



Solutions Overview

A New Services Aggregation Benchmark for the WAN and MAN— The Cisco 7200VXR Series Router

YOUR CHALLENGE

Enterprise networks face challenges when aggregating branch offices or remote locations. Cost, resilience, speed, and security are all critical factors confronting enterprises today as they extend voice, video, and data services globally. There is a need for an integrated architectural approach to accommodate IP Security/Secure Sockets Layer (IPsec/SSL), VPN, Multiprotocol Label Switching (MPLS), and Ethernet.

OUR SOLUTION

Enterprise WAN and MAN services aggregation requires a flexible solution that accommodates a wide range of connectivity and service options. It must be cost-effective, reliable, and scalable to meet all future requirements.

The Cisco® 7200VXR Series Router reinvents the most widely deployed WAN and MAN platform in the industry while taking enterprise services aggregation to a new, higher level of performance.

THE BEST JUST GOT SIGNIFICANTLY BETTER

With a completely new network processing engine, the Cisco 7200VXR Series has been upgraded in virtually every way. Already the most powerful single-processor platform, the Cisco 7200VXR Series now offers enterprise customers:

New Cisco 7200VXR Series Network Processing Engine-G2 that doubles the performance of the previous generation engine for services aggregation

New Cisco 7200VXR Series VPN Services Adapter with triple the performance increase for IPsec Advanced Encryption Standard (AES) and Triple Digital Encryption Standard (3DES) for best-in-class integrated IPsec VPN from headquarters to the branch

New Cisco 7200VXR Series Port Adapter Jacket Card offering up to 50 percent more bandwidth capacity and up to 50 percent more slot capacity (port adapter) with the existing chassis

Cisco 7200VXR Series Router which easily meets new services aggregation requirements with the industry's most popular WAN and MAN aggregation platform—without complete equipment upgrades and radical redesigns



THIS IS NOT JUST AN UPGRADE, IT'S A NEW BENCHMARK FOR PRICE AND PERFORMANCE

The Cisco 7200VXR Series delivers exceptional price and performance with its compact form factor, modularity, scalability, and wide range of deployment options. This combination of benefits makes the Cisco 7200VXR Series ideal for large enterprise and service provider-edge aggregation.

THE SMART, SAFE CHOICE IS THE BEST CHOICE

With processing speed of up to 2 million packets per second, port adapters ranging from N x DS-O to Gigabit Ethernet and OC-3, and an unparalleled number of high-touch IP services, the Cisco 7200VXR Series is the only smart choice for your enterprise's services aggregation WAN and MAN edge.

MATCHLESS FLEXIBILITY FOR THE WIDEST RANGE OF DEPLOYMENT OPTIONS

Only the Cisco 7200VXR Series offers your enterprise the flexibility to support the widest range of deployment options, including:

- **WAN edge**—Award-winning quality-of-service (QoS) feature performance
- **Broadband aggregation**—Up to 16,000 Point-to-Point Protocol (PPP) sessions per chassis
- **MPLS provider edge**—Leading choice for provider-edge deployment
- **Voice, video, and data integration**—Time-division multiplexing (TDM)-enabled Cisco 7200VXR chassis and voice port adapters
- **IPsec VPN**—Scalable to 5000 tunnels per chassis
- High-end customer premises equipment (CPE)
- **IP-to-IP gateway support**—Provides a network-to-network interface point for signaling interworking (H.323 and Session Initiation Protocol [SIP]), media interworking, address and port translations (privacy and topology hiding), billing and call-detail-record (CDR) normalization, and bandwidth management (QoS marking using type of service [ToS])

BUILDING ON A HISTORY OF INNOVATION LEADERSHIP

The Cisco 7200 Series represents Cisco's primary enterprise and service provider edge router worldwide with more than 330,000 units installed in the field. Its unique blend of connectivity offerings, services, and reliability has made it the router of choice for numerous Cisco Systems® developments, including QoS features and MPLS provider-edge functions. The Cisco 7200VXR Series carries General Deployment Cisco IOS Software code suitable for deployment anywhere in customer network and has a "dead-on-arrival" (DOA) rate that is less than 0.01 percent and decreasing. Customers who select the Cisco 7200VXR Series are investing in proven technology.

The Cisco 7200VXR Series builds upon the company's history of innovation by providing your enterprise a services aggregation router platform with unmatched flexibility, modularity, and investment protection.

PRIMARY BENEFITS OF THE CISCO 7200VXR SERIES ROUTER

The Cisco 7200VXR Series Router reduces your costs and simplifies systems management by delivering an unprecedented level of service integration.

- Simplified network management reduces your operating costs.
- Standard platforms and common user interfaces reduce your training costs.
- A single service contract reduces your installation and maintenance costs.

PRIMARY FEATURES AND BENEFITS TO YOUR BUSINESS INCLUDE...

Ideal Compact Form Factor for WAN and MAN Aggregation

The Cisco 7200VXR three-rack-unit (3RU) chassis offers you an ideal solution for a stackable, scalable, midrange routing solution.

Unparalleled Breadth of Connectivity Options

The Cisco 7200VXR Series supports more than 60 interfaces with an unparalleled breadth of connectivity options. These connectivity options provide flexibility, scalability, and the ability to meet changing network needs without chassis replacement. Because these port adapters are common to the Cisco 7200, 7301, and 7500 Routers and the FlexWAN module for the Cisco 7600 Series, customers are ensured continued investment protection. The common port and service adapters also lower operational costs by simplifying stocking of replacement parts and allowing platform migration at minimal cost.

Exceptional Hardware Modularity Fully Field-Upgradable

The Cisco 7200VXR Series processor and port adapter modularity protects customers' investments by providing scalability plus the ability to redeploy the system as their network needs grow.

Scalability That Maximizes ROI for Complete Investment Protection

The Cisco 7200VXR Series provides outstanding value, offering unmatched low-density configuration options while also providing up to 48 ports per chassis. In addition, the Cisco 7200VXR Series processor and port adapter modularity, combined with the Cisco 7300 and 7600 product lines, simplify the stocking of spares and protect customers' investments in interfaces by providing the ability to redeploy the system as their network needs grow. Furthermore, the Cisco 7200VXR Series is fully backward-compatible.

The IP Services Leader

The leading platform for new feature development, the Cisco 7200VXR Series currently has an unparalleled number of high-touch IP services.

The Performance/Price Leader

With a processing capacity of up to 2 million packets per second (pps), the Cisco 7200VXR Series is the most powerful single processor from Cisco Systems.

Services Acceleration for Every Type of VPN

VPN acceleration delivers hardware-accelerated IPsec services for a variety of solution areas, including IPsec VPN.

Fully Voice-Enabled

The Cisco 7200VXR Series provides multi-service gateway functions for voice over IP (VoIP), Frame Relay, or ATM as well as IP-to-IP gateway support.

The Most Secure Platform

The Cisco 7200VXR Series delivers:

- Threat defense with firewall, intrusion protection system (IPS), and NetFlow
- Secure VPN connectivity, and site-to-site and remote access
- Trust and identity protection with Network Admission Control
- Network foundation protection with control-plane policing, Network Based Application Recognition (NBAR), and Cisco Secure Multicast

Full Cisco IOS Software Support

The Cisco 7200VXR Series supports network services, including QoS, security, compression, and encryption at high speeds.

Flexibility, Modularity and Performance in a Compact Form Factor

The Cisco 7200VXR Series Router delivers innovation that targets customer deployment concerns. It targets the widest range of deployment applications.

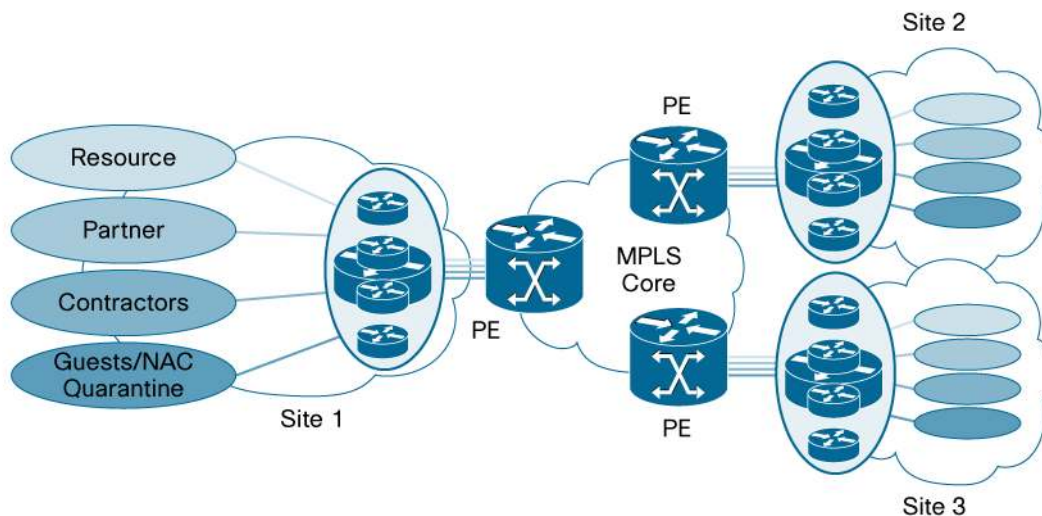
WAN Edge

With an unparalleled number of high-touch IP services and hardware-accelerated WAN edge and QoS services, the Cisco 7200VXR Series is an ideal WAN edge connectivity or aggregation solution.

Voice and Data Integration

The Cisco 7200VXR Series provides the highest-density Cisco voice gateway solution with 20 T1/18 E1 trunk terminations in 3RU. With its advanced QoS features, the Cisco 7200VXR Series can also integrate voice and data within the same chassis, helping customers transport voice over data networks and save on capital equipment costs associated with two networks—TDM and packet-based—including the recurring management costs of each.

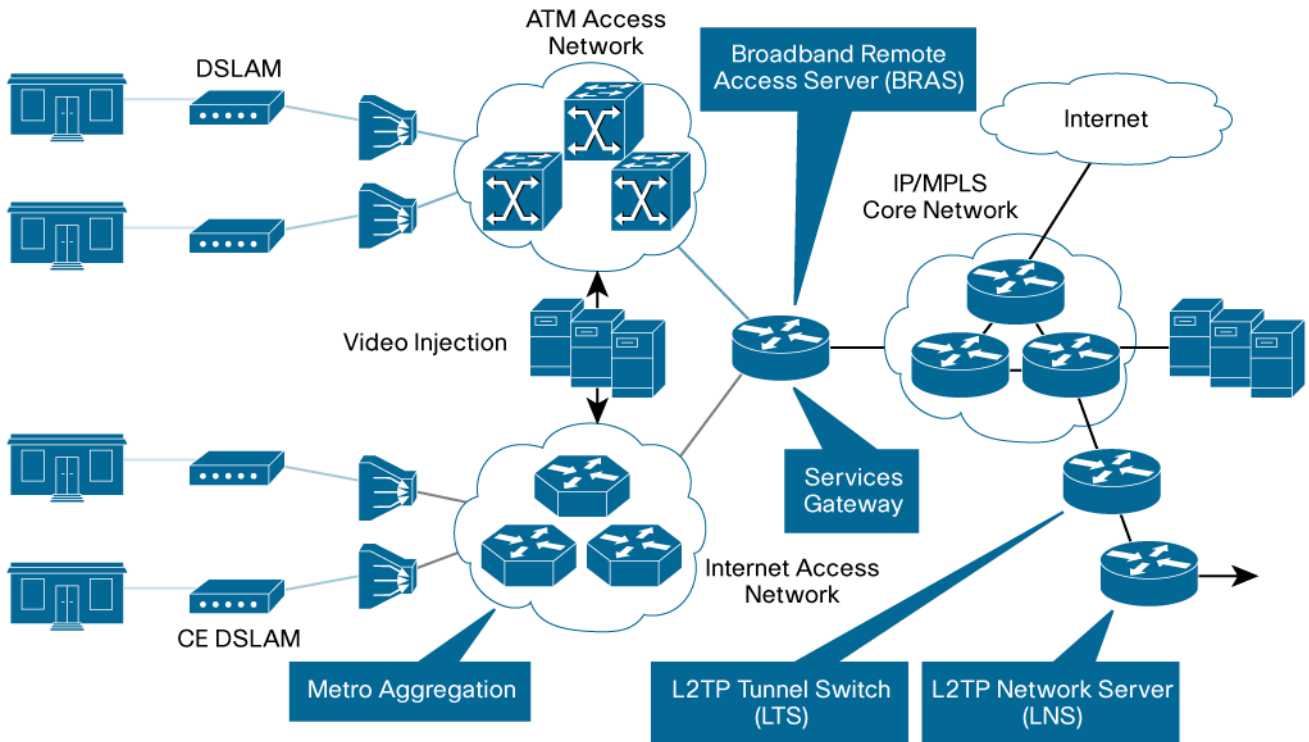
Figure 1. MPLS Provider-Edge Functions



MPLS PROVIDER-EDGE FUNCTIONS

The Cisco 7200VXR Series is an ideal MPLS solution. MPLS fuses the intelligence of routing with the performance of switching to scale existing networks to meet future growth demands. Networks can handle more traffic, users, media-rich data, or bandwidth-intensive applications.

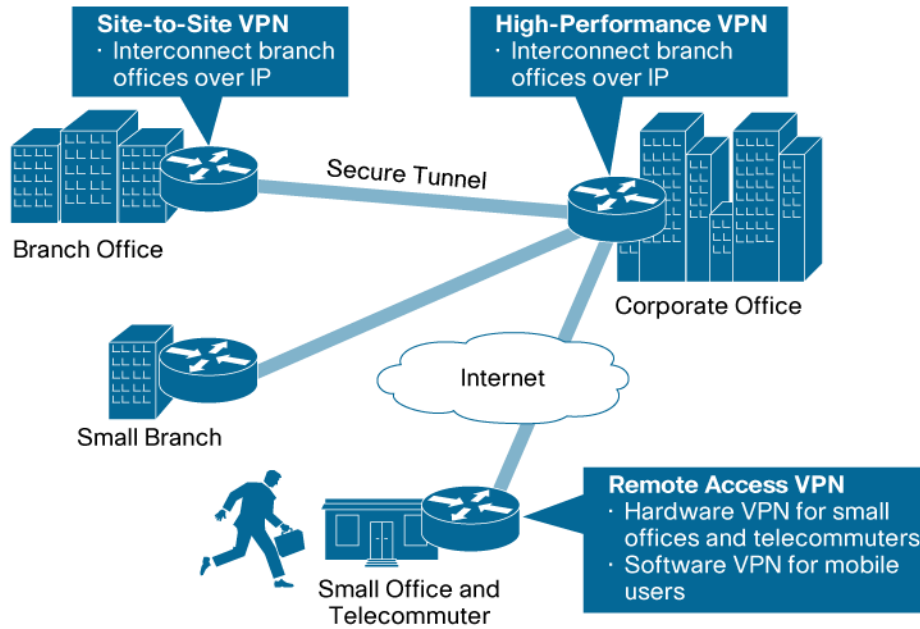
Figure 2. Broadband Subscriber Aggregation



BROADBAND SUBSCRIBER AGGREGATION

The Cisco 7200VXR Series supports up to 16,000 PPP or Layer 2 Tunneling Protocol (L2TP) sessions, enabling aggregation of a large number of users into a compact form factor, thereby saving rack space and reducing hardware investment costs.

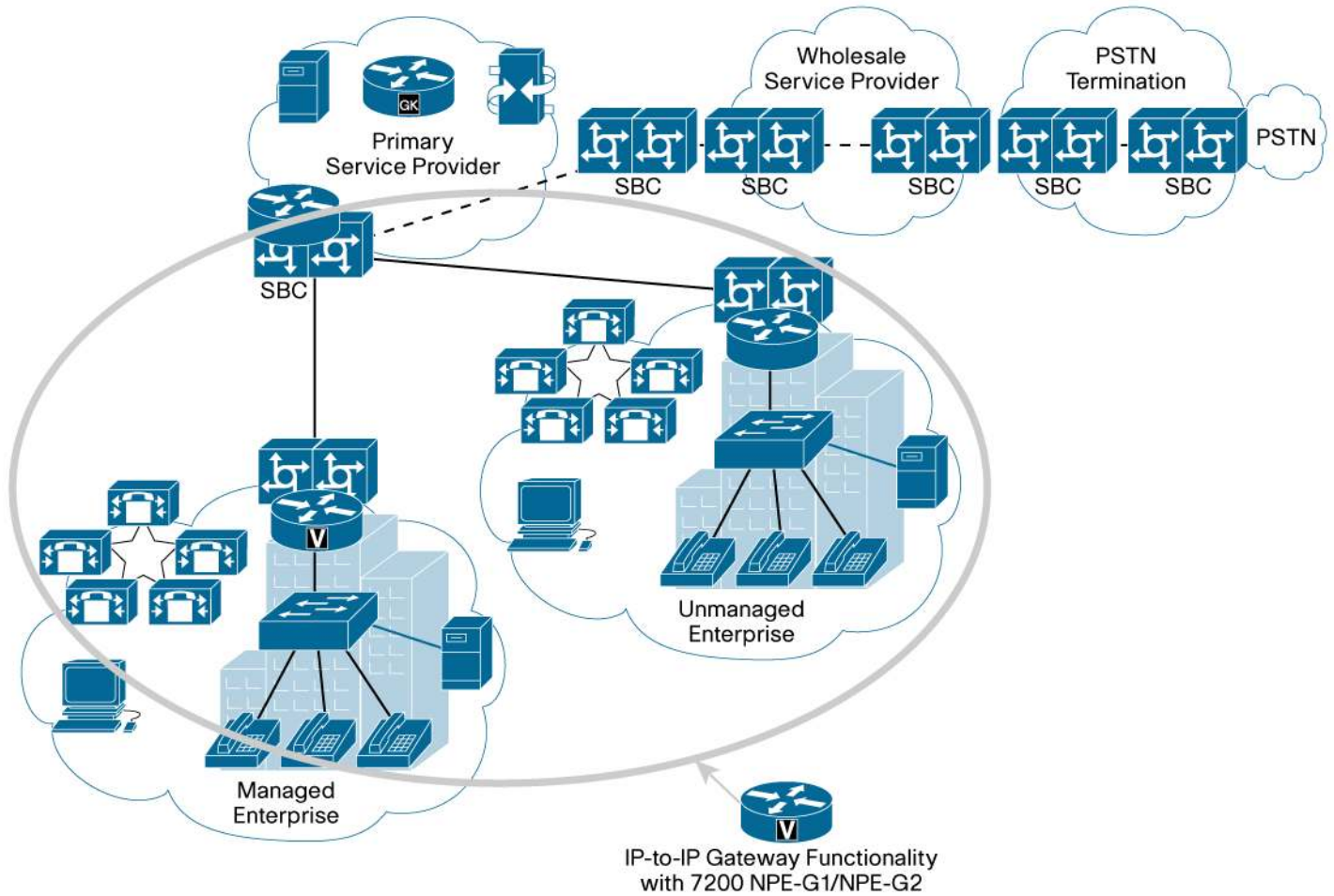
Figure 3. IPsec VPN



IPsec VPN

Using the latest VPN Services Adapter (C7200-VSA), the Cisco 7200VXR Series can aggregate up to 5000 3DES- and AES-encrypted sessions per chassis.

Figure 4. IP-to-IP Gateway Support



IP-TO-IP GATEWAY SUPPORT

Direct IP interconnections between VoIP networks lower costs, lower latency, improve voice quality, and offer greater flexibility to support emerging services when compared with public-switched-telephone-network (PSTN) or TDM interconnections.

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