SNA Switching Services (SNASw) Overview

Leveraging Investments, Empowering the Enterprise

Cisco Systems

Agenda

- Emerging Network Trends
- Status of APPN Networks Today
- Cisco SNASw

Moving to a New World Network

Old World Network

- SNA-based applications on enterprise servers
- 10- and 16-Mbps shared campus network
- PBX for separate voice network
- Low-speed WAN connectivity
- "Fat" clients

New World Network

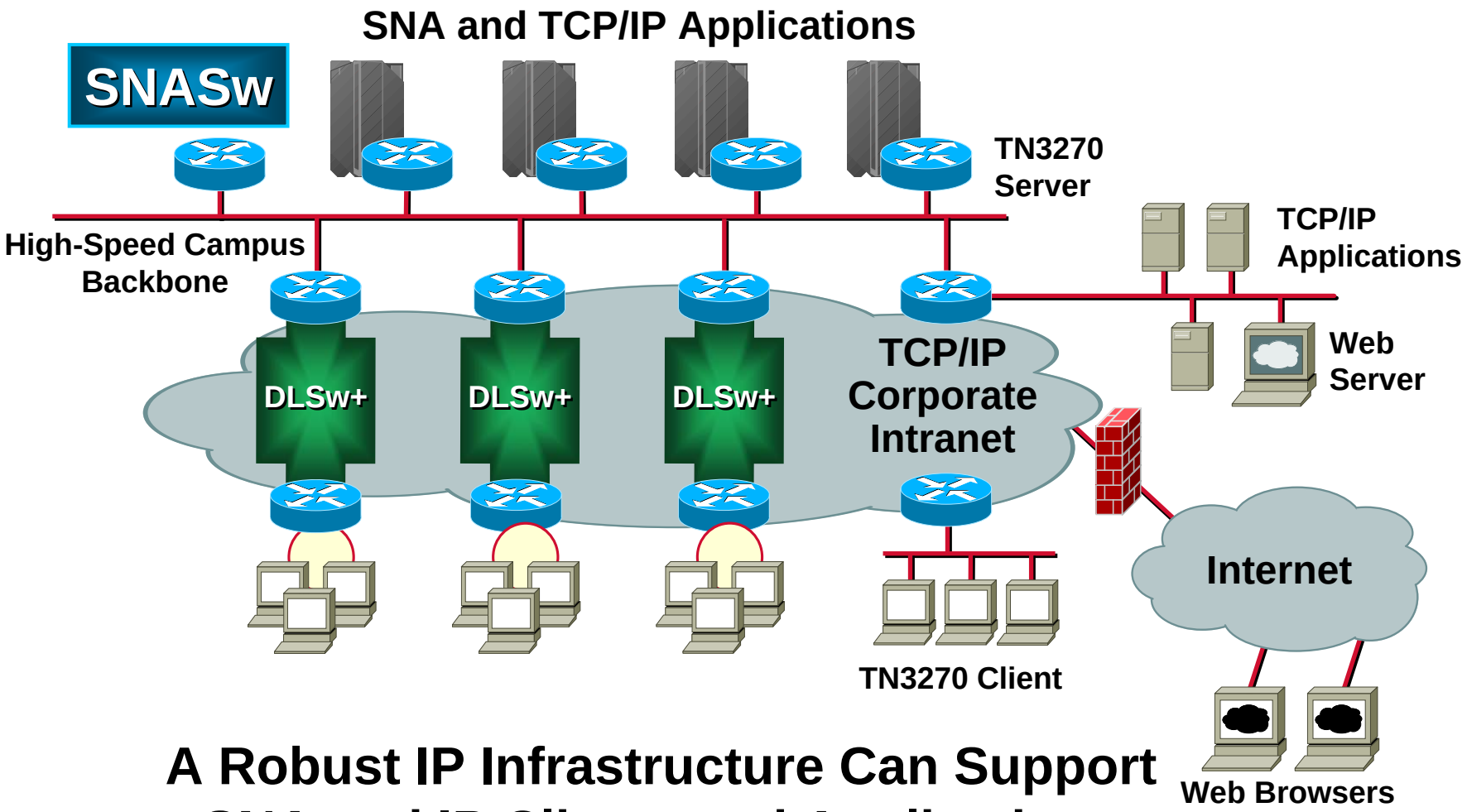
- IP-based applications on multiple server platforms
- Media-independent, high-speed campus switching
- Consolidated data, voice, and video
- High-speed WAN connectivity
- "Thin" clients

Leveraging Investments, Empowering the Enterprise

e-nable the WAN	**A consolidated IP intranet that supports SNA, TCP/IP, voice, and video**
e-nable the Data Center	**A data center that provides access to business data and applications**
e-nable the Application	**Web-enabled access to all applications**
e-nable the Campus	**A media-independent, high-speed, switched infrastructure**

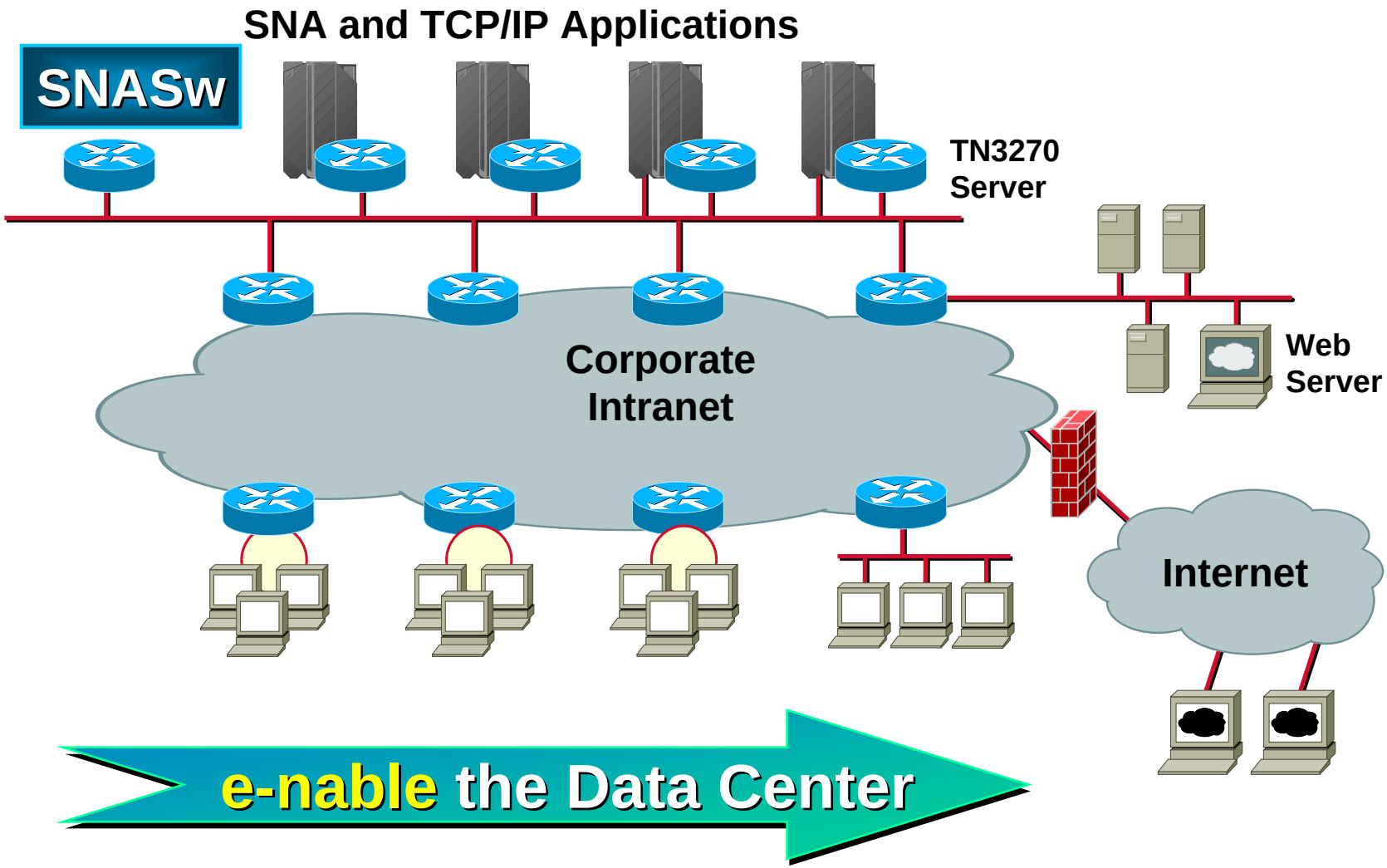
Cisco Has All of These Solutions Available Today!

Today's Consolidated Data Network



A Robust IP Infrastructure Can Support SNA and IP Clients and Applications

e-nable the Data Center



Leveraging Investments Roadmap

e-nable the WAN	**DLSw+ Availability, Scalability, Performance Enhancements, CiscoWorks Blue Enhancements**
e-nable the Data Center	**SNASw, CIP Performance Enhancements**
e-nable the Application	**Cisco WebClient Enhancements, Cisco Transaction Connection, TN3270 Enhancements**
e-nable the Campus	**Gigabit Token Ring**

Empowering the Enterprise Roadmap

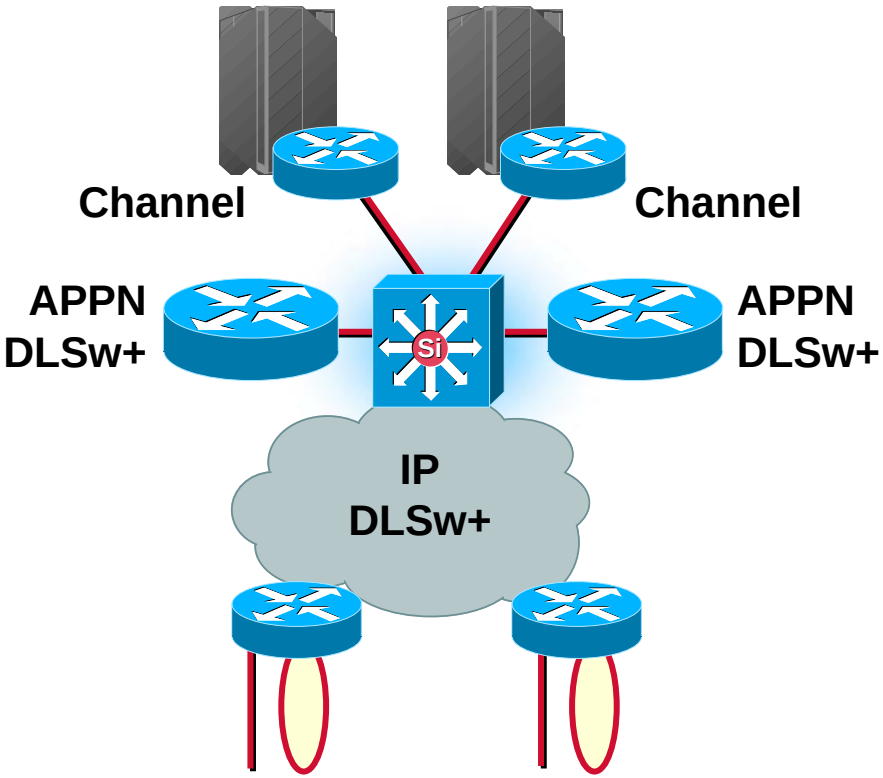
e-nable the WAN	**Enterprise VPN and Multiservice Solutions**
e-nable the Data Center	**Enhanced TCP/IP Network Services**
e-nable the Application	**End-to-End Network Services**
e-nable the Campus	**Gigabit and ATM-Consolidated Ethernet and Token Ring Solutions**

Why Enterprises Choose APPN

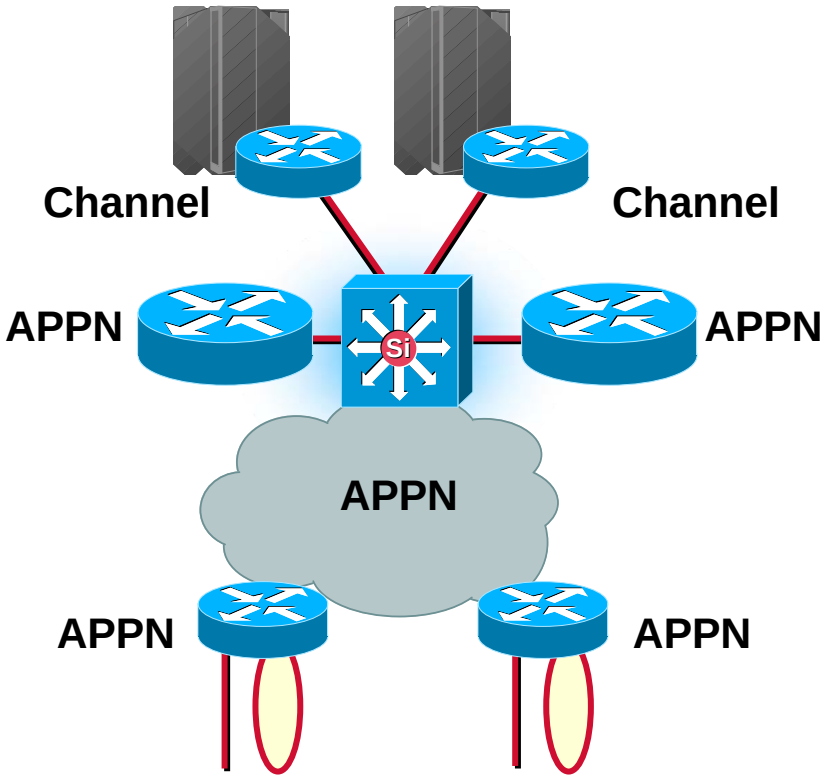
- Native SNA routing (95%)
- Reduced FEP dependency (90%)
- Support for Sysplex environment (80%)
- Peer-to-peer communications (20%)
- Native SNA network (10%)

Source: Cisco customers

What Do Cisco APPN Networks Look Like Today?



- 90%—DLSw+ on backbone, APPN in data center



- 10%—Native APPN across the backbone

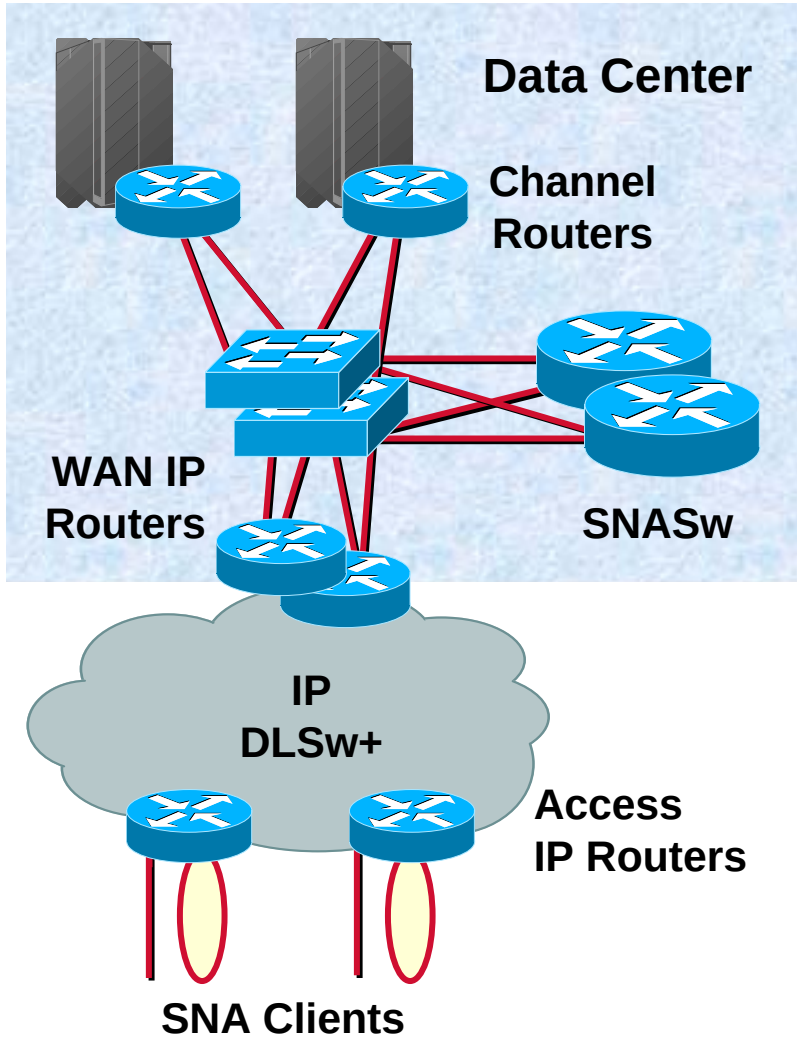
Cisco APPN Goals

- Integrate APPN into the IP infrastructure
- Provide efficient APPN routing functionality
- Improve APPN scalability
- Reduce APPN complexity
  - Simplify network design
  - Reduce configuration requirements
- Improve manageability of APPN

Introducing: SNA Switching Services

What Are SNA Switching Services?

- New release of APPN
- Branch Extender (BX) support to improve scalability
- Enterprise Extender (EX) support to integrate APPN into the IP network
- Full HPR support with updated ARB flow control
- Usability and management enhancements
- Reduced configuration requirements

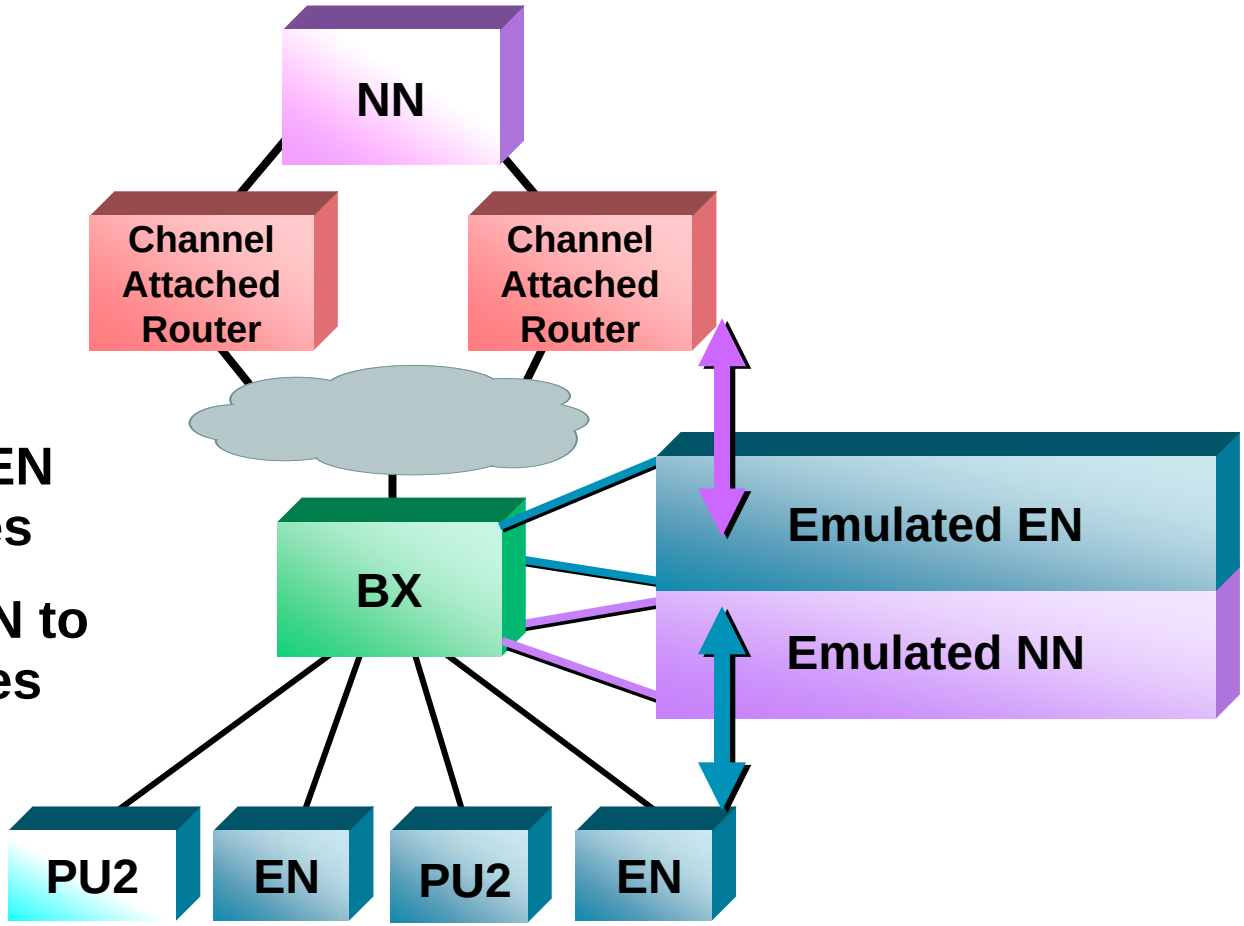


APPN NN versus SNASw BX

Cisco APPN NN	SNASw BX
Full Routing Services	Works with VTAM To Provide Routing Services
HPR Network Support over IP: DLSw+	HPR Network Support over IP: DLSw+, EX
More than 100 Configuration Commands and Operands	Approximately 30 Commands and Operands
Broadcast Traffic Grows as Number of Routers Increases	Broadcast Traffic Eliminated from Network

What Is Branch Extender?

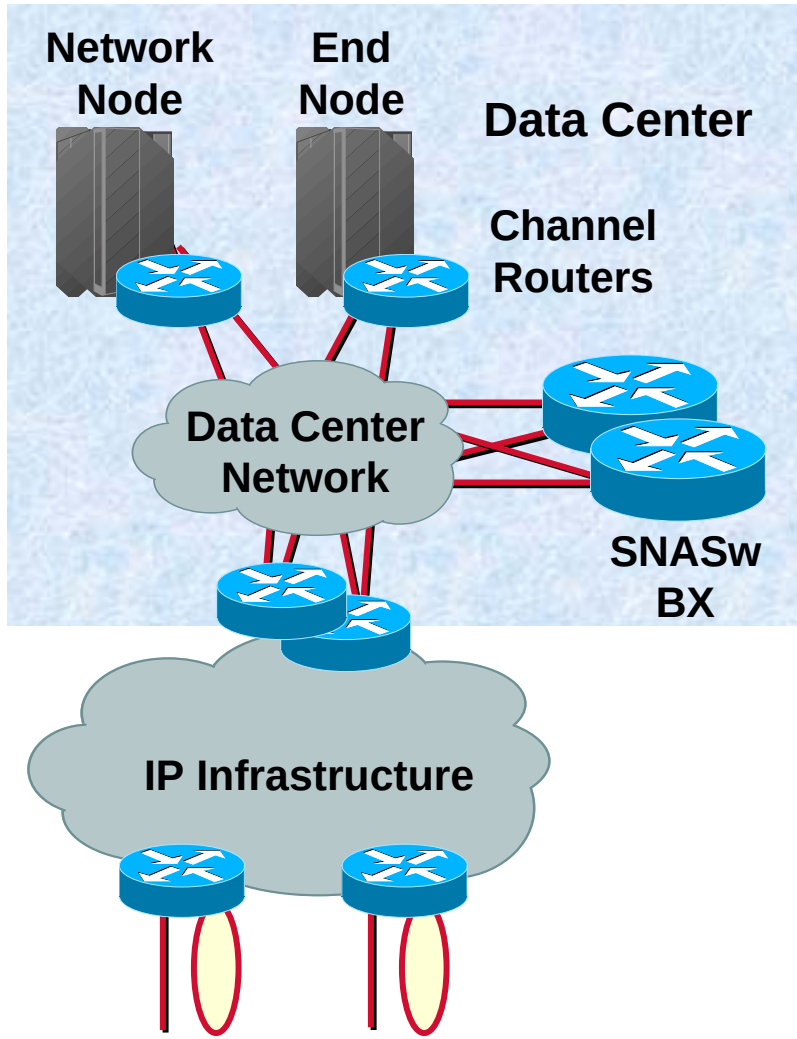
- BX looks like an EN to upstream nodes
- BX looks like a NN to downstream nodes



Branch Extender Network Design

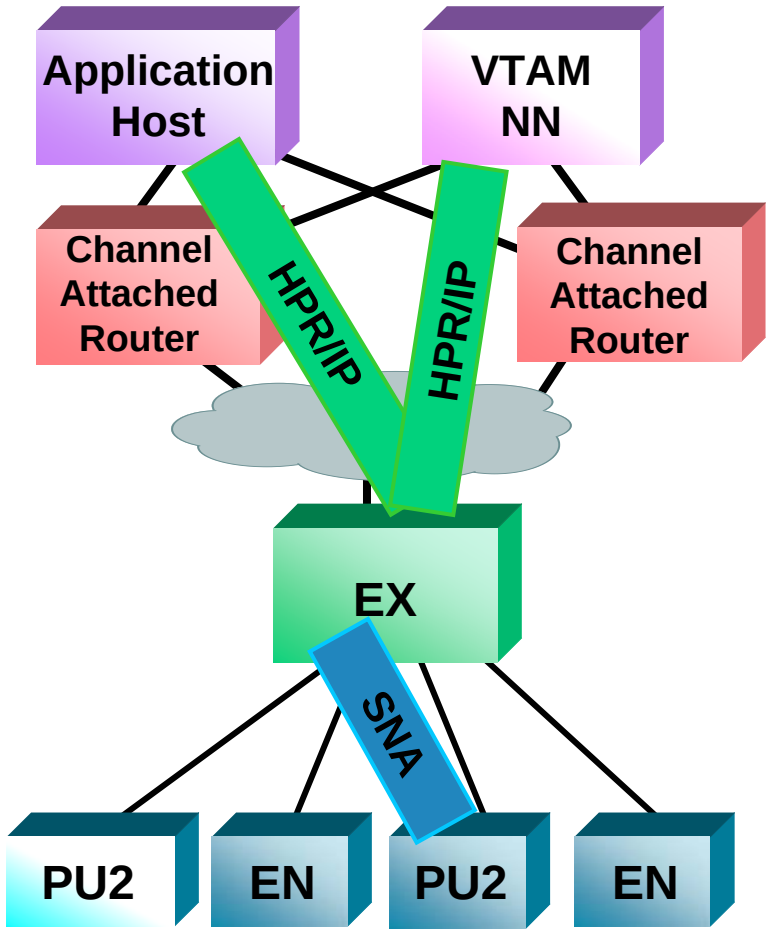
- Single (plus backup) VTAM NN with DLUS
- Application hosts ENs
- SNASw with BX in the data center
- Channel-attached routers bridge to VTAM

No APPN Broadcast Traffic!

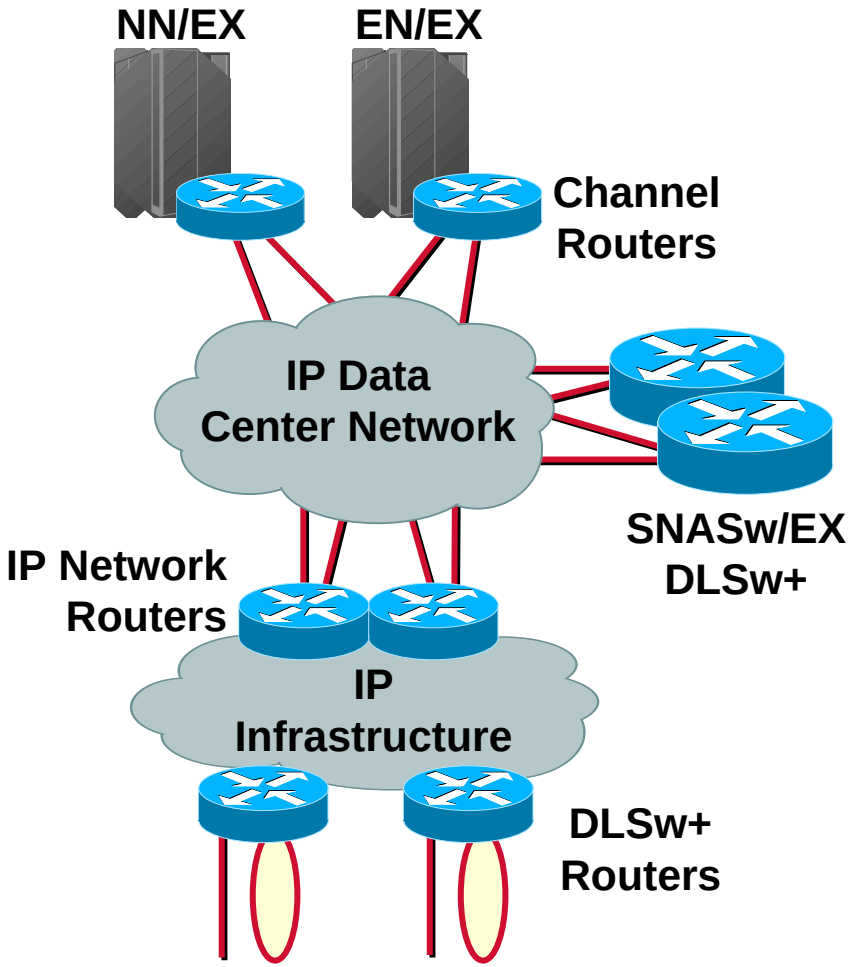


What Is Enterprise Extender?

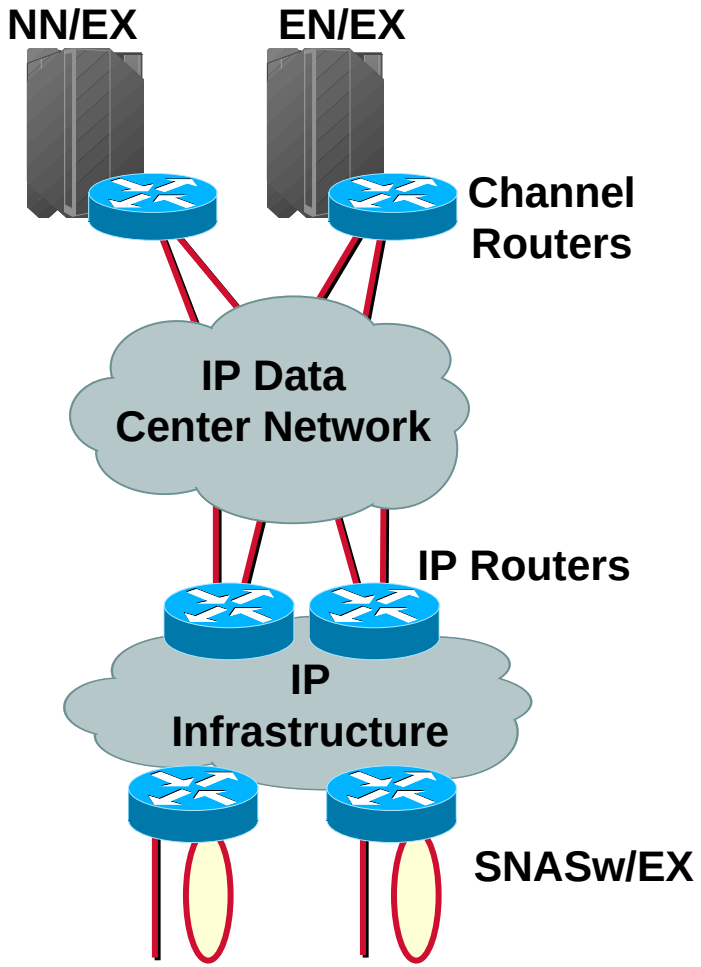
- SNA messages exit enterprise server using IP—HPR/IP
- IP routing through the network using RIP or OSPF
- Flow control, error control, segmenting end-to-end using HPR
- Parallel sysplex capable



Enterprise Extender Network Design—Two Options



Option 1: DLSw+ to the Branch



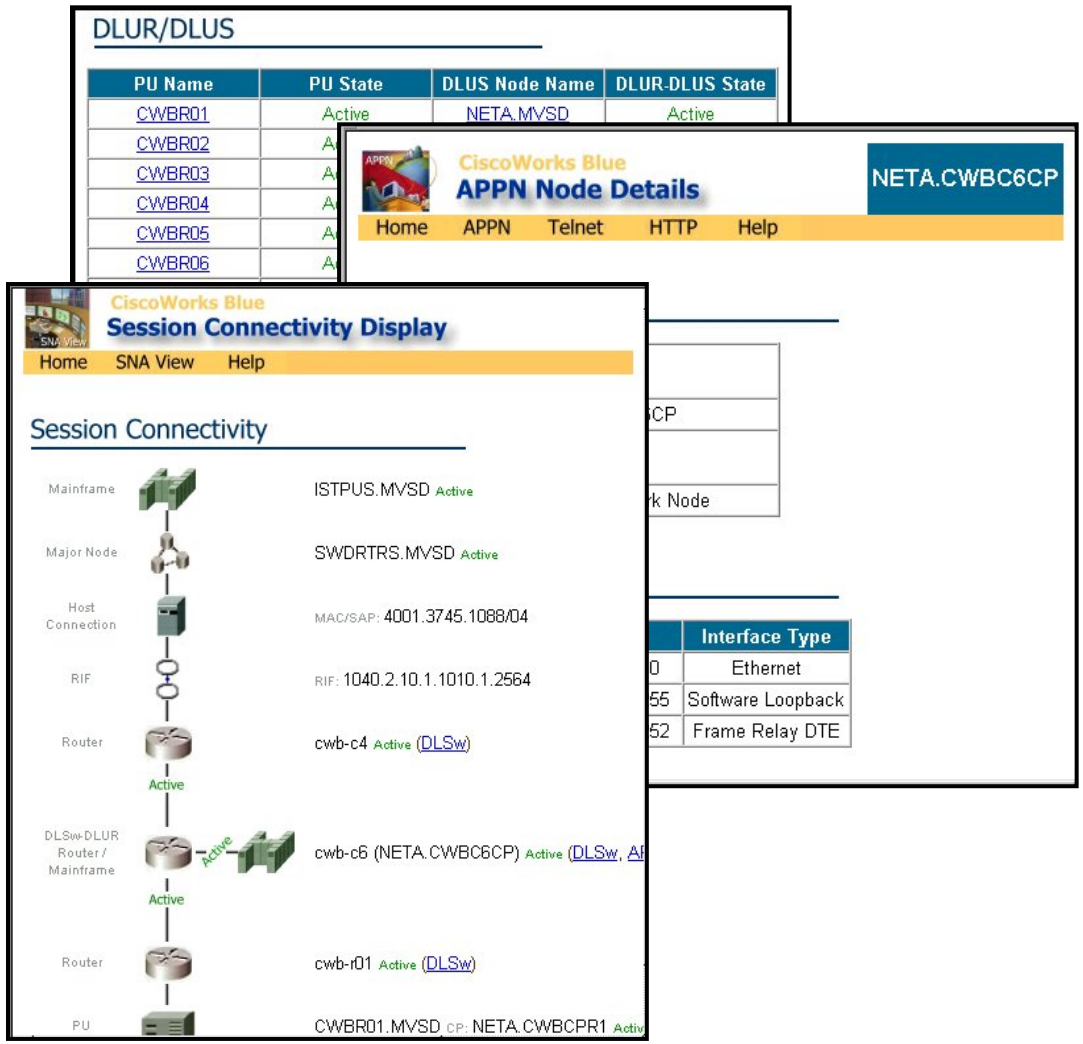
Option 2: EX to the Branch

Remote DLSw+ and EX Comparison

	DLSw+	EX
Message Priority	Sets IP Precedence Bits	Sets IP Precedence Bits
Availability Limitations	DLSw+ Router Point of Failure	VTAM Recovery for RTP Connections
Risks	Mature (500,000+ Routers)	New, Untested
Remote Routers	Minimal Memory, Minimal Processing Overhead	More Memory, More Processing Overhead

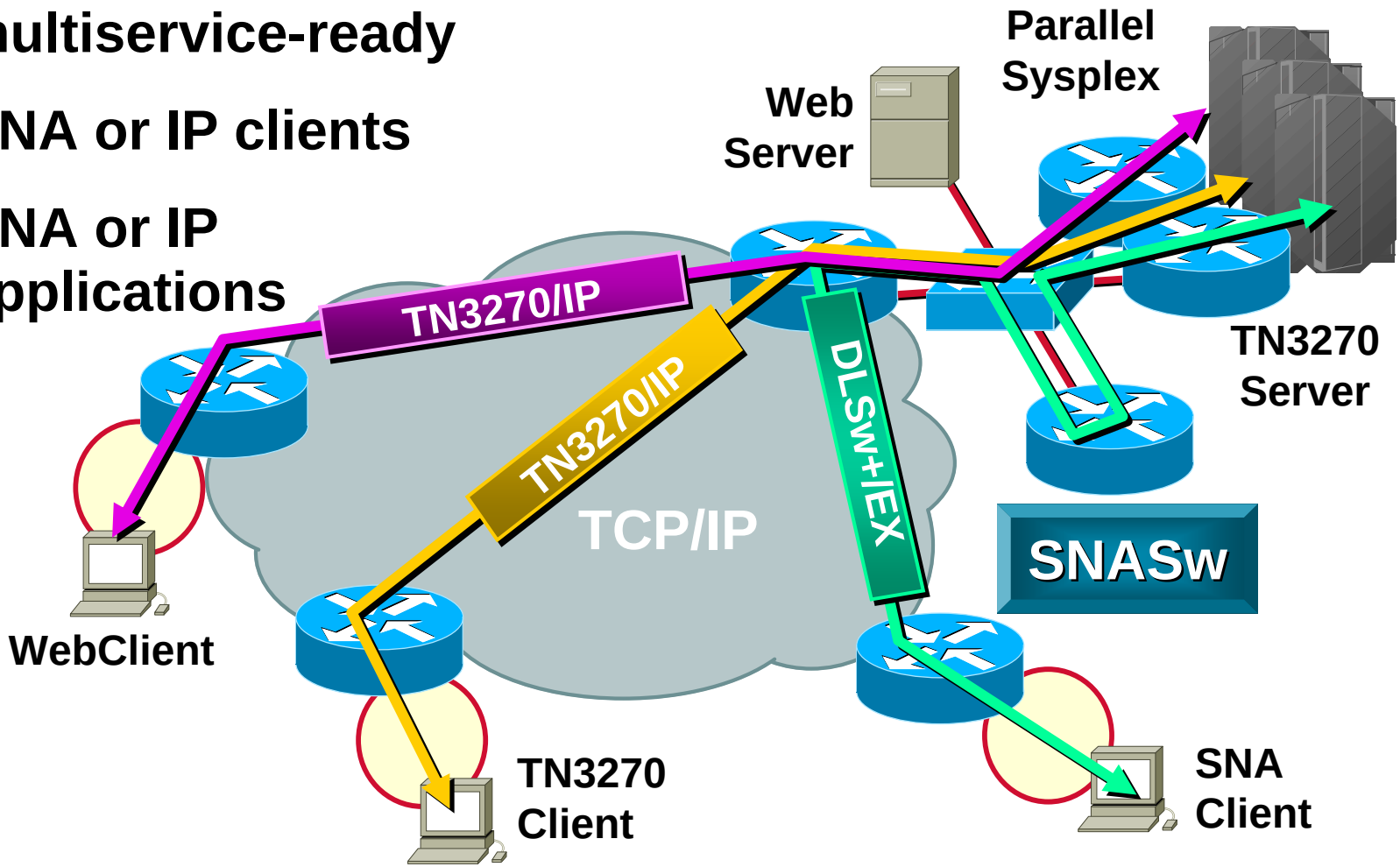
Managing APPN Resources with Maps and SNAView

- **From a Web browser, access:**
  - **SNA resources (PU and LU sessions)**
  - **Topology and directory information**
  - **Path information**
  - **Hot links to other tools**
  - **V. 2.1 shipping 9/99**



The Result: An IP Infrastructure

- Internet-ready, multiservice-ready
- SNA or IP clients
- SNA or IP applications



Summary

The SNASw solution from Cisco

- Integrates SNA into the IP infrastructure
- Reduces complexity in APPN networks
- Provides a scalable solution
- Interfaces with all architecturally compliant APPN nodes
- Provides enhanced usability and management functionality