HP ProCurve Networking Business

Network of the Future….Today!

Jimmy Ray Purser, Engineer
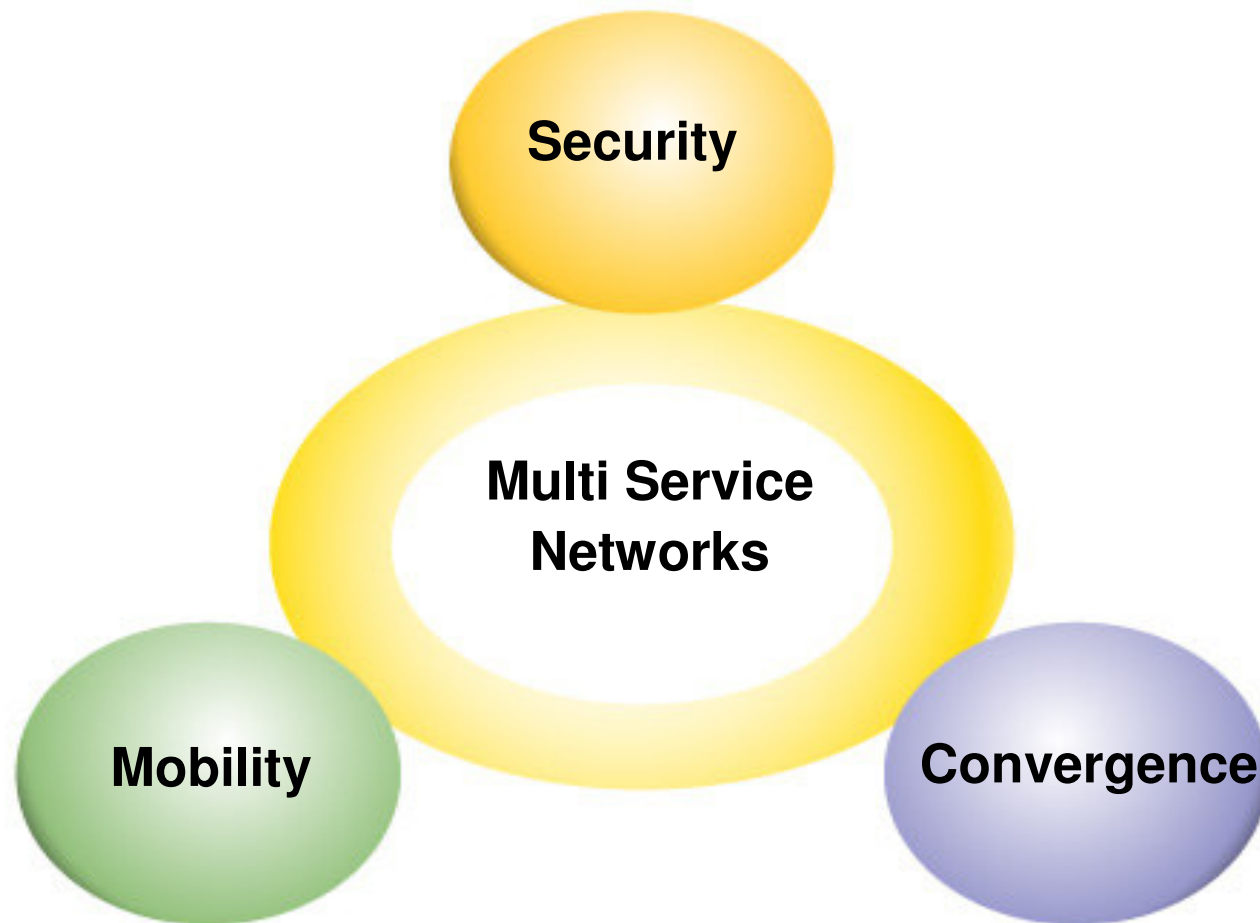
What is the HP ProCurve Adaptive EDGE Architecture ™ ?

The HP ProCurve Adaptive EDGE Architecture™ is comprised of two key principles:

- *Control to the EDGE* moves intelligence out to point of connection so that decision are made immediately rather than deferring them to the core

- *Command from the Center,* based on business needs, configures the EDGE driven by user identity, application and device type fundamentally changing the way networks are managed
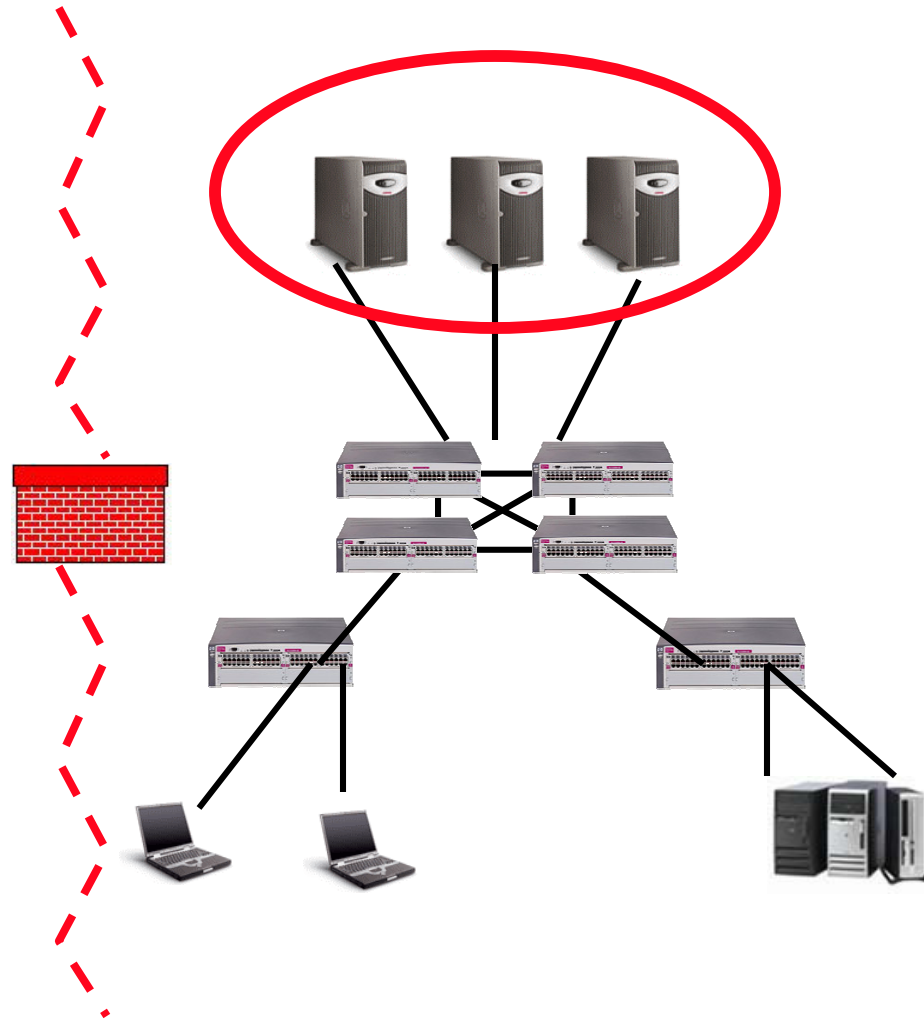
ProCurve Security

Network Resource Security

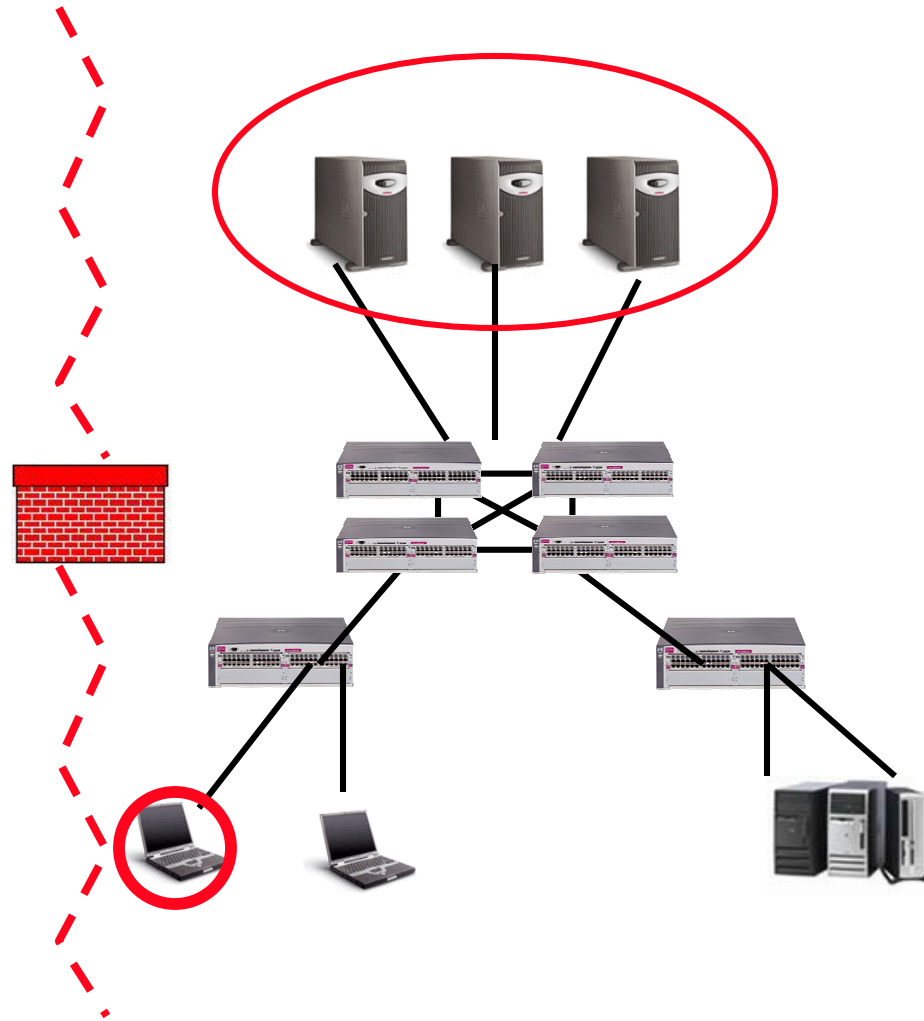- Controlling access to network resources (servers, printers, etc.).
  - Physical security
  - Network OS user authentication
  - Intrusion detection

Host/Application Security

•Ensuring that network hosts and applications are secure.

- Update-to-date OS security patches
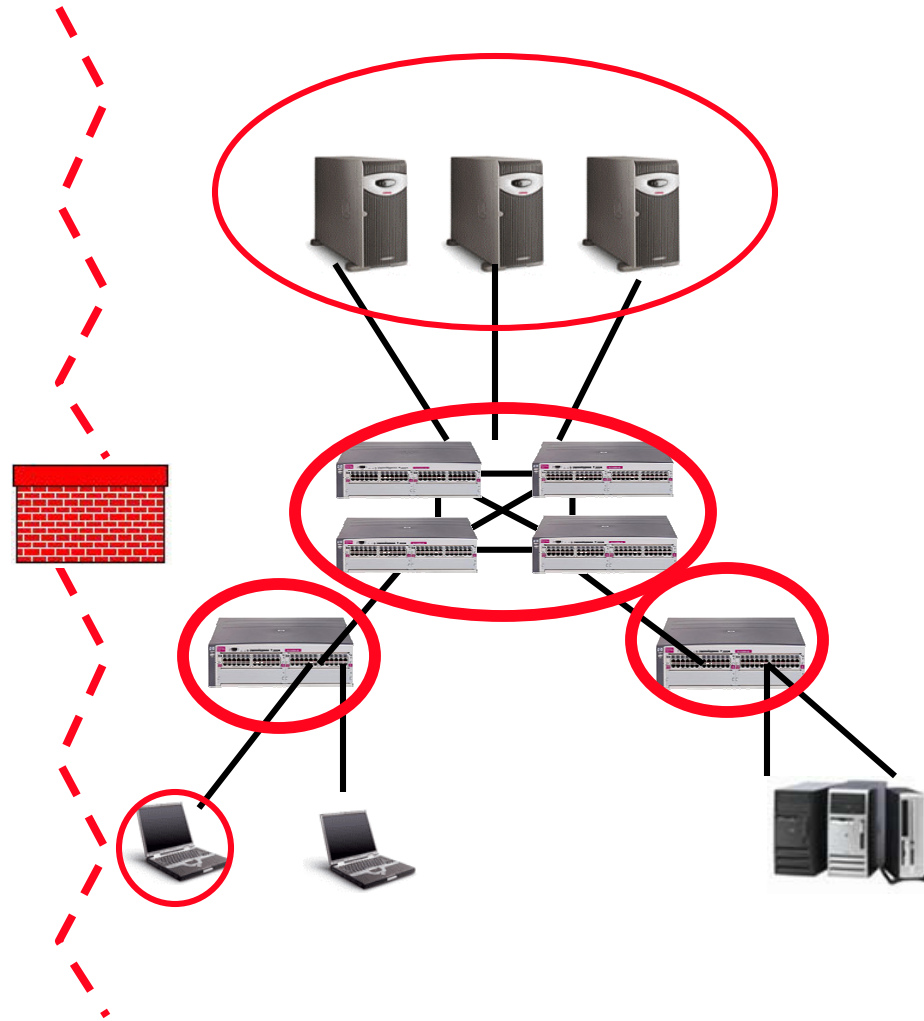- Anti-Virus software
- Personal Firewalls

Management Access Security

- Controlling management access to infrastructure devices (switches, routers, etc.)
  - Physical security
  - Local passwords
  - Management VLANs
  - Management user authentication
    - Radius
    - TACACS+
  - Secure communications
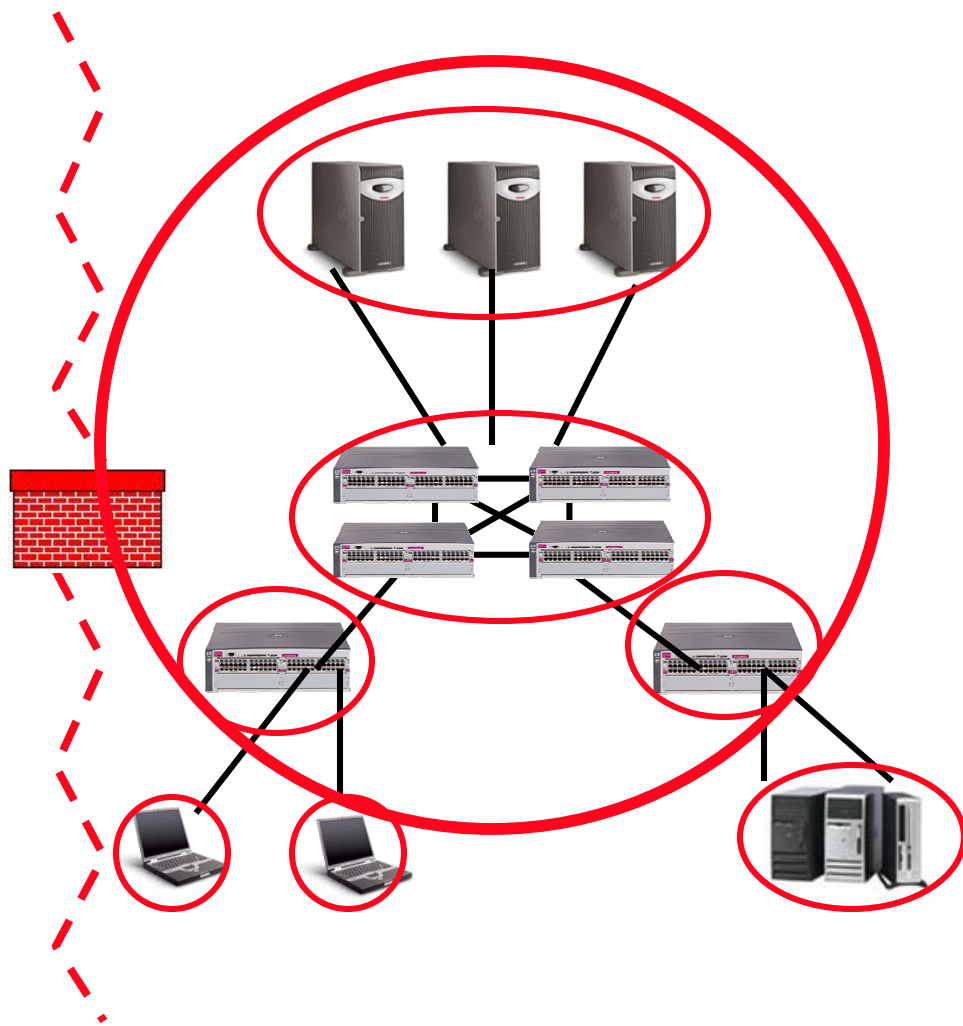   - SSH
    - SSL
    - SNMP v3

Network Access Security

- Unauthorized users have no or controlled access to the network.
  - Port Security
  - IEEE 802.1x
  - IEEE 802.1x with Port Security
  - IEEE 802.1x with Open/Guest VLANs

Wireless Security

Needs

- Safeguard network integrity
- Ensure privacy of wireless traffic
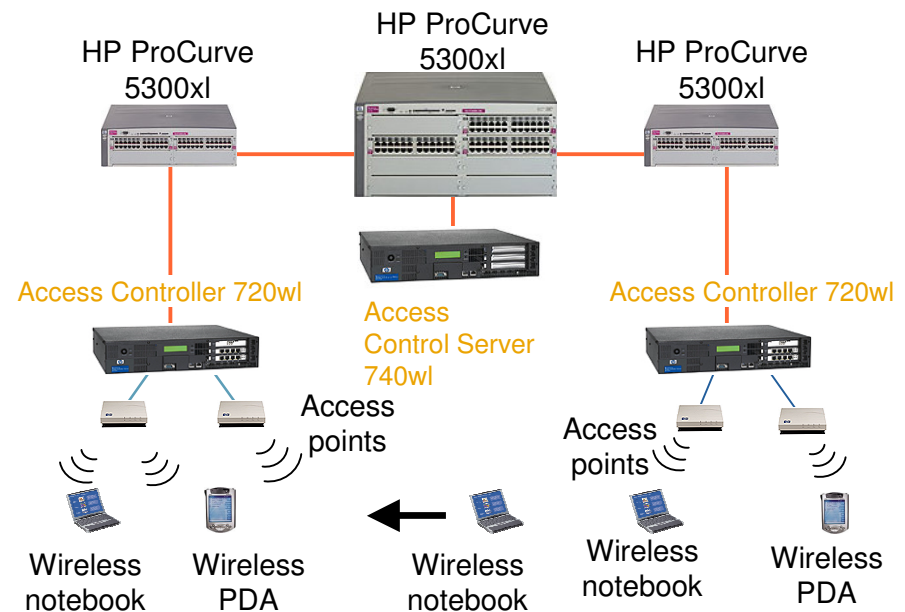- Grant appropriate visitor access

HP ProCurve solution

Access Control Server 740wl

- Offers centralized user authentication and policy rights management

Access Controller 720wl

- Enforces user profile, security, and roaming

HP ProCurve Wireless Access Points or non-HP access points

HP ProCurve 5300xl

HP ProCurve 5300xl

HP ProCurve 5300xl

Access Controller 720wl

Access Control Server 740wl

Access Controller 720wl

Access points

Access points

Wireless notebook

Wireless PDA

Wireless notebook

Wireless notebook

Wireless PDA

Deployment configuration

- Uses VPN client native in OS to authenticate employee and secure wireless traffic
- Visitors granted Internet access through HTTP redirect to logon page
- Uninterrupted roaming across subnets

Stopping Virus Problems

- **Using the TCP Dump expressions in the 700 series to stop Welchia and SoBig**
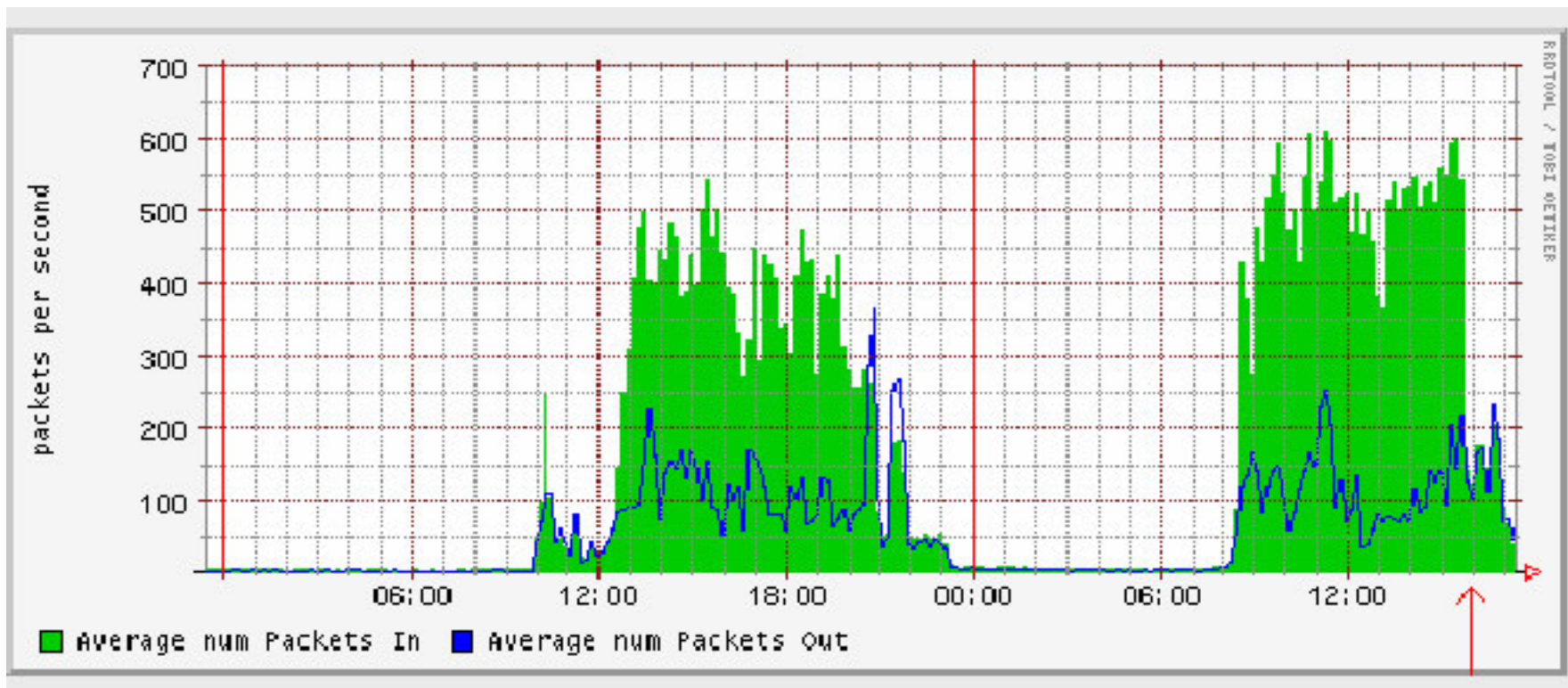
ProCurve Mobility

Mobility : Key Customer Issues

Issue/Concern	Tech Exec?	IT Mgr?
• Wireless is happening… need to get control	✓	✓
• Security issues still a big concern: authentication, rogue APs, etc.	✓	✓
• New deployment challenges: physical layout, new technologies?		✓
• Too many vendors with niche products		✓
• Difficult to manage: desire to emulate switch management experience?		✓
• Need help from a Trusted Advisor to navigate the "wireless sea"	✓	✓
• Is the productivity boost there?	✓	
• What future applications make WLAN promising (i.e. VoWLAN)?	✓	
• Need to enable future technologies with today's investments	✓	✓

HP ProCurve Wireless Access Point 420

The HP ProCurve Wireless Access Point 420 offers a cost-effective approach to enhancing the productivity of a mobile workforce without sacrificing flexibility and choice in securing a wireless network.

J8130A (North America version)

J8131A (Worldwide version)

Availability: now

Pricing depends on region

Wireless Access Point 420
Key Features

- 802.1X port-based access control
- Enhanced encryption management
- VLAN support and tagging
- Wi-Fi Protected Access
- IEEE 802.11g single-radio design
- IEEE 802.3af Power over Ethernet support
- Adjustable output power
- Remote configuration and management
- Dual flash images
- Interoperability

# 420 Access Point Competitive Comparison

Feature	3COM 8000	3COM 8250	Cisco 1100	Proxim AP 600	HP ProCurve 420
IEEE 802.11g	🚫	✔	🚫	✔	✔
802.1x	✔	✔	✔	✔	✔
Wi-Fi Protected Access	🚫	✔	✔	✔	✔
Intra-cell Blocking	🚫	✔	🚫	✔	✔
VLAN Support	🚫	✔	✔	✔	✔
Multiple SSIDs	🚫	🚫	✔	✔	🚫
802.3af (PoE)	🚫	✔	🚫	✔	✔
Adjustable Tx Power	✔	✔	✔	✔	✔
Plenum Rated	✔	✔	✔	✔	✔

HP ProCurve Wireless Access Point 520wl

HP ProCurve Wireless

Access Point 520wl

- Security

- Ease of use

- Price/performance leadership
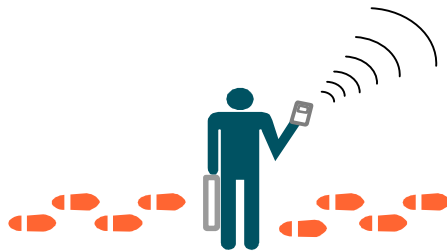
HP ProCurve Wireless Access Point 520wl Accessories

HP ProCurve Wireless Range

Extender Antenna 100wl

J8134A

HP ProCurve 802.11b Wireless

Access Point Card 150wl

J8135A 11CH (North America)

J8136A 13CH (Europe/Asia)

J8137A 14CH (Japan)

HP ProCurve 802.11a Wireless

Access Point Kit 160wl

J8138A North America

J8148A Singapore

J8149A Europe

J8150A Japan

Indoor 2.5 dBi gain antenna
for increasing range of the
520wl access point

802.11b, 11Mbps radio
component for the
520wl access point

802.11a, 54Mbps radio
component for the
520wl access point

520wl Competitive Comparison

Feature	HP ProCurve 520wl	3COM 8700	3COM 8750	Cisco Aironet 1200
dual 802.11b support	✓	⊘	⊘	⊘
802.11g support	future	⊘	✓	⊘
WiFi Protected Access	future	⊘	✓	✓
Intra-cell blocking	future	⊘	✓	⊘
VLAN support	✓	✓	✓	✓
802.1x support	✓	✓	✓	✓
Adjustable Tx Power	future	✓	✓	✓
Multiple SSIDs	✓	⊘	⊘	✓
Plenum rating	✓	⊘	⊘	✓
802.3af (PoE)	⊘	✓	✓	⊘
wireless repeater (AP to AP)	✓	⊘	⊘	✓
warranty	Lifetime	1 Year	1 Year	1 Year

** requires installation of two 802.11b radios

420/520wl Feature Comparison

Feature	HP ProCurve 420	HP ProCurve 520wl
IEEE 802.11g	✓	Future
IEEE 802.11a	🚫	✓
802.1x	✓	✓
WiFi Protected Access (WPA)	✓	Future
Intra-cell Blocking	✓	Future
VLAN Support	✓	✓
Multiple SSIDs	Future	✓
802.3af (PoE)	✓	🚫
Adjustable Tx Power	✓	Future
Plenum Rated	✓	✓

HP ProCurve Secure Access 700wl Series— a complete, secure wireless mobility solution

HP ProCurve Access Controller 720wl

HP ProCurve Access Control Server 740wl

HP ProCurve Integrated Access Manager 760wl

ProCurve Convergence

Mitel VoIP Solutions
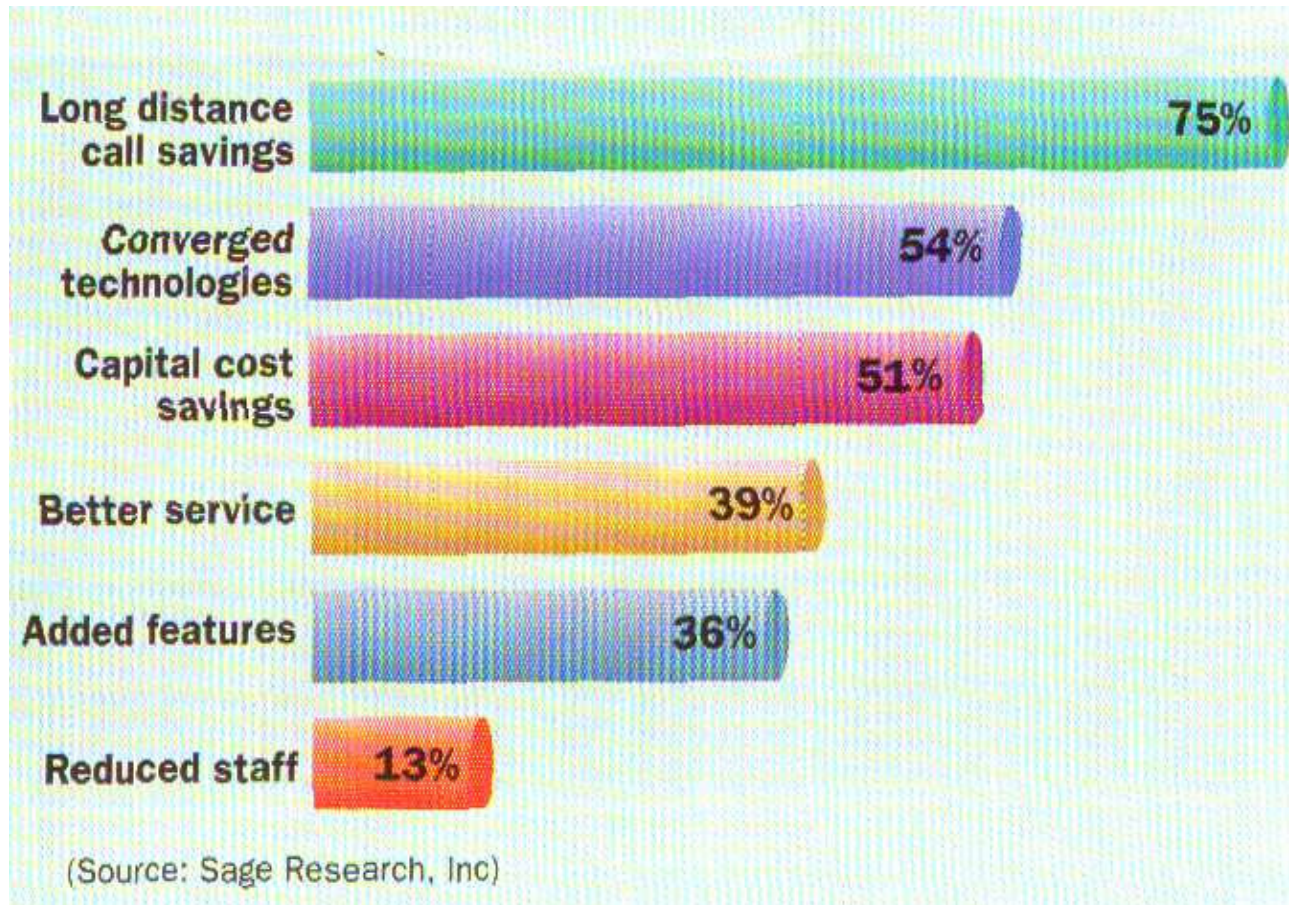
Embargoed information until Monday, September 29, 2003
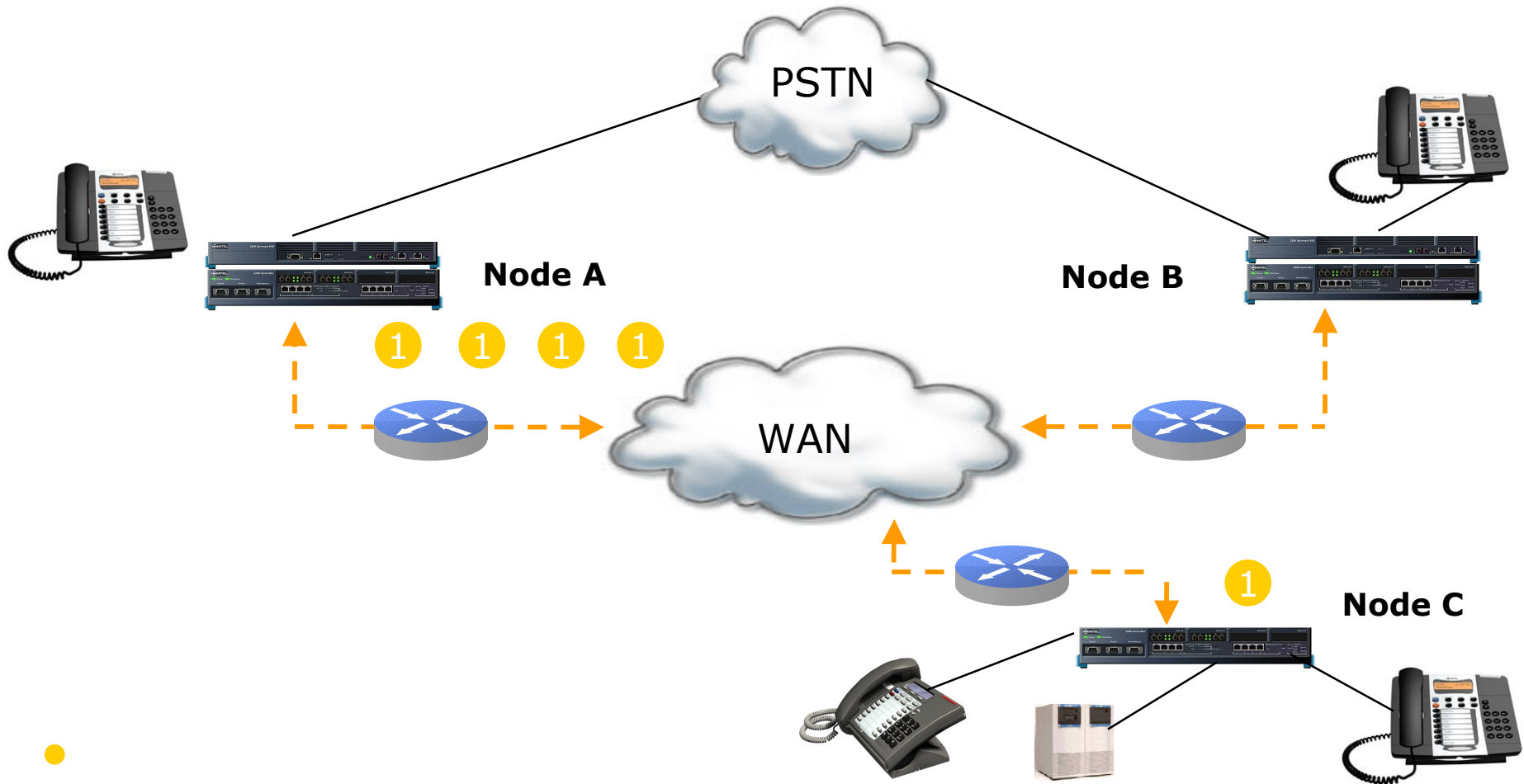
Mitel 3300 Controller

- Provides call control and gateway functionality
- Contains additional embedded functionality
- Houses MMC Modules
- 3 user variants
  - 100 user
  - 250 user
  - 700 user

VoIP Savings

Long distance call savings — 75%
Converged technologies — 54%
Capital cost savings — 51%
Better service — 39%
Added features — 36%
Reduced staff — 13%

(Source: Sage Research, Inc)

Solutions for small and medium sized businesses
Enabling convergence for all environments

Low-density VoIP deployments
- Small to medium-sized enterprise
- Remote office deployments

Customer problem
- Line cost, system complexity, infrastructure management costs

ProCurve solution
- PoE stackable with advanced EDGE features and 802.3af
  - option of 24 or 48 port
  - 24 or 48 IP phones
- Interoperability with IP telephony vendors
- ProCurve IP telephony partners

HP Switch 5300xl

HP Switch 2650-PWR

HP Switch 2650-PWR
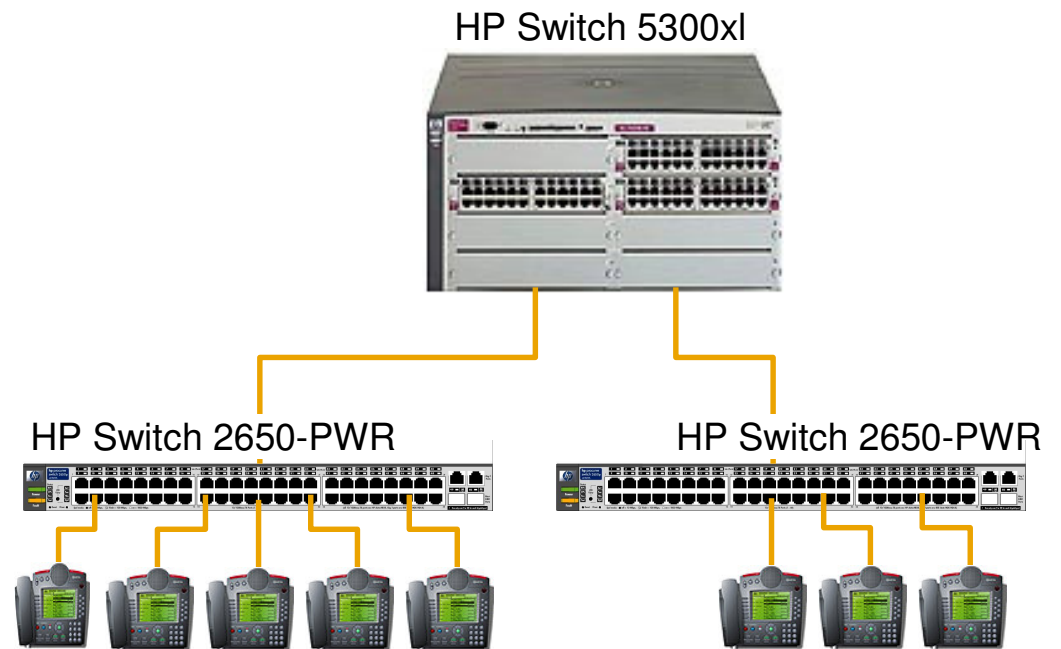
HP ProCurve convergence solutions

QoS
- Provision, control, prioritize
- Layer 2: IEEE 802.1p
- Layer 3: IP type of service (IP TOS)—IP precedence, Diffserv

Ease of use
- LLDP, VVLAN, IGMP, PIM Dense
- 24 or 48 ports

PoE
- 802.3af compliant
- RPS

QoS
- Provision, control, prioritize
- Layer 2: IEEE 802.1p
- Layer 3: IP type of service (IP TOS)—IP precedence, Diffserv

Investment protection
- Chassis upgradable to PoE

Ease of use
- LLDP, VVLAN, IGMP, PIM Dense

PoE
- 802.3af compliant

Remote office

Remote office

IP PBX

HP PoE switch

HP PoE switch

IP PBX

HP Switch 5300xl
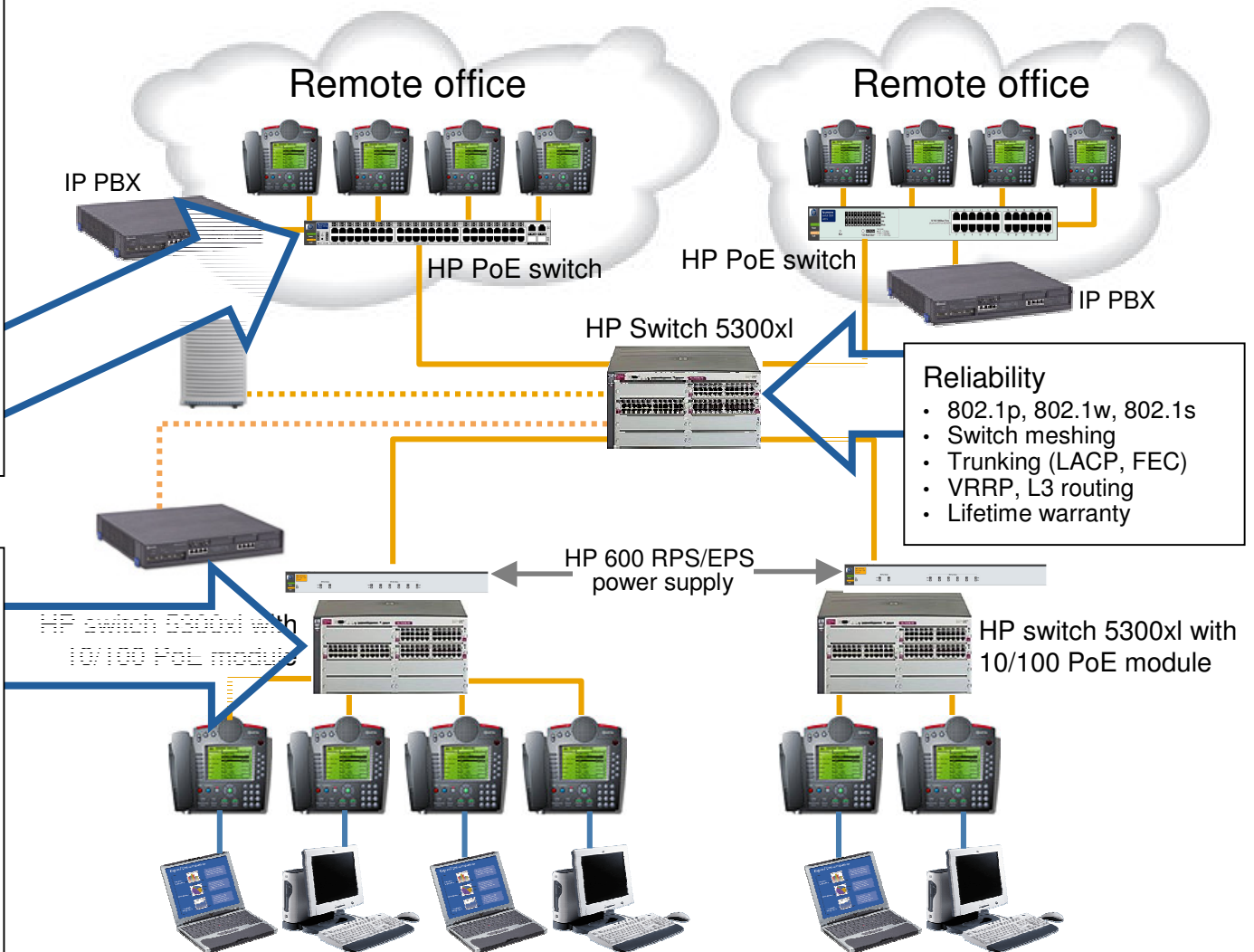
Reliability
- 802.1p, 802.1w, 802.1s
- Switch meshing
- Trunking (LACP, FEC)
- VRRP, L3 routing
- Lifetime warranty

HP 600 RPS/EPS power supply

HP switch 5300xl with 10/100 PoE module

HP switch 5300xl with 10/100 PoE module

Stackable Competitive comparison

Feature	HP ProCurve	3COM 4400-PWR	Avaya P333-24	Nortel T460-24	Cisco 3550 PWR-24	Foundry 24/4802-PoE
48 Port Product	✔	⊘	⊘	⊘	⊘	✔
803.3af Compliant	✔	✔	✔	✔	✔	✔
Full 15.4 watts all Ports	✔	⊘	⊘	⊘	⊘	✔
1U form factor	✔	✔	⊘	⊘	✔	⊘
Cost Performance	✔	⊘	⊘	⊘	⊘	⊘
Redundancy	✔	⊘	⊘	✔	✔	✔
Dual Personality Uplink Ports	✔	⊘	⊘	⊘	✔	✔

GB to the Desktops – they are getting there!

- What is being purchased – predominantly LAN On Motherboard gigabit
  - Intel, Dell, Hewlett Packard, and IBM are pushing Gigabit Desktop
  - In 2003, Gigabit is standard on all new servers
  - by 2004, 100% of new desktops will be Gigabit ready
    (source: Intel, June 2003)
- Increased Bandwidth for PC's
  - Performance improvement in Windows 2000 and Windows XP Help make them gigabit ready
  - Pentium 4 with Hyper-Threading technology
  - PCI-X and PCI Express bus technology
  - Gigabit NIC's offer the following benefits
    - Significantly reduce CPU processor utilization
    - Up to 700MB throughput using full-duplex (source: ZDNet at UK)

Application Performance Improvement

10/100/1000 over 10/100

User Productivity is Positively impacted!

- 47% improvement over 10/100 in accessing Microsoft SQL DB records

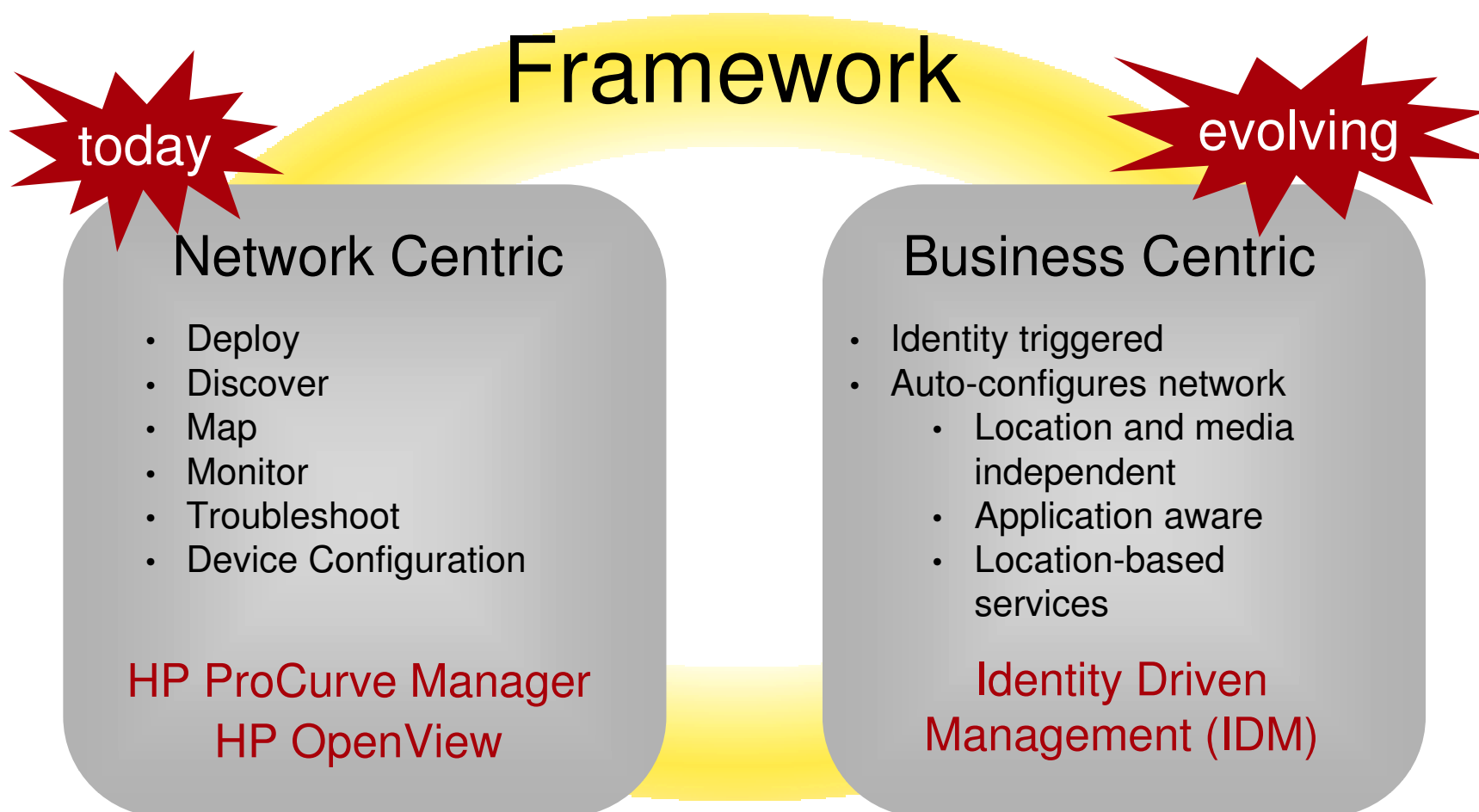- 40% improvement over 10/100 in execution MS office apps
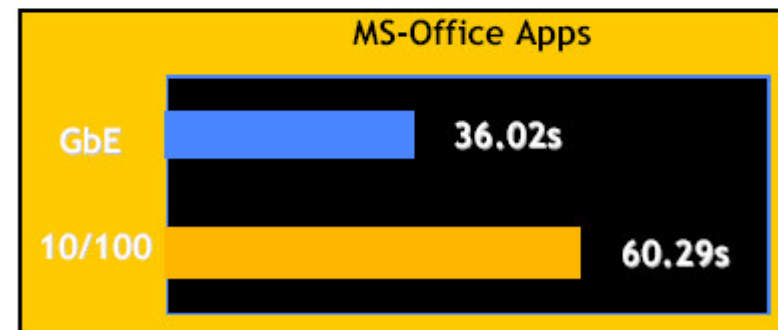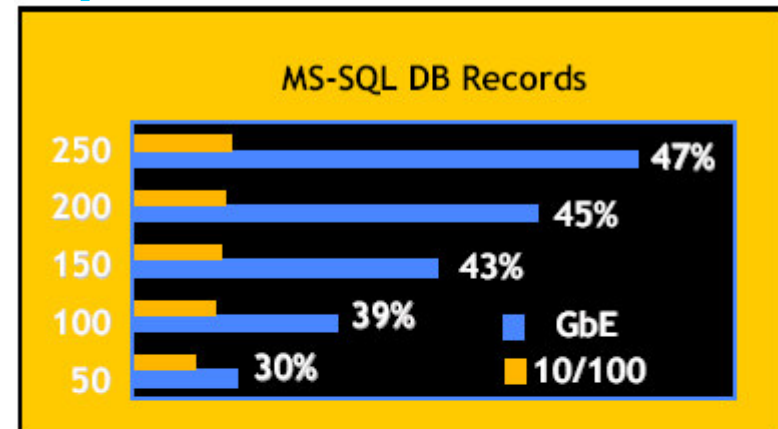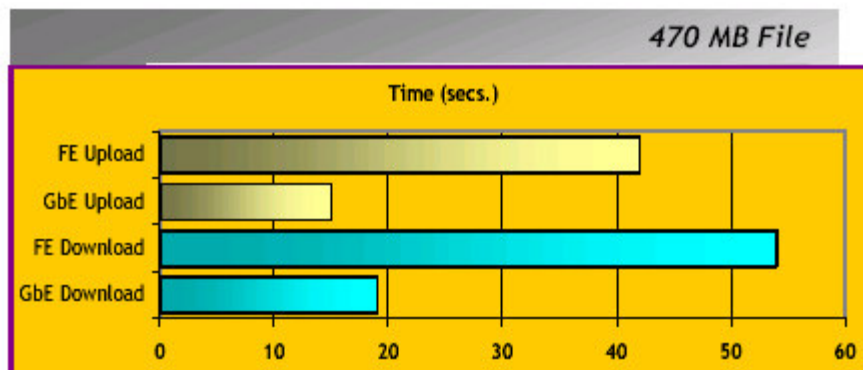
Source: eSeminars – Ziff Davis Media presented By Intel/Dell June 2003
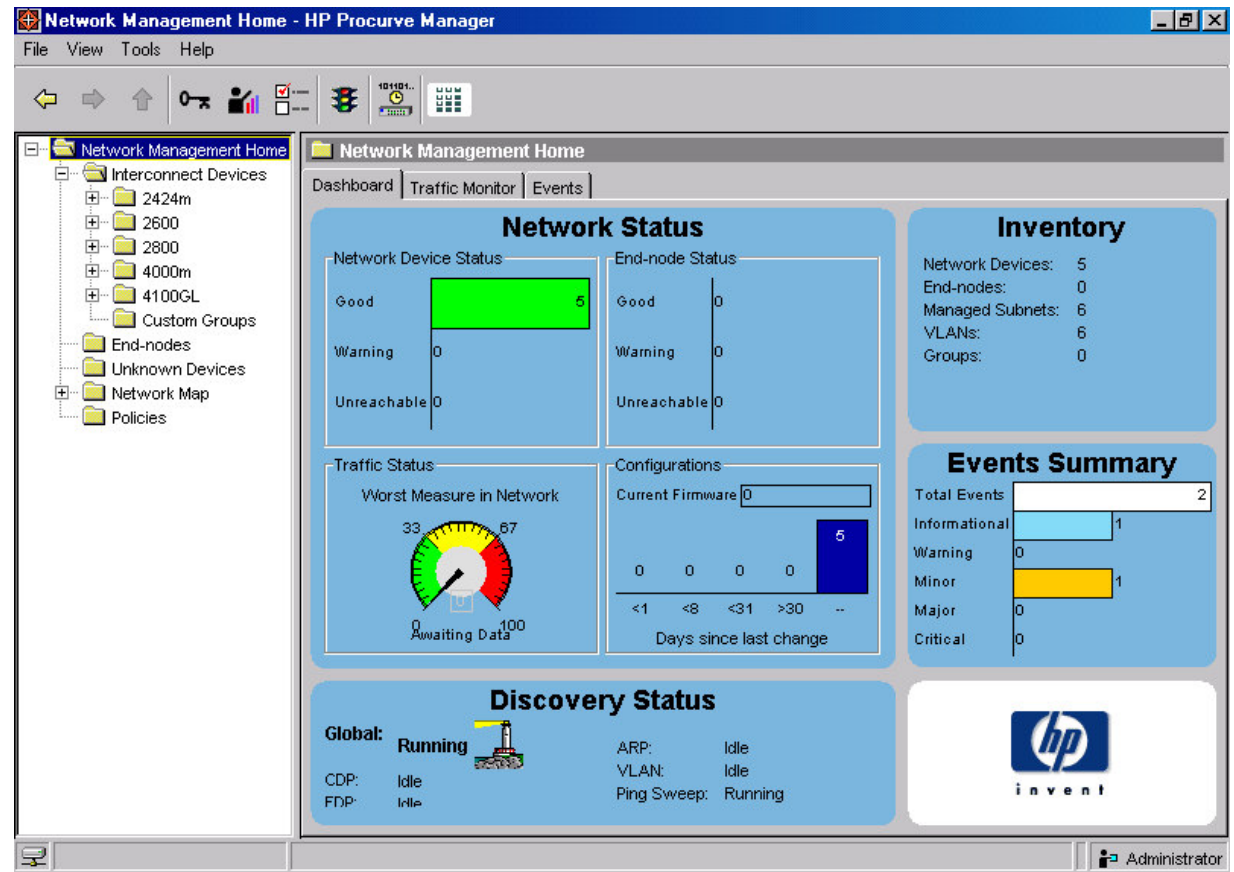
Faster, better, cheaper
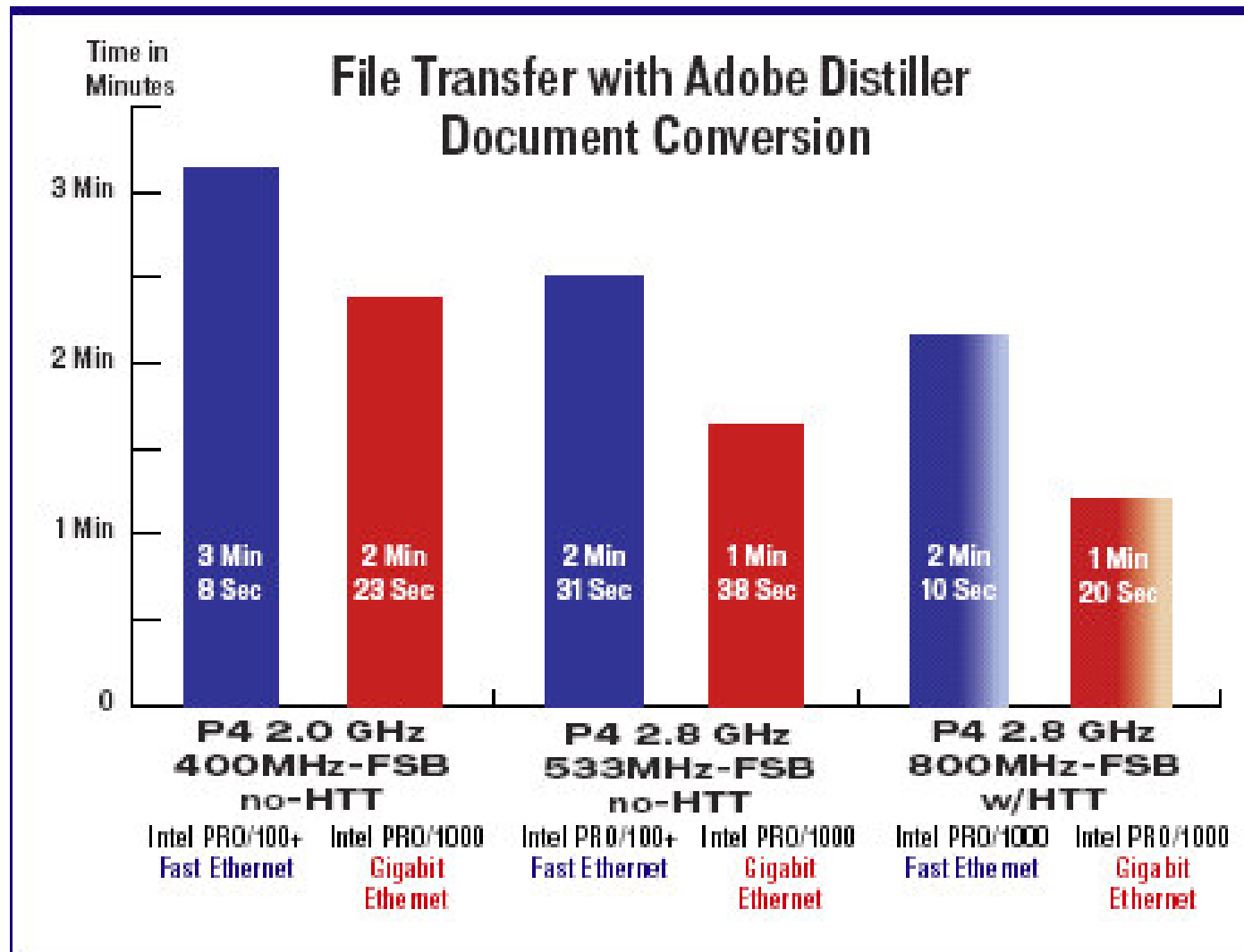
HP ProCurve Manager

- Windows-based **network management solution**

- Two versions available: Standard and PLUS

- Provides necessary tools to **effectively manage your network,** including:

  ✓ Auto-Discovery
  ✓ Topology Mapping
  ✓ Device Polling
  ✓ Device Configuration
  ✓ Traffic Monitoring
  ✓ and more….

PCM "Home Page"

August 25, 2004
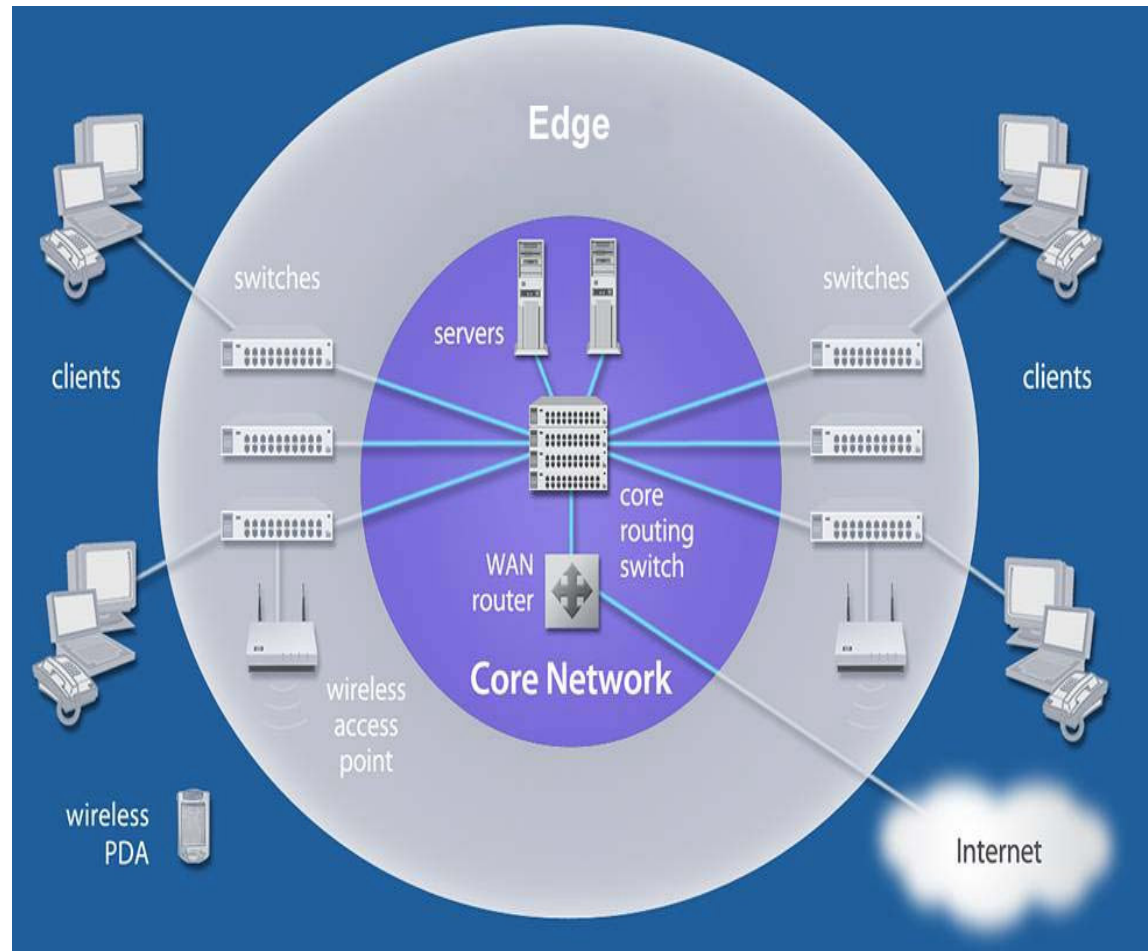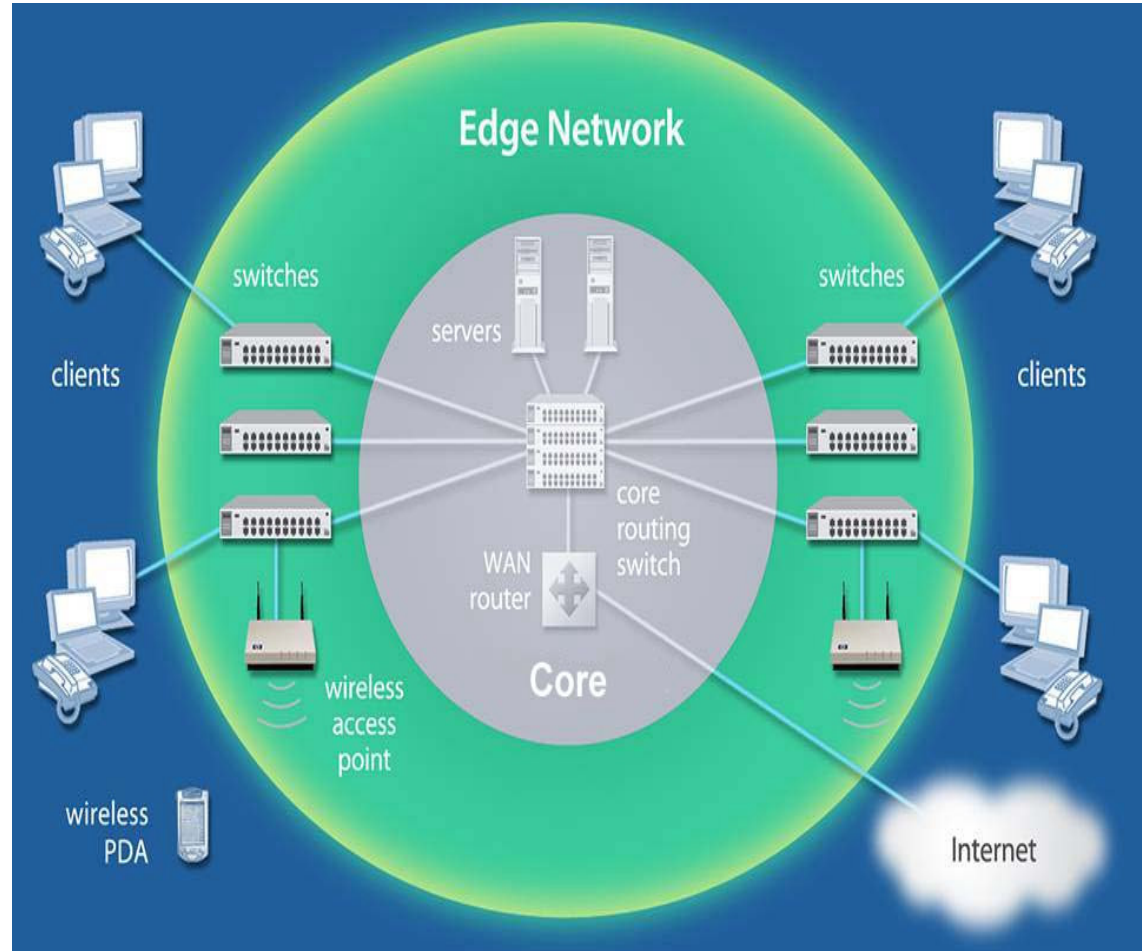
Core Centric Networks

- Every switch added at the edge increases the "decision making" load in the core – *constrained scalability.*
- Cost/performance curve for core switches is not linear – *expensive and constrained scalability.*
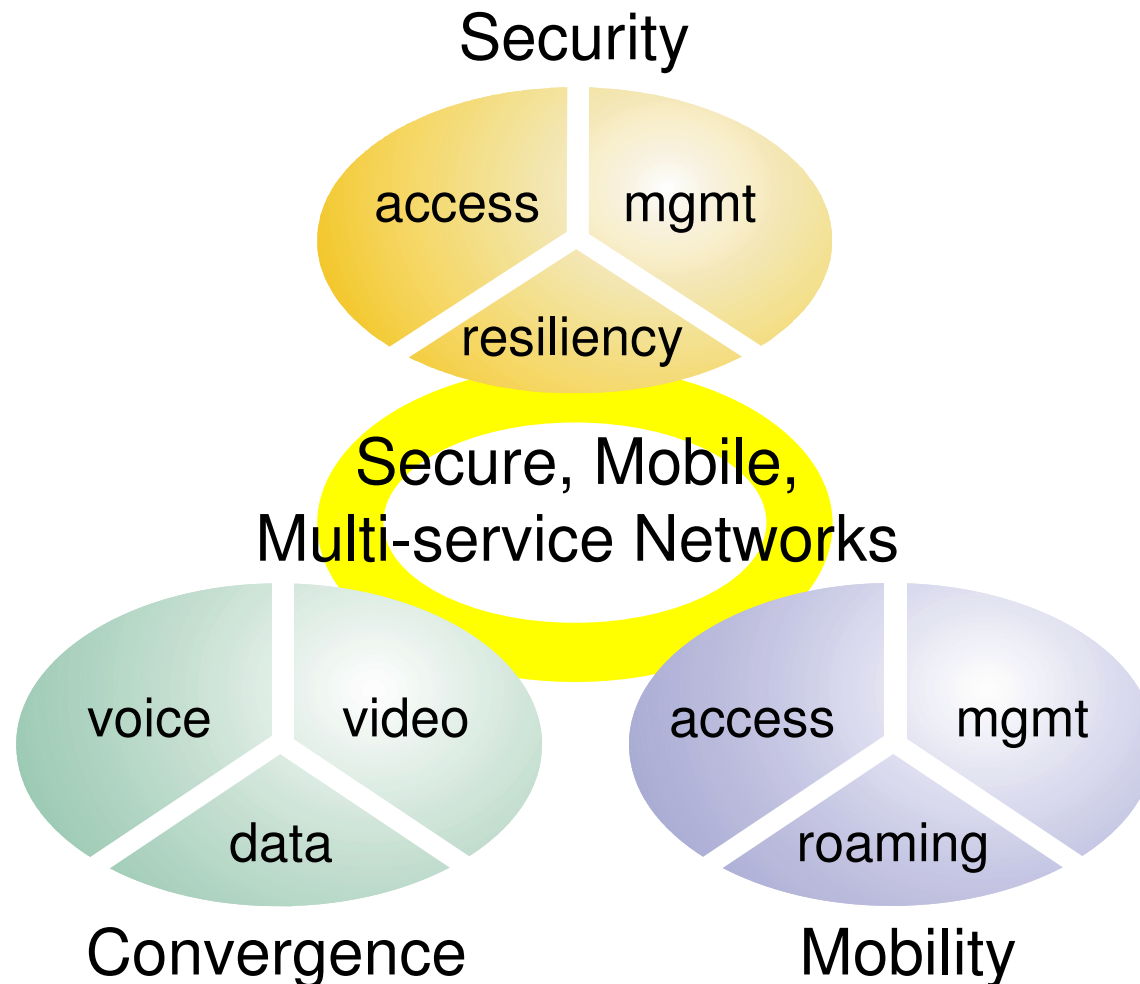- Many decision functions CANNOT be deferred to the core – *can't meet emerging application needs.*

Edge Centric Networks

- Every EDGE switch adds "decision making" capacity – *linear scalability and meets all emerging application needs.*
- EDGE switches are highly standardized volume components – *affordable scalability.*
- Core switches get simpler (layer 2) providing pure bandwidth – *reduced cost and complexity.*

Three Pillars and Key Attributes of the
Adaptive EDGE Architecture ™

Security

access | mgmt

resiliency

Secure, Mobile,
Multi-service Networks

Convergence

voice | video

data

Mobility

access | mgmt

roaming

Seven Key Attributes

1. Easy implementation of user security and application support

2. Secure connection management for portable and mobile users

3. Unparalleled range of traffic prioritization

4. Automatic control of network configuration

5. No need for custom network design or added hardware

6. Robust, always on reliability

7. Superior bandwidth optimization