Juniper Networks
IP Routers & Security Solutions
Tendencias Tecnologicas

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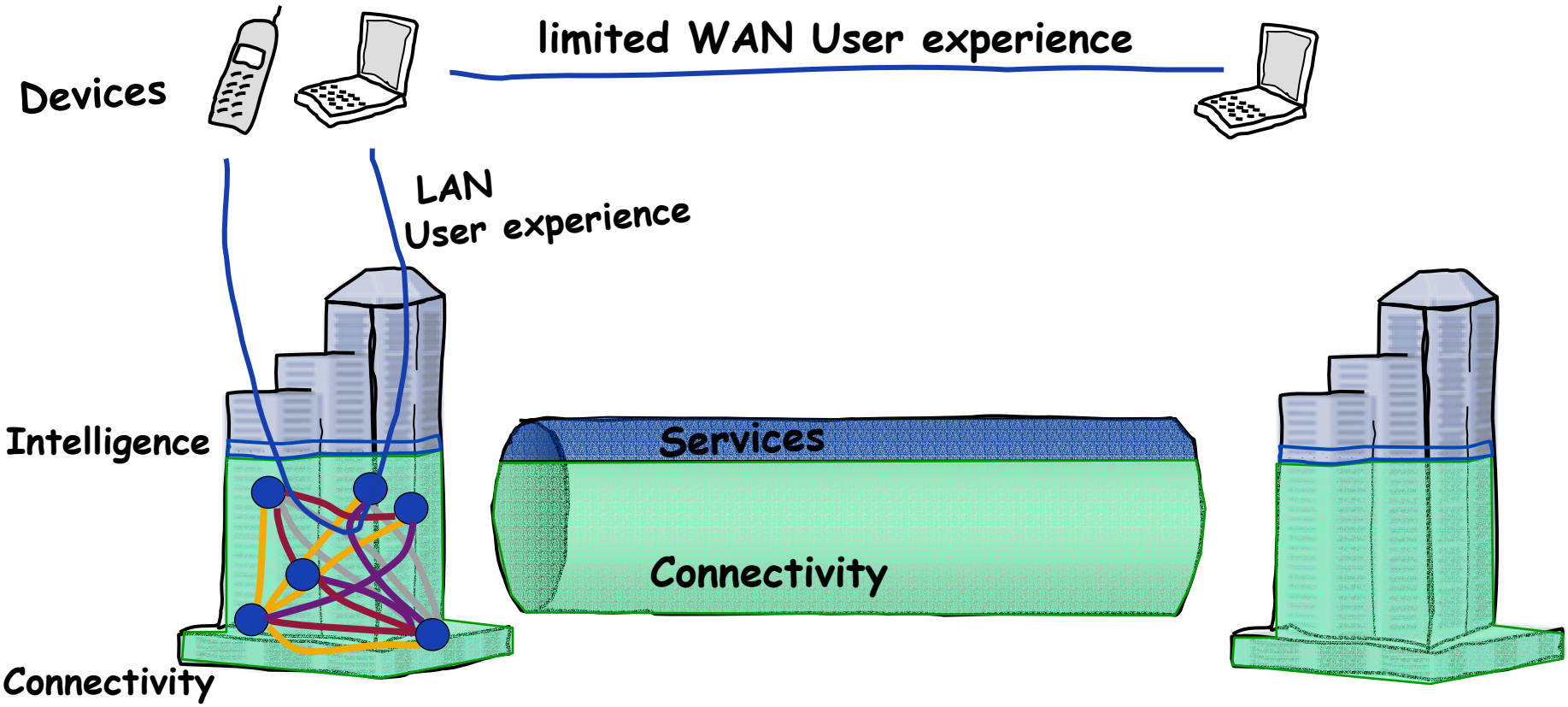
TAM Juniper Networks Mexico

Ctrejo@juniper.net

Juniper™ NETWORKS

The Internet is Changing…Today:



The Industry Has Two Choices

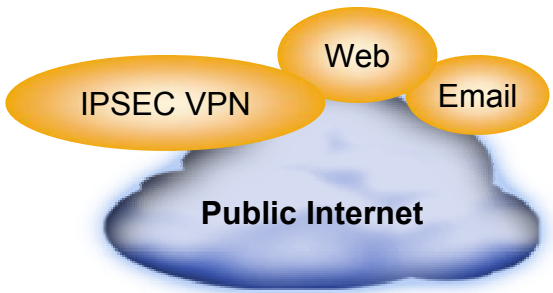
Continue growing service-specific private networks & a commoditized Internet…

Private Networks

Control over security, quality…

Expensive

No inter-carrier connectivity

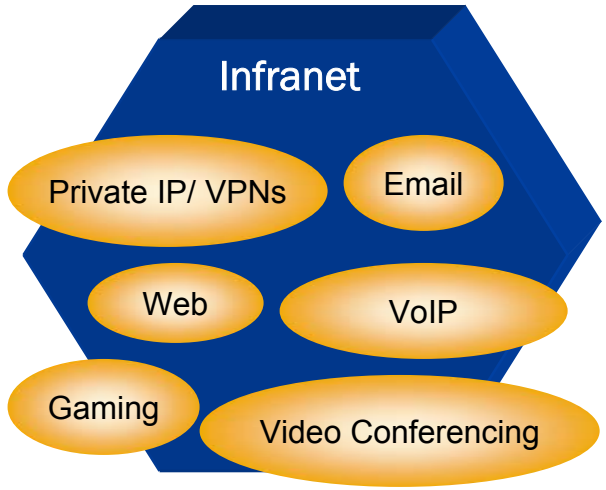


Global connectivity

Low cost

No control over security, quality…

…OR migrate to a single infrastructure that delivers quality, security & reach

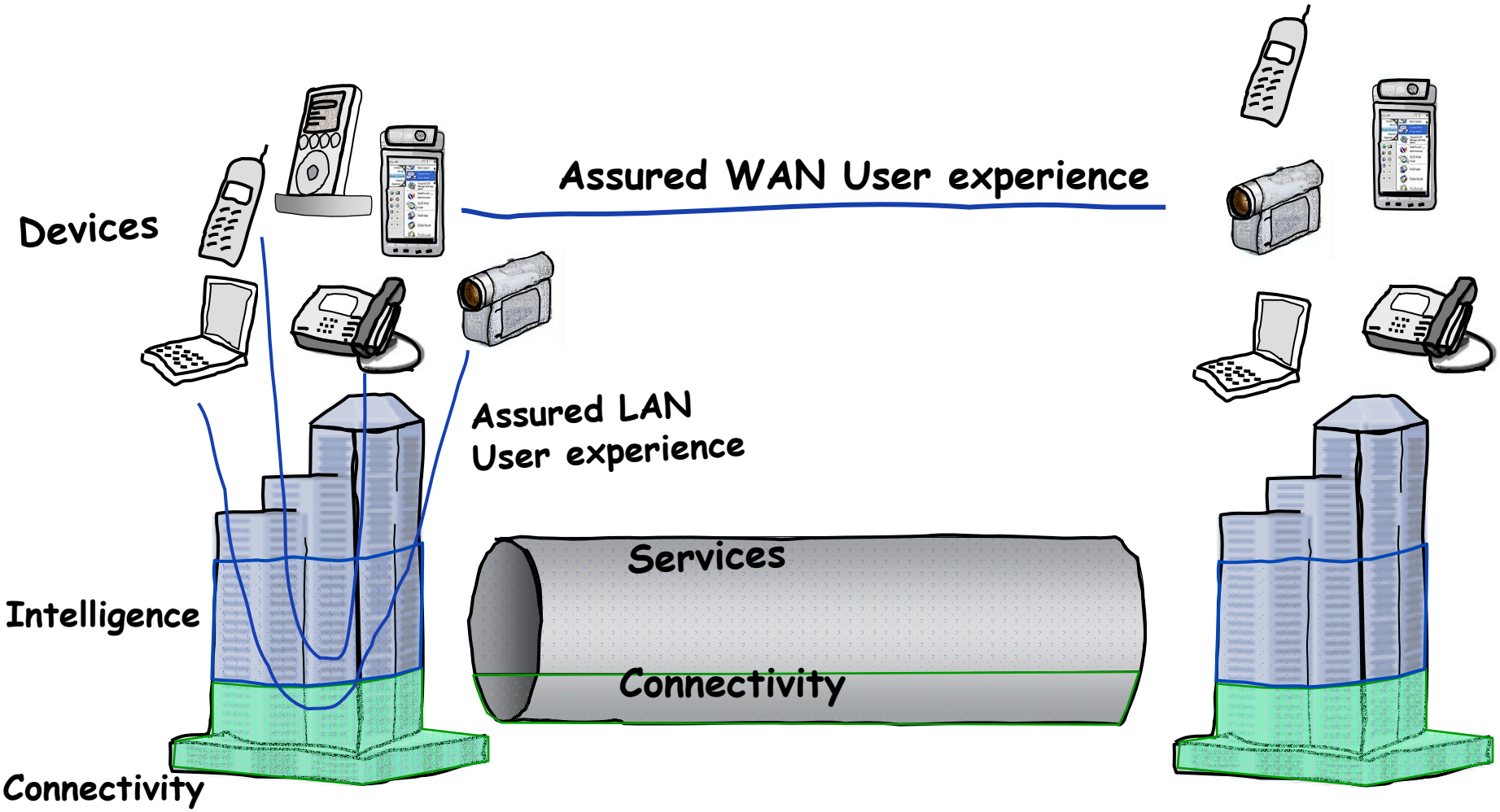


Single Network

Segregated, uniquely managed virtual networks

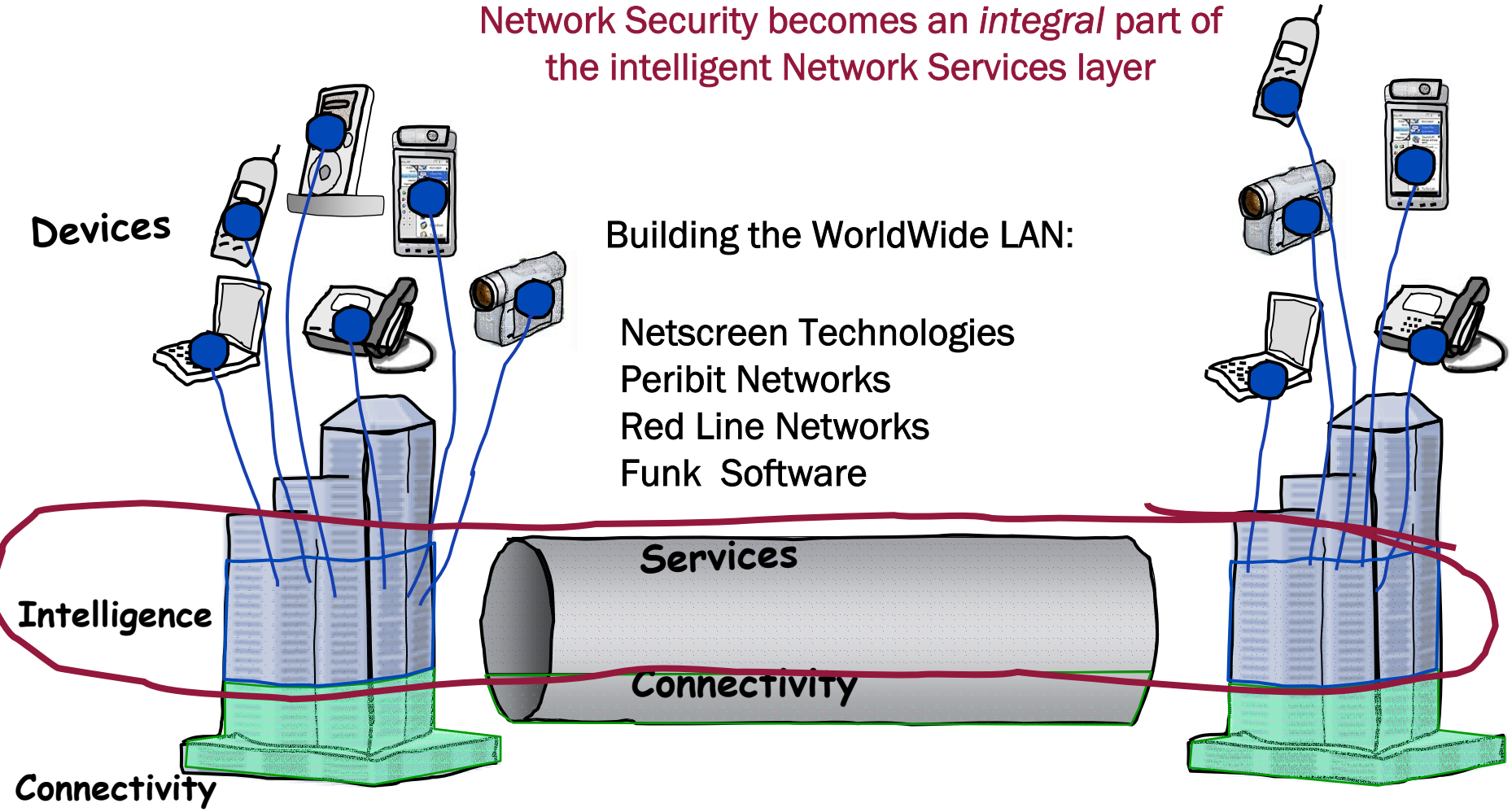
Assured end-to-end experience

The Internet is Changing…:



Intelligent Services – a Challenge and an Opportunity

Network Security becomes an *integral* part of the intelligent Network Services layer

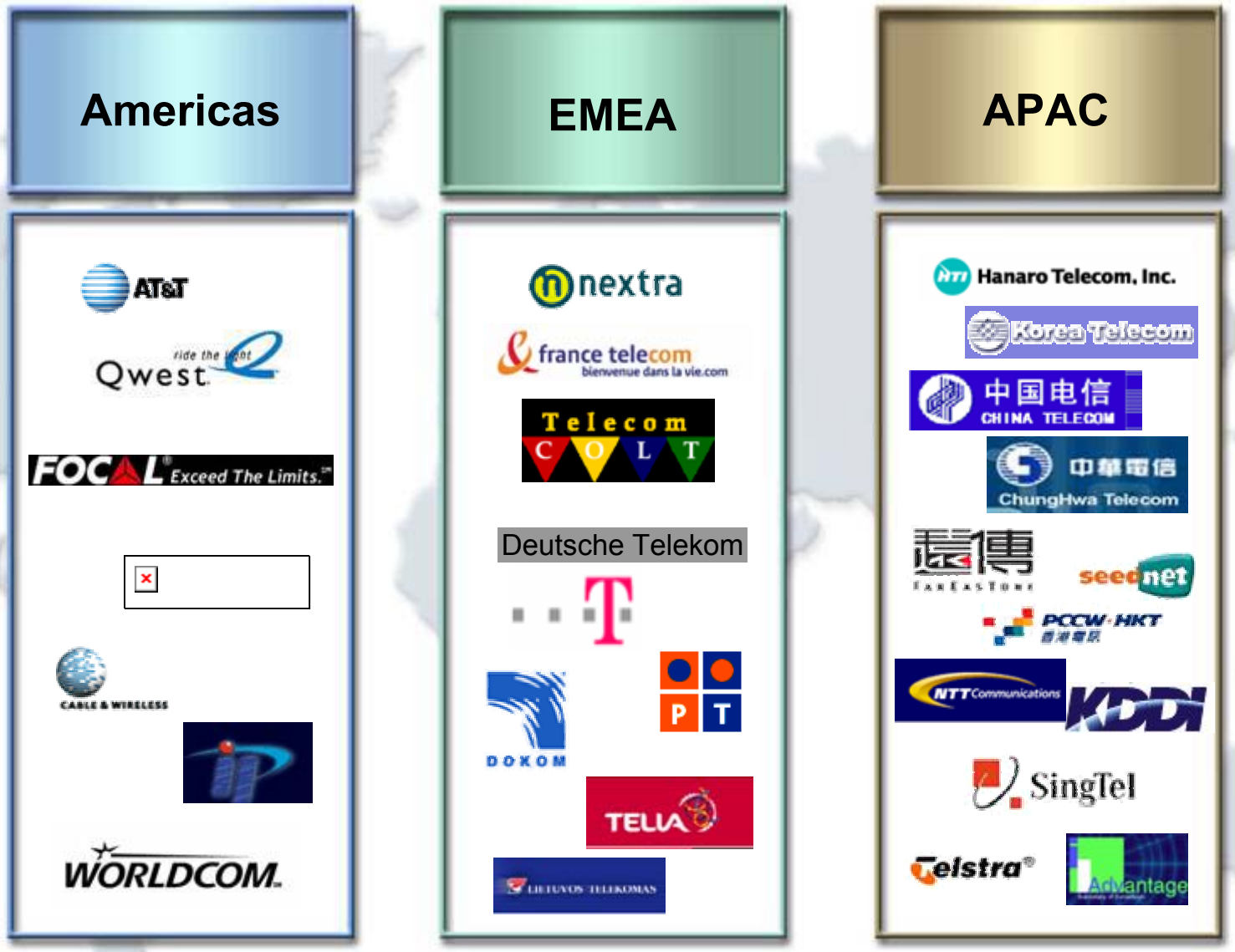


Secure and Assured Portfolio

 Routing	Deliver high levels of security, uptime and performance with simplified operations in converged IP and IP/MPLS infrastructures through professional-grade routers based on the advanced, modular JUNOS operating system.
 Application Acceleration	Improve and control application performance for users accessing centralized and web-based applications across a wide area network to improve user satisfaction while lowering infrastructure cost and complexity
 Session Border Controller	Extends the reach of IP telephony beyond a single network by providing the advanced security, protocol interworking, NAT traversal and Quality of Service mechanisms required to interconnect two VOIP networks for seamless call control and completion.
 Intrusion Detection and Prevention	Provide zero day protection against worms, Trojans, spyware, keyloggers, and other malware by identifying and stopping network & application-level attacks as well as giving visibility to potential rogue servers and applications, and other violations
 Secure Access SSL VPN	Eliminate the need for client access software, changes to internal servers, and costly ongoing maintenance & desktop support while providing added security through endpoint validation agents
 Integrated Firewall/IPSec VPN	Integrated security devices with Stateful firewall and IPSec VPN, including models with integrated IDP at the Data Center or integrated Antivirus, Web Filtering and wireless access at the branch office.

Global Commercial Customer Base

Includes 25 of the largest 28 service providers



Research & Education Customers

National Networks

North America

- Abilene - Internet2
- CA*net4 - Canada
- And 5 other National R&E Networks

Europe: GÉANT + 10 National R&E Networks

Asia: APAN + 3 National R&E Networks

Regional & Campus Networks

North America

- 16 GigaPoPs
- 13 Supercomputer Centers & National Labs
- 50+ Universities
- Several State Government Nets
- Several K-12 Systems

Europe

- 14 GigaPoPs
- 1 Supercomputer Center
- 30+ Universities & Research Labs

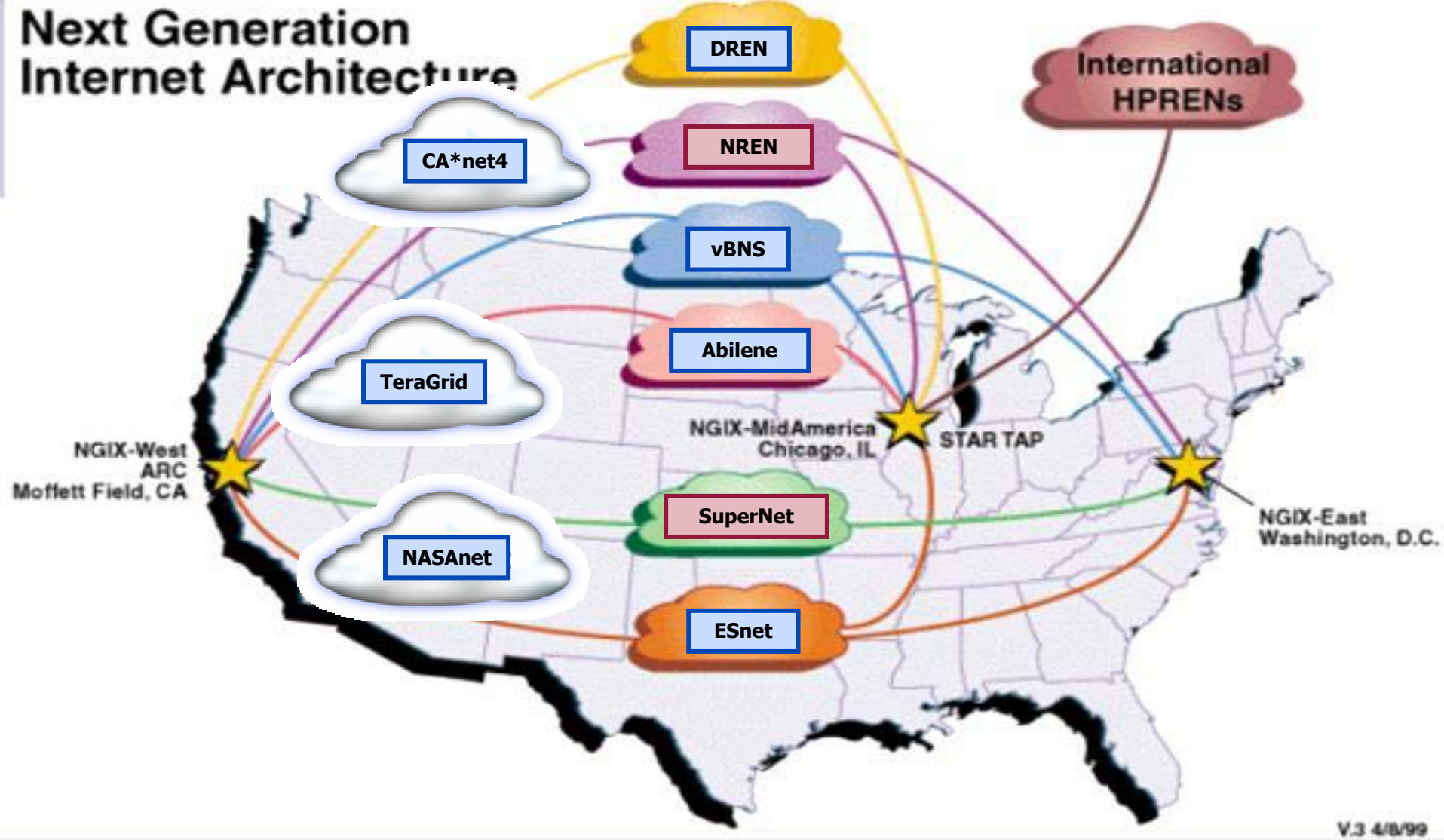
Asia

- 20+ Universities & Research Labs

Latin America

- 1 GigaPoP
- 1 University

Next Generation Internet Architecture



DREN - Defense Research & Engineering Network

NREN - NASA Research and Education Network

vBNS - Very High Performance Backbone Network Service (NSF)

Abilene - University Corporation for Advanced Internet Development (UCAID)

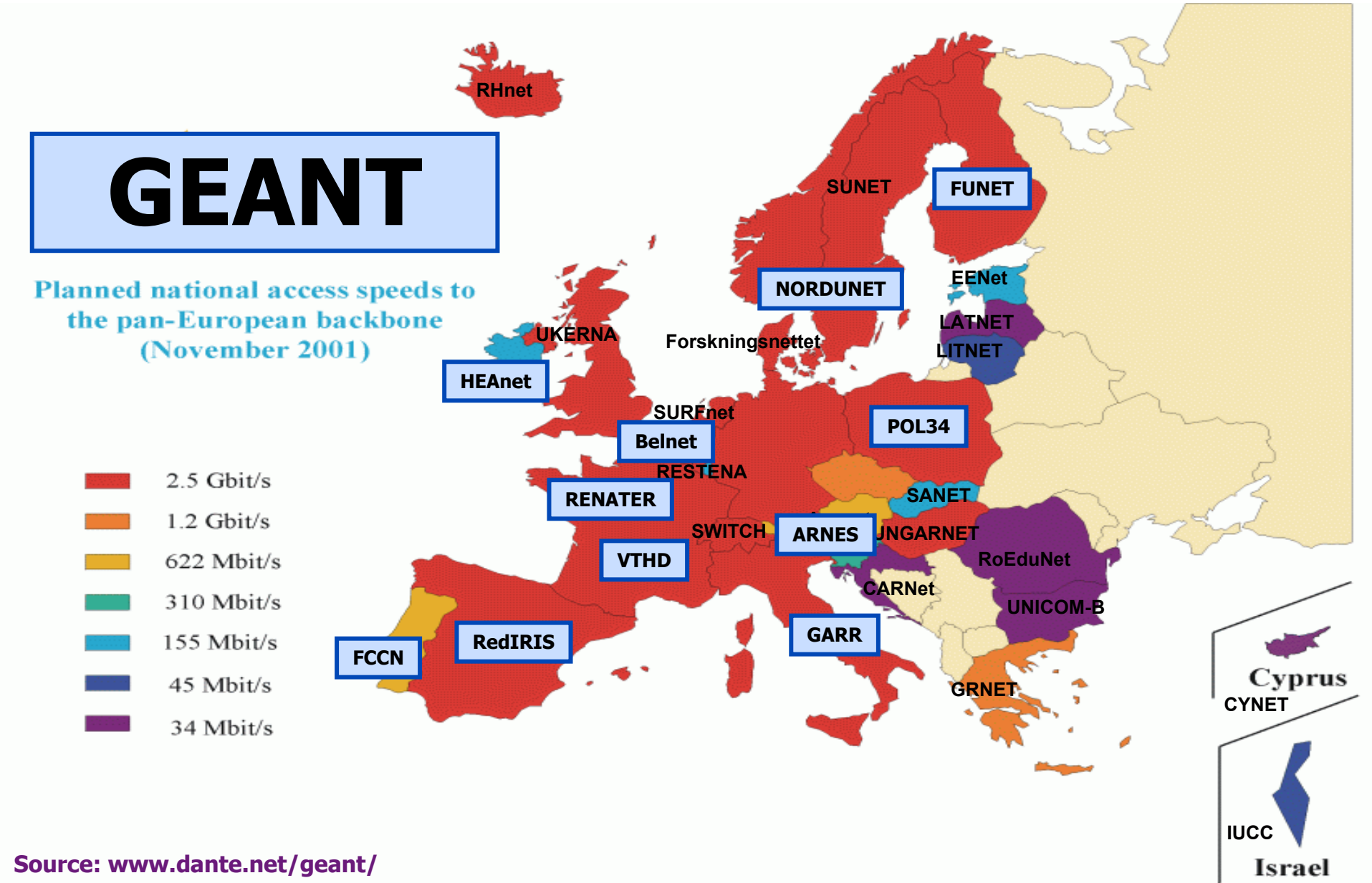
SuperNet - Terabit Research Network (DARPA)

ESnet - Energy Sciences Network (DOE)

All Juniper

Partial Juniper

EMEA R&E Networks



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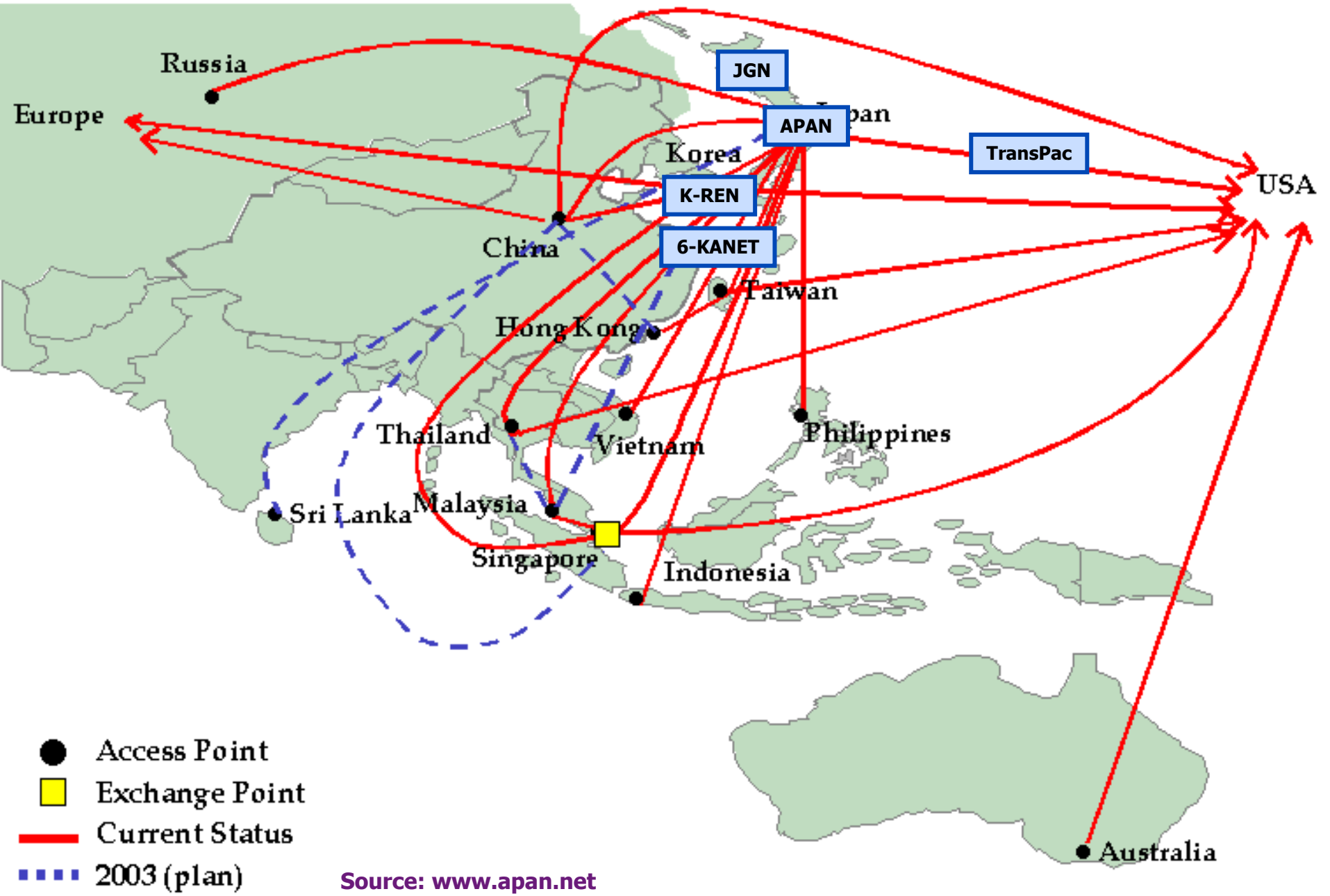
APAN Network Topology (updated 2003. 1. 15)



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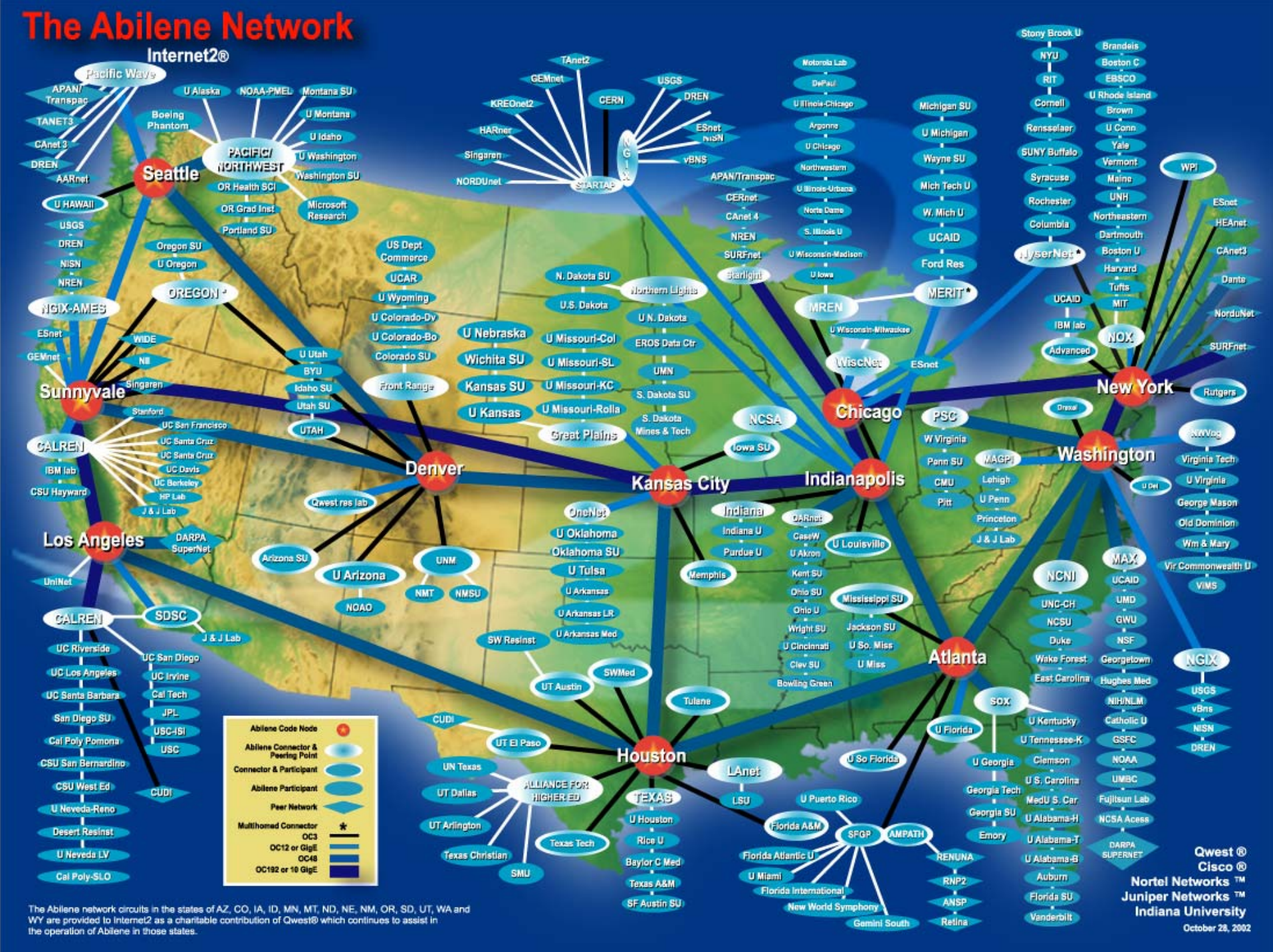
The Abilene Network
Internet2®
Pacific Wave
APAN/ Transpac
TANET3
CAnet 3
DREN
AARnet
U HAWAII
USGS
DREN
NISN
NREN
NGIX-AMES
ESnet
GEMnet
Sunnyvale
Stanford
UC San Francisco
UC Santa Cruz
UC Santa Cruz
UC Davis
UC Berkeley
HP Lab
J & J Lab
CALREN
IBM lab
CSU Hayward
Los Angeles
DARPA SuperNet
UniNet
CALREN
SDSC
J & J Lab
UC Riverside
UC Los Angeles
UC Santa Barbara
San Diego SU
Cal Poly Pomona
CSU San Bernardino
CSU West Ed
U Neveda-Reno
Desert Resinst
U Neveda LV
Cal Poly-SLO
UC San Diego
UC Irvine
Cal Tech
JPL
USC-ISI
USC
CUDI
Seattle
Boeing Phantom
U Alaska
NOAA-PMEL
Montana SU
U Montana
U Idaho
U Washington
Washington SU
PACIFIC NORTHWEST
OR Health SCI
OR Grad Inst
Portland SU
Microsoft Research
Oregon SU
U Oregon
OREGON *
WIDE
NII
Singaren
U Utah
BYU
Idaho SU
Utah SU
UTAH
Qwest res lab
Denver
US Dept Commerce
UCAR
U Wyoming
U Colorado-Dv
U Colorado-Bo
Colorado SU
Front Range
U Nebraska
Wichita SU
Kansas SU
U Kansas
Great Plains
Arizona SU
U Arizona
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GEMnet
KREOnet2
HARnet
Singaren
NORDUnet
CERN
STARTAP
NGIX
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NISN
vBNS
APAN/Transpac
CERnet
CAnet 4
NREN
SURFnet
Starlight
N. Dakota SU
U.S. Dakota
Northern Lights
U N. Dakota
EROS Data Ctr
UMN
S. Dakota SU
S. Dakota Mines & Tech
U Missouri-Col
U Missouri-SL
U Missouri-KC
U Missouri-Rolla
OneNet
U Oklahoma
Oklahoma SU
U Tulsa
U Arkansas
U Arkansas LR
U Arkansas Med
SW Resinst
UT Austin
SWMed
CUDI
UT El Paso
UN Texas
UT Dallas
UT Arlington
Texas Christian
SMU
ALLIANCE FOR HIGHER ED
TEXAS
U Houston
Rice U
Baylor C Med
Texas A&M
SF Austin SU
Texas Tech
Kansas City
NCSA
Iowa SU
Indiana
Indiana U
Purdue U
Memphis
Tulane
LAnet
LSU
Houston
Motorola Lab
DePaul
U Illinois-Chicago
Argonne
U Chicago
Northwestern
U Illinois-Urbana
Notre Dame
S. Illinois U
U Wisconsin-Madison
U Iowa
MREN
U Wisconsin-Milwaukee
WiscNet
Chicago
Indianapolis
DARNet
CaseW
U Akron
Kent SU
Ohio SU
Ohio U
Wright SU
U Cincinnati
Clev SU
Bowling Green
U Louisville
Mississippi SU
Jackson SU
U So. Miss
U Miss
Michigan SU
U Michigan
Wayne SU
Mich Tech U
W. Mich U
UCAID
Ford Res
MERIT*
ESnet
Stony Brook U
NYU
RIT
Cornell
Rensselaer
SUNY Buffalo
Syracuse
Rochester
Columbia
NYSERNet*
UCAID
IBM lab
Advanced
NOX
New York
Drexel
PSC
W Virginia
Penn SU
CMU
Pitt
MAGPI
Lehigh
U Penn
Princeton
J & J Lab
Washington
U Del
Brandeis
Boston C
EBSCO
U Rhode Island
Brown
U Conn
Yale
Vermont
Maine
UNH
Northeastern
Dartmouth
Boston U
Harvard
Tufts
MIT
WPI
ESnet
HEAnet
CAnet3
Dante
NorduNet
SURFnet
Rutgers
NMVoG
Virginia Tech
U Virginia
George Mason
Old Dominion
Wm & Mary
Vir Commonwealth U
ViMS
MAX
UCAID
UMD
GWU
NSF
Georgetown
Hughes Med
NIH/NLM
Catholic U
GSFC
NOAA
UMBC
Fujitsun Lab
NCSA Acess
DARPA SUPERNET
NGIX
USGS
vBns
NISN
DREN
NCNI
UNC-CH
NCSU
Duke
Wake Forest
East Carolina
Atlanta
SOX
U Kentucky
U Tennessee-K
Clemson
U S. Carolina
MedU S. Car
U Alabama-H
U Alabama-T
U Alabama-B
Auburn
Florida SU
Vanderbilt
U Florida
U So Florida
U Georgia
Georgia Tech
Georgia SU
Emory
U Puerto Rico
Florida A&M
SFGP
AMPATH
RENUNA
RNP2
ANSP
Retina
Florida Atlantic U
U Miami
Florida International
New World Symphony
Gemini South
Abilene Code Node
Abilene Connector & Peering Point
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Peer Network
Multihomed Connector
OC3
OC12 or GigE
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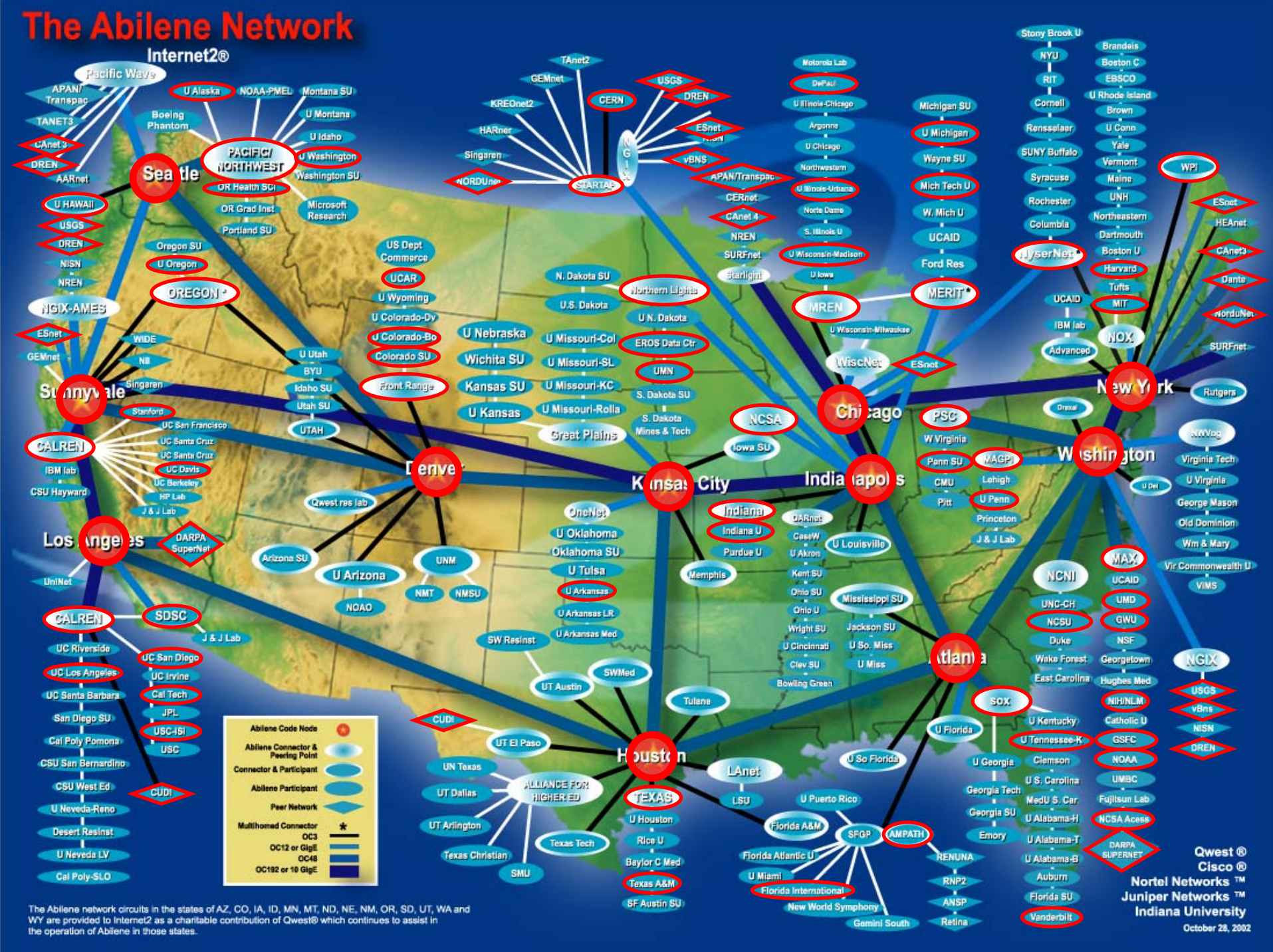
The Abilene network circuits in the states of AZ, CO, IA, ID, MN, MT, ND, NE, NM, OR, SD, UT, WA and WY are provided to Internet2 as a charitable contribution of Qwest® which continues to assist in the operation of Abilene in those states.
Qwest ®
Cisco ®
Nortel Networks ™
Juniper Networks ™
Indiana University
October 28, 2002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Boeing Phantom
PACIFIC NORTHWEST
OR Health Sci
OR Grad Inst
Portland SU
Seattle
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USGS
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Oregon SU
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WIDE
NII
Singaren
Stanford
UC San Francisco
UC Santa Cruz
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UC Davis
UC Berkeley
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SDSC
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San Diego SU
Cal Poly Pomona
CSU San Bernardino
CSU West Ed
U Neveda-Reno
Desert Resinst
U Neveda LV
Cal Poly-SLO
UC San Diego
UC Irvine
Cal Tech
JPL
USC-ISI
USC
CUDI
US Dept Commerce
UCAR
U Wyoming
U Colorado-Dv
U Colorado-Bo
Colorado SU
Front Range
Denver
U Utah
BYU
Idaho SU
Utah SU
UTAH
Qwest res lab
Arizona SU
U Arizona
NOAO
UNM
NMT
NMSU
U Nebraska
Wichita SU
Kansas SU
U Kansas
N. Dakota SU
U.S. Dakota
U Missouri-Col
U Missouri-SL
U Missouri-KC
U Missouri-Rolla
Great Plains
Northern Lights
U N. Dakota
EROS Data Ctr
UMN
S. Dakota SU
S. Dakota Mines & Tech
Kansas City
OneNet
U Oklahoma
Oklahoma SU
U Tulsa
U Arkansas
U Arkansas LR
U Arkansas Med
SW Resinst
UT Austin
SWMed
Houston
UT El Paso
UN Texas
UT Dallas
UT Arlington
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LAnet
LSU
TAnet2
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KREOnet2
HARnet
Singaren
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ESnet
vBNS
APAN/Transpac
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CAnet 4
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Motorola Lab
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Notre Dame
S. Illinois U
U Wisconsin-Madison
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MREN
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WiscNet
ESnet
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NCSA
Iowa SU
Indianapolis
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Michigan SU
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Wayne SU
Mich Tech U
W. Mich U
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Princeton
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Virginia Tech
U Virginia
George Mason
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Dante
NorduNet
SURFnet
NCNI
UNC-CH
NCSU
Duke
Wake Forest
East Carolina
SOX
U Kentucky
U Tennessee-K
Clemson
U S. Carolina
MedU S. Car
U Alabama-H
U Alabama-T
U Alabama-B
Auburn
Florida SU
Vanderbilt
U Florida
U So Florida
U Georgia
Georgia Tech
Georgia SU
Emory
MAX
UCAID
UMD
GWU
NSF
Georgetown
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NIH/NLM
Catholic U
GSFC
NOAA
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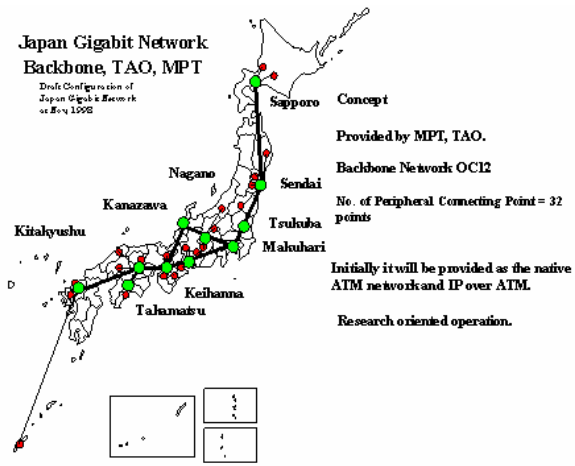
Japan Gigabit Network

- Japan Gigabit Network (JGN) - nationwide, next generation network widely available for use at universities, research institutions, venture businesses & local governments in Japan.
- IPv6 service offered to the public and academic institutions in Japan since Fall 2001
- Juniper Networks - a key supplier of IPv6 routing platforms since 2001.
- *"I appreciate Juniper Networks IPv6 implementation, as it provides us the same level of packet forwarding capacity, scalability as its IPv4. Also, it can run IPv4 and IPv6 simultaneously, while providing the interoperability with other IPv6 vendors' routers. I, especially, appreciate Juniper Network's prompt and adequate technical supporting to try to deliver the production- caliber quality operation."*

Dr. Esaki, head of JGN IPv6 operation

Juniper M20 Router running IPv6 in Otemachi IPv6 System Operation and Technical Development Center



v4 & V6 on a single infrastructure

ESnet Announcement 8/28/02

Department of Energy's Global Research Network Teams With Juniper Networks to Deploy Simultaneous IPv4 and IPv6 Operation

Delivers Scalability and Performance without Compromise to Advance Global Internet Expansion

- A single set of routers
- Simultaneous IPv6 implementation

Juniper IPv4 vs IPv6 Forwarding

- Both forwarding tables (IPv4 & IPv6)
  - Built by the Routing Engine
  - Stored in memory on the Forwarding Engine's ASIC
- All forwarding decisions made in hardware
- Internet Routing Table
  - From University of Oregon Route Views Server
  - Approximately 112,000 Routes

TeraGrid

- Distributed Terascale Facility
- $53 Million NSF Funded Supercomputer Project
- Distributed across NCSA; Argonne; SDSC; Caltech
  - 8 Terraflops at NCSA (Illinois)
  - Petabytes of data at SDSC (California)
- Network has:
  - 6 T640s
  - 16 SONET OC-192 Circuits
  - 12 - 10 Gigabit Ethernet Links

Router platform selection

Two platforms in production for ~2 years

- Cisco 12416
- Juniper M160

One new (then unannounced) platform

- Juniper T640

Technical recommendation was for T640

- Significant improvement in performance
  - Longer 'high-performance service' lifetime
- Immediately scalable to 40-Gbps interfaces
- More compact (half rack)
- Newest technology

M5s required for OC-3c ATM support

Juniper Networks

M and T Architecture

Juniper M & T Series Routers

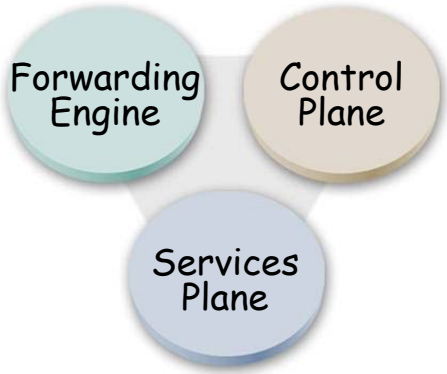
JUNOS

Common software and features

Across all platforms

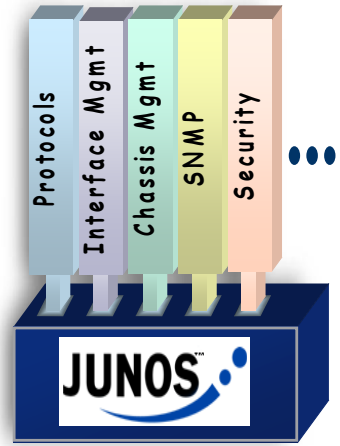
Juniper Routers Advantage

most Secure



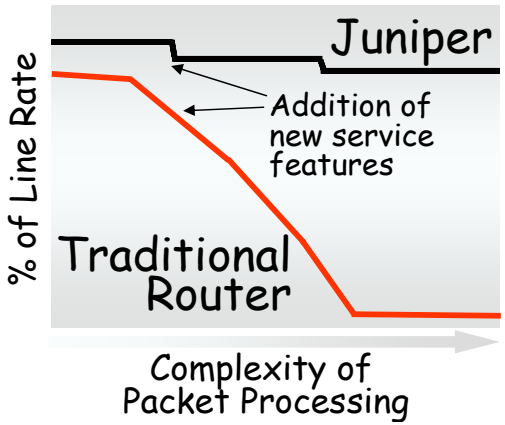
- Modularity for full router control while under attack
- Next Gen CLI for fast editing of filters while under attack
- Dedicated processing to support many filter terms without degradation

highest Uptime



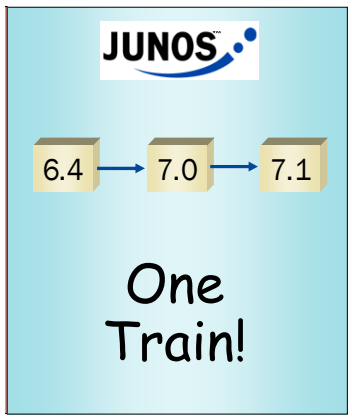
- Strong attack defense ensures system stability
- Minor problems do not lead to system crashes
- Next Gen CLI prevents operator error
- Rescue config button for fast recovery

excellent Performance



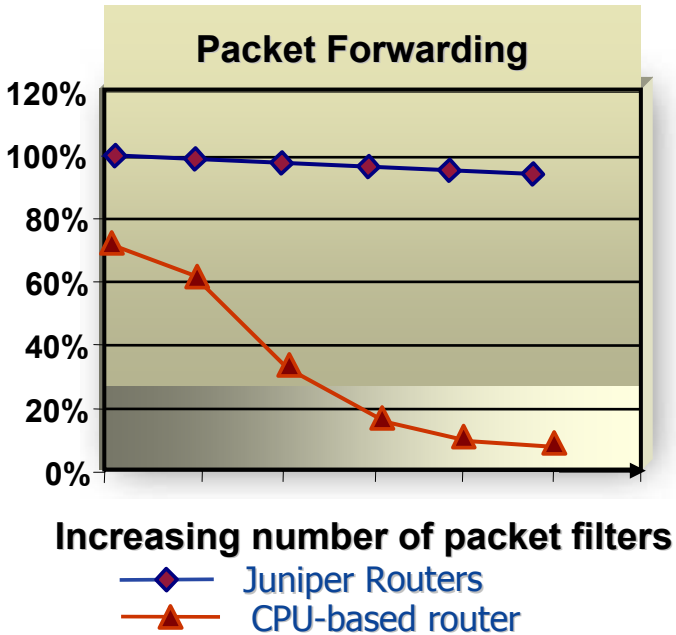
- Predictable performance for voice, video and other time critical apps
- Comprehensive QOS functions to classify, prioritize and schedule traffic

reduced Operational cost



- One software train
- Multiple management tools, including J-Web
- XML-based API
- Restoration features
- Feature licensing
- Interoperability

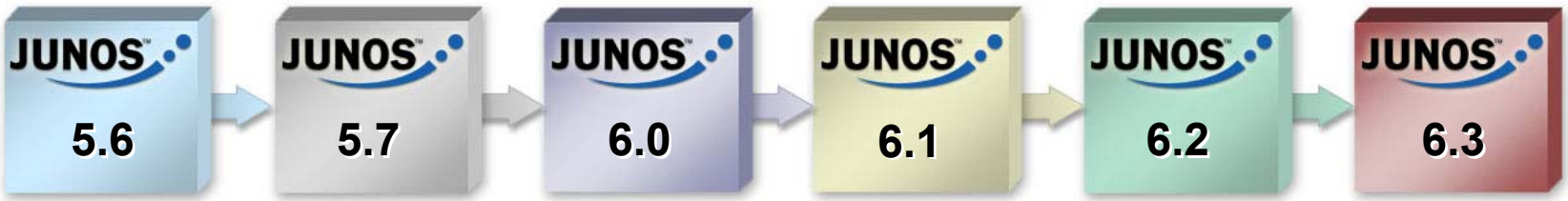
ASIC Based Forwarding and Services



- All packet forwarding and advanced services are executed in hardware on a custom designed ASIC, not on a CPU
- This ASIC is a programmable, high performance packet classifier and forwarding engine optimized for IPv4, IPv6, and MPLS
- Acts as a centralized resource enabling breakthrough support for performance-based, enhanced services on all interfaces
  - filter based forwarding, packet filtering, packet sampling, rate limiting, traffic policing, and port mirroring

Design and Operations Simplicity

New Features and Functionality



Single Binary Image on All Platforms

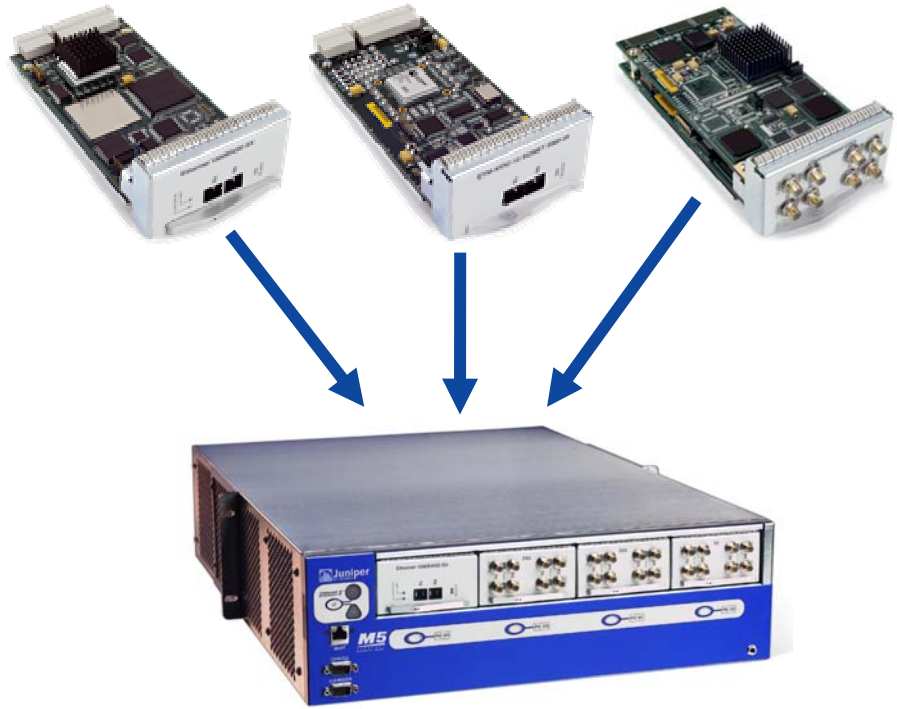
Fewer variables and a simpler process mean less time is spent planning, provisioning, and deploying your networks

- CLI enhancements (access controls, command line completion, context sensitive help, rich set of show commands, ect.)
- Industry-standard management protocols (XML, SYSlog, and SNMP)
- User-friendly configuration syntax: hierarchical (easy to read), editor supports local scoping, and comments/inactive command support

Physical Interface Cards (PICs)

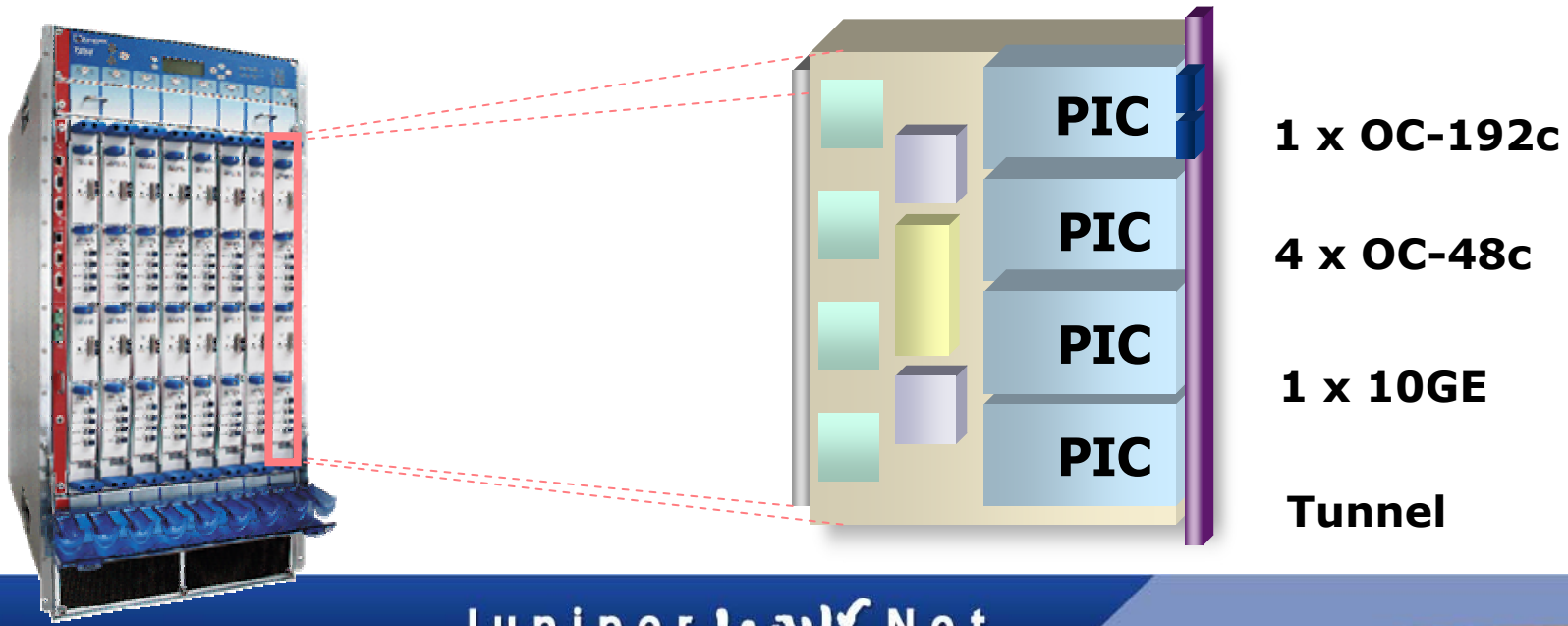
Mix and Match PICs enable maximum configuration flexibility

- Each FPC has 4 PIC slots, any PIC can go into any slot
- Example: an M10 can be configured with OC-48 SONET, Gig-E, Fast-E, DS-3, and OC-12 SONET
- PIC choices include: Fast-E, Gig-E, T1, DS-3, OC3 (SONET & ATM) , OC12 (SONET & ATM), OC-48 SONET, OC-192 SONET, 10 Gig-E



Flexible PIC Concentrators (FPC)

- Multiple interface media per FPC slot
- PIC hot insert/removal
- Adding additional flexible PIC controllers (FPCs) adds additional shared memory
  - Available to any interface in the system
  - There is never a possibility of “memory starvation”



Software Usability and Operations

- Command Line Interface
  - User & group access control
  - Flexible config management
  - Commit & rollback
  - Hierarchical, easy to read
- Protocols & Tools
  - SNMP v1, 2 (v3 in 5.4)
  - Telnet and FTP
  - Syslog and NTP
  - TACACS+ and RADIUS
  - SSH and SCP
  - Ping and Traceroute

```
interfaces {
    fxp0 {
        unit 0 {
            family inet {
                address 10.0.0.20/24;
            }
        }
    }
}
routing-options {
    static {
        route default {
            gateway 10.0.0.1;
            retain;
            no-readvertise;
        }
    }
}
```

Benefit: Simpler Operations

IPv6 Available Features

- Supported on all M-series and T-series platforms

Addressing & Forwarding

- Forwarding in hardware
- Addressing
  - Link, site, global
  - Stateless autoconfiguration
- Neighbor discovery
- IPv6 Packet Filtering
- EUI 64 Autogeneration
- Unicast RPF
- FBF and CBF for IPv6
- Destination/Source Class Usage

Routing Protocols

- IS-IS
- OSPFv3
- MP-BGP over v4/v6
- RIPng
- Static
- IPv6 VPN (RFC2547bis)
- PIM v2
- MLD

Operations & Transition

- Common support
- ICMPv6
- SNMP over v6 + MIBs
- IP applications
  - Ping, telnet, ssh, ftp…
- Transition
  - Configured tunnels
  - Dual stack
  - Transport IPv6 in MPLS

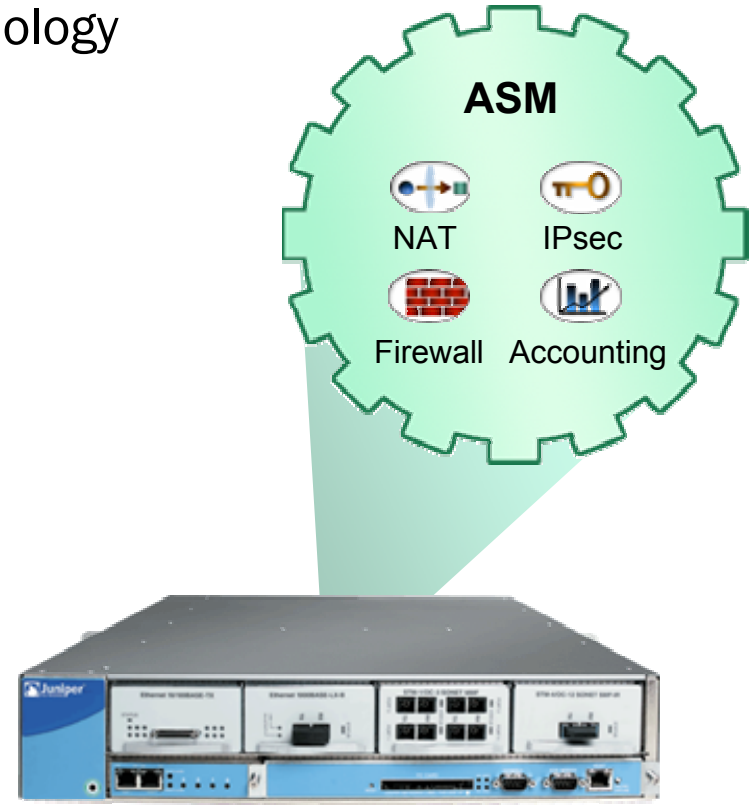
Service-Built M7i router

- **Leverages production proven technology**
  - Internet Processor II technology
  - Feature rich JUNOS 6.0 software
- **Uses existing M5/M10 PIC's**
  - Broad set of interfaces available (45)
  - Provides investment protection
- 2 Rack Units high
- Four configurations:
  - 4 open slots, 2 x FE fixed
  - 4 open slots, 2 x FE fixed, adaptive services module
  - 4 open slots, 1 x GE fixed (SFP)
  - 4 open slots, 1 x GE fixed (SFP), adaptive services module

Ideal for:
- **PE services, low density PoPs**
- **Carrier class head office CPE**

M7i with Adaptive Services Module

- Hardware-accelerated packet processing with programmable ASICs
  - Based on Adaptive Services PIC technology
  - High performance services
  - Optional, must be ordered w/ chassis
- J-Protect security toolkit
  - High speed NAT
  - High speed Stateful Firewall
  - High speed IPSec
- J-Flow accounting
  - High speed accounting



Security in the Intelligent Infrastructure

- The network infrastructure is becoming more intelligent
  - MPLS
  - “Infranet”
- The intelligent infrastructure provides end-to-end services to applications:
  - Quality of Service (QoS)
  - Security
  - Reliability
  - Measurement
- Every device in the path of packets needs to provide these services in tandem with all other devices
  - Security devices are no exception

J-series Services Router

J2300

- 2XT1/E1/Serial platform
- 2 fixed FE LAN + 1 fixed 2 port card
- 1 FE & 1 primary port active, additional w/license
- 1 expansion slot for backup ISDN/dial interfaces

J4300

- NxT1/E1
- 2 fixed FE LAN + 6 open interface slots
- 1 FE port active, additional w/ license

J6300

- DS3 platform
- 2 fixed FE LAN + 6 open interface slots
- Both FE ports active
- Redundant power supply

I/O Cards: 2xT1, 2xE1, 2xSerial, 2xFE (J4300/J6300), DS3 (J6300)

Juniper Advantages for R&E Nets

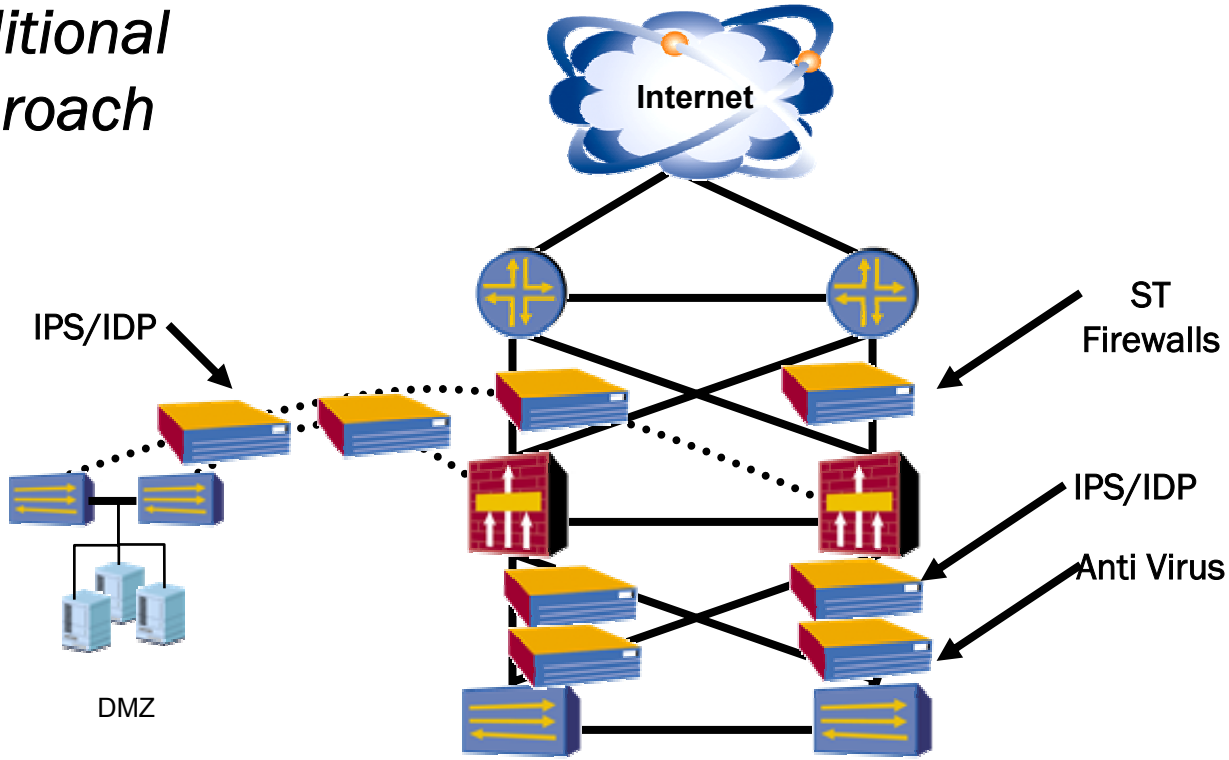
- JUNOS
  - Running in production networks for 10+ years
  - High Performance IPv4; Scalable Multicast that works; IPv6 features and functionality
  - Same JUNOS on all M&T Series Routers
- Hardware Performance
  - Advanced Features at line rate
- Routers that don't get in the way of Network Research
  - No performance or operational bottlenecks allow network researchers to focus on network research not router trouble shooting

Network Security: New Challenges

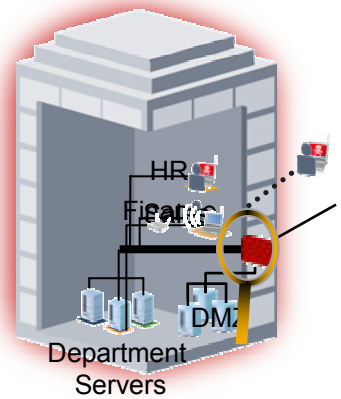
1. Merging Network Security into an intelligent network infrastructure
2. Disappearance of the Trusted Network. Users and their devices are always *"inside"*
3. Applications impose tougher demands on network equipment :
4. New types of endpoints, less trust and less control
5. Attacks target applications, spread quickly and are increasingly more difficult to detect

Security in the Intelligent Infrastructure

Traditional Approach

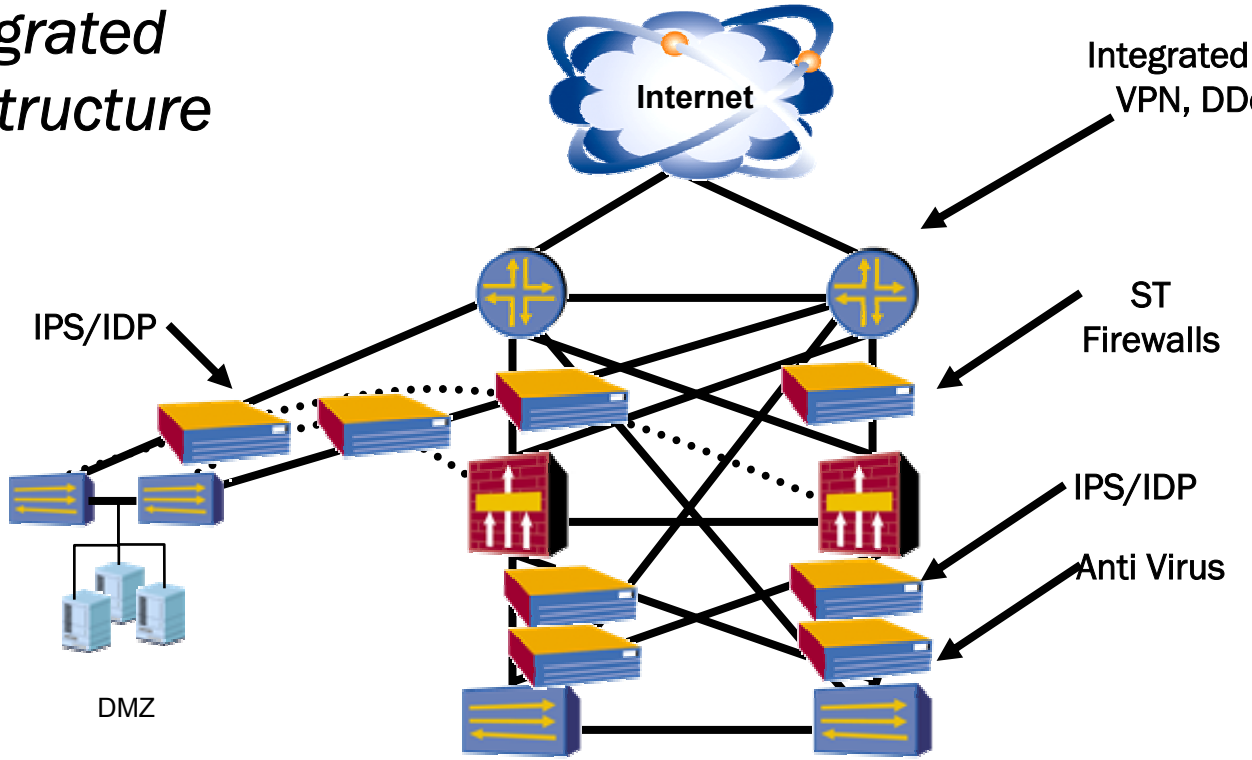


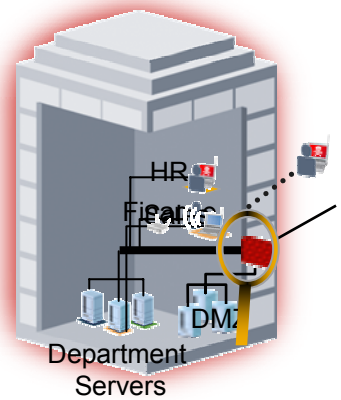
All devices need to participate in the intelligent infrastructure



Security in the Intelligent Infrastructure

Integrated Infrastructure



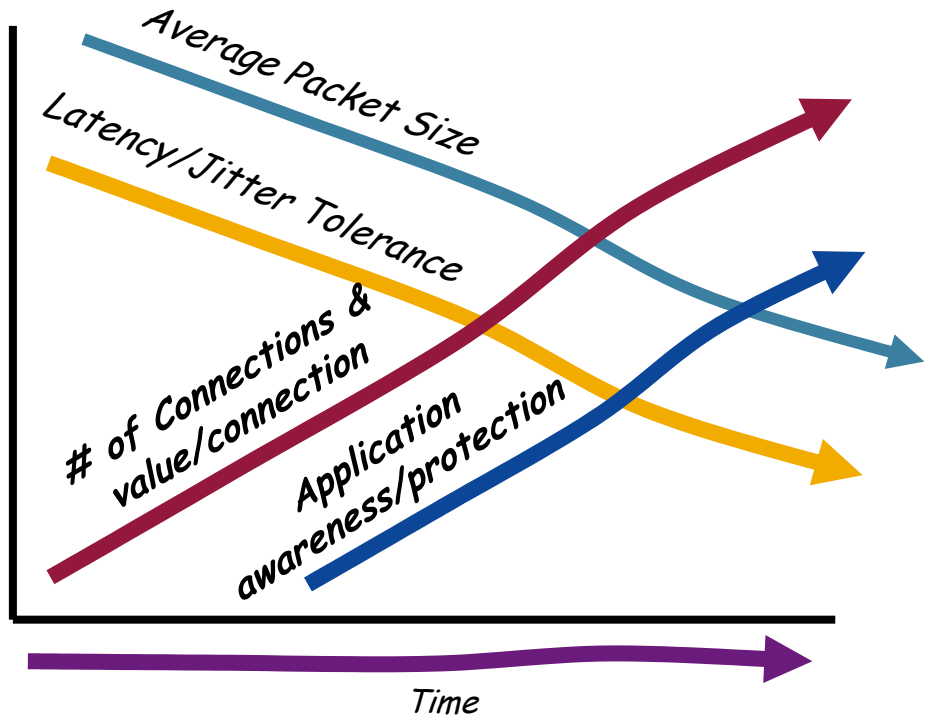


Worldwide threat management 2005-2009, IDC white paper.

- Appliances remain popular by being a simple means of delivering security software, so much so that appliance products can be found that cover many different security applications. By 2007, 80% of all network security solutions will be delivered via a dedicated appliance.
- IDC believes that the market for threat management appliances remained strong because of the wide coverage of the products. IDC tracks these products in price bands ranging from a few hundred dollars to a few hundred thousand dollars. The appliances solve many enterprise security problems.
- IDC believes that there will continue to be new players in this market because there are low barriers to entry and strong demand for different types of appliances, especially regionally.
- Threat management appliances, especially UTMs, continue to be popular with small and medium-sized enterprises. This segment continues to be targeted by all of the appliance vendors because of the large number of potential customers.

Evolution of the Enterprise Gateway
Increasing Demands Require New Approaches

- Increasing use of small packet applications: multi-media, streaming media, VoIP, etc.
- Make traffic decisions with low latency to ensure applications are not affected
- Increasing demand for remote network connectivity: from home, on the road, on the go- PDA's wireless
- Application vulnerabilities are on the rise, application attacks are growing in sophistication



Introducing NetScreen-Integrated Security Gateway (ISG) 2000

Best-of Breed Security in a Single Platform

- **Predictable Performance –**
  Next-Generation Security ASIC (GigaScreen³)
  - 2 Gbps Stateful Firewall - any packet size
  - 1 Gbps 3DES & AES IPSec VPN - any packet size
  - 1 Gbps+ IDP
- **Integration**
  - Core networking capabilities via ScreenOS– Security Zones & Virtual Systems, OSPF, BGP & RIPv2 routing, A/P & A/A High Availability
  - Security applications -- FW/Deep Inspection/VPN
- **Scalability**
  - New flexible architecture designed to accommodate future performance, capacity and functionality needs
    - Up to 28 ports, up to 500 VLANs,
- **Attack Protection**
  - Network attack protection, including DoS attacks (Screens)
  - Deep Inspection to protect against attacks in Internet-facing protocols

Forecast and assumptions (IDC)

Continuing expansion of the UTM security appliance.
Security event correlation married to UTM management.
Opportunities in small and medium-sized enterprises. The number of small and medium-sized companies is huge.
Addressing new applications such as voice, Web services, and storage networks.

Wireless (WLAN) security
Change in form factor. Security appliance form factors will continue to change. The standalone black box is beginning to be replaced by appliance blades or Cards

.

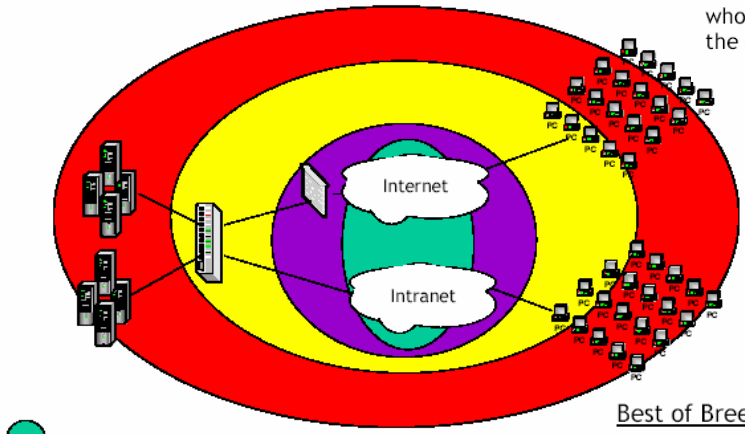
Firewall routers . boon or bane? The increasing incorporation of firewall technology into routers by networking vendors such as Cisco, Enterasys, and Juniper can be a blessing or a curse for the threat management markets.

More new players and no consolidation.

SSG: New Family

	SSG 550	SSG 520
Maximum Performance and Capacity(1)		
ScreenOS version support	ScreenOS 5.1	ScreenOS 5.1
Firewall performance	1 Gbps IMIX traffic	600 Mbps IMIX traffic
3DES VPN performance	500 Mbps	300 Mbps
Packets per second (64 byte packets)	600,000	300,000
IPS performance	500 Mbps	300 Mbps
Concurrent sessions	128,000	64,000
New sessions/second	15,000	10,000
Policies	4,000	1,000
Users supported	Unrestricted	Unrestricted
Network Connectivity		
Fixed I/O	4x 10/100/1000	4x 10/100/1000
Physical Interface Module (PIM) Slots	6	6
Enhanced PIM Slots	4	2
WAN interface options	Serial, T1, E1, DS3	
LAN interface options	SFP, FE, 10/100/1000	

APM advisors report: Traffic Management



Network Layer Services (Link connectivity / routing) latency, etc.

Connection Layer Services (Filtering, Firewall)

Session Services (SSL, Appl Protection, Content Management)

Application Platform Services (Backend, GUI, etc)

Therefore the service points for Traffic Management are being defined by the application architecture rather than the network architecture.

Competition

Taking a look at what should keep Packeteer awake at night, there are a number of monsters coming out of the closet. First of all, many of the other Ingress / Egress products are including various QoS mechanisms within their products. While there may not be an argument about whose traffic management is better than whose, it's clear that most of the vendors are taking the approach we outlined in the APM Paper, which is that this is a feature and not a product.

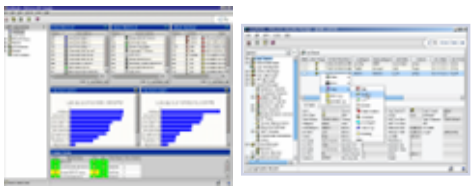
Best of Breed vs Breadth

While any feature needs to work, there is a level of 'good enough' within traffic management that should be kept in mind. Basically, what 'traffic shaping' or queuing is providing is a prioritization scheme that provides bandwidth for the applications that should have it. Therefore any well-implemented scheme will manage congestion and improve response times for critical transactions.

Juniper's Broad Product Portfolio

Meeting a Diverse Range of Requirements

Central Policy-Based Management

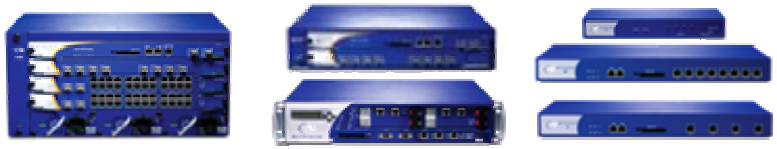


Secure Remote Access (SSL VPN)

Access Routing

Unified Access Control

Integrated Firewall/IPSEC VPN



Integrated Security Gateways

Intrusion Detection and Prevention

Secure Services Gateways

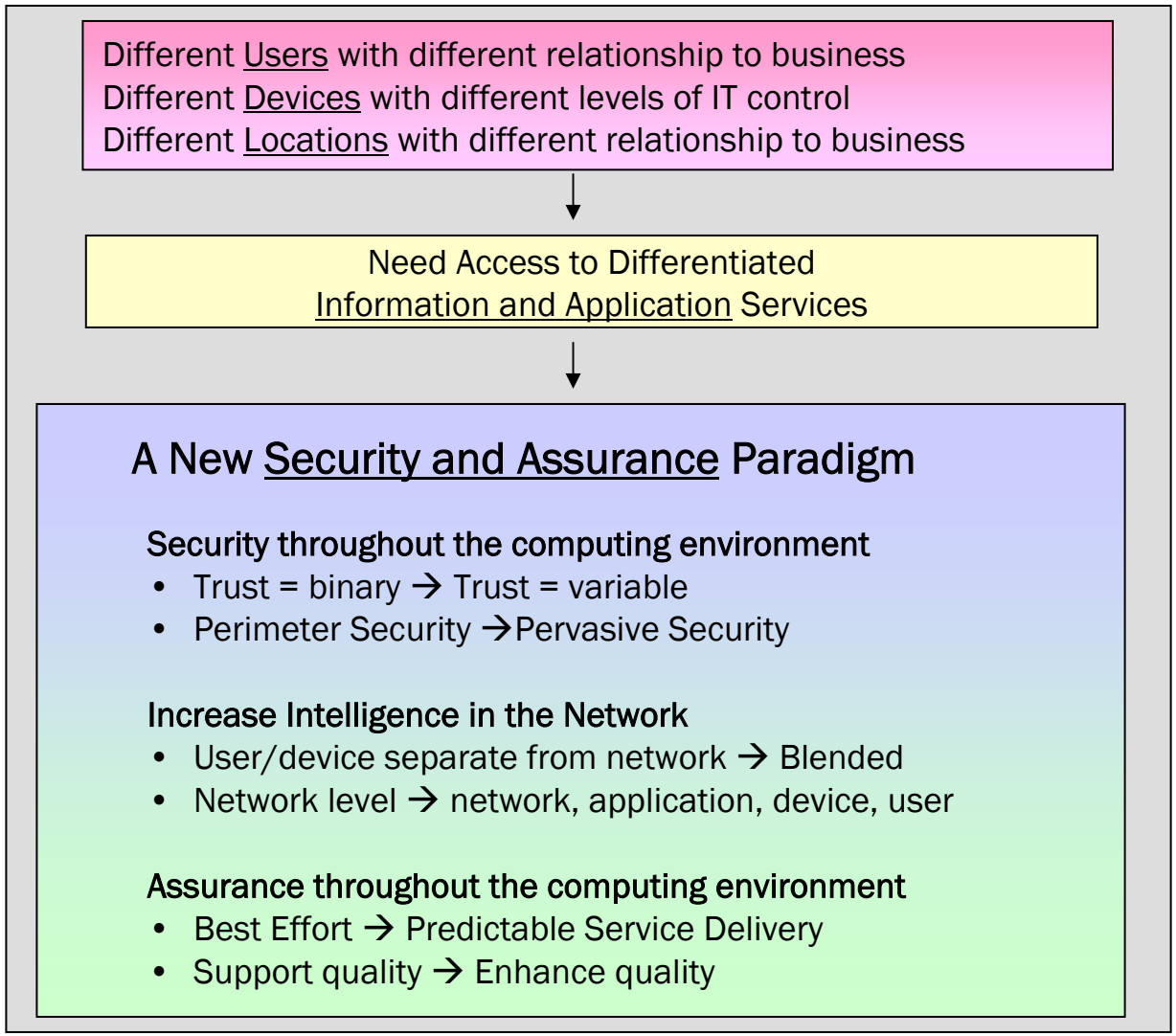
Core and Aggregation Routing

WAN Acceleration

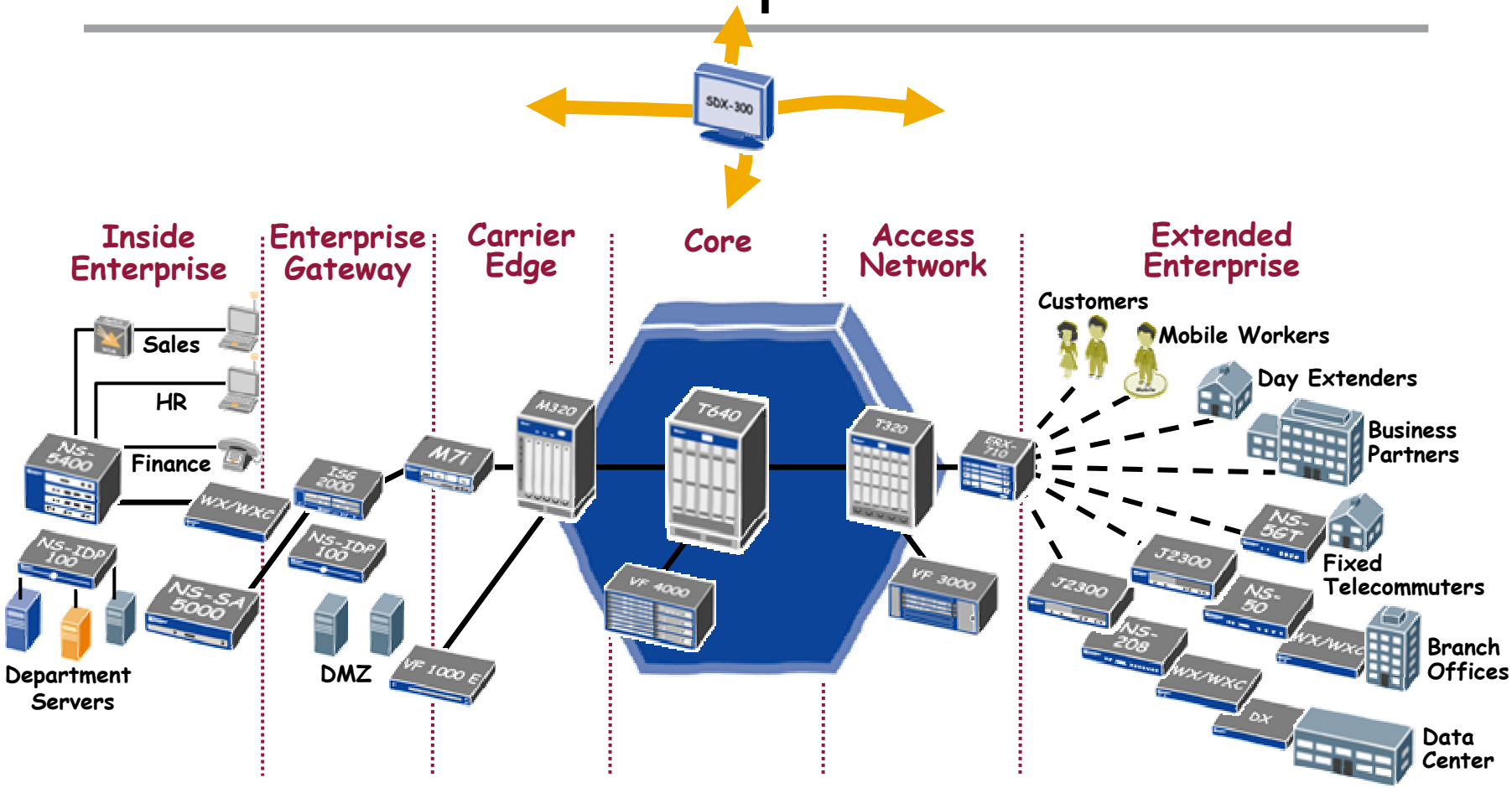
Application Acceleration

VF-Series

Evolving Challenges and Requirements



Best in Class Platforms for Carriers and Enterprises



- Purpose-built platforms delivering performance, stability and control
- Applications and services supported at scale
- User and application aware

=

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Preguntas?