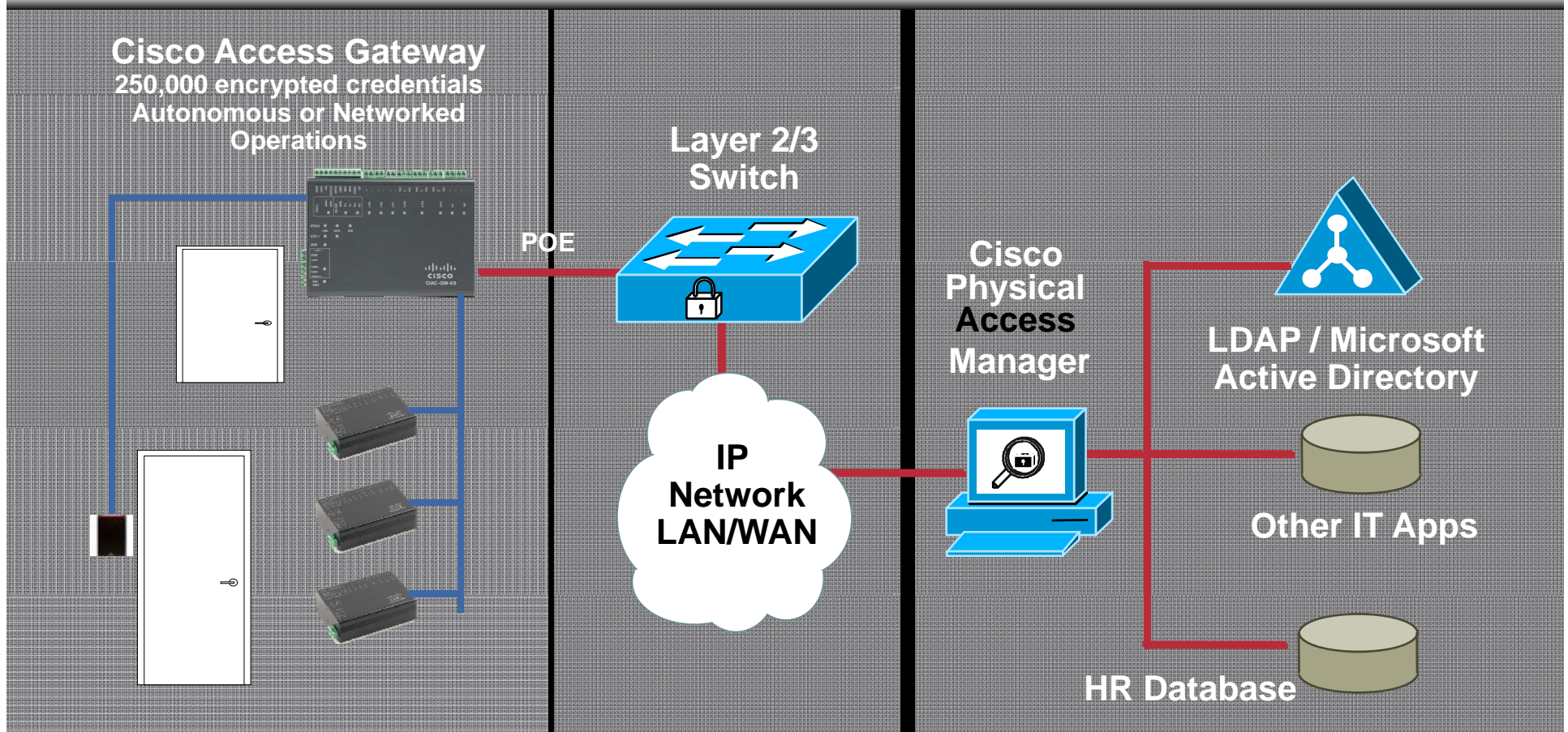


Cisco WAAS + Digital Media System =
Expanded Reach of Digital Media Deployments

Acceso Físico



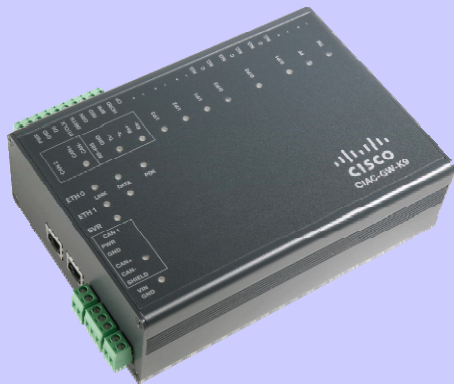
Arquitectura de Acceso electrónico basado en IP



Connect your existing readers, add new doors easily, and integrate with IT systems
Eliminate expensive, proprietary, hard to diagnosis and configure panels

Sistema de control de Acceso Fisico

A Comprehensive Solution for Electronic Access Control
Leverages IP infrastructure, integrates with other Physical Security applications



- **Hardware:**

Cisco Access Gateway connects existing door hardware (readers, locks etc.) to the network

Additional doors can be managed by connecting expansion modules to the Access Gateway

- **Software**

Cisco Physical Access Manager (Cisco PAM) is a Management Appliance for configuration, monitoring and report generation.



CISCO