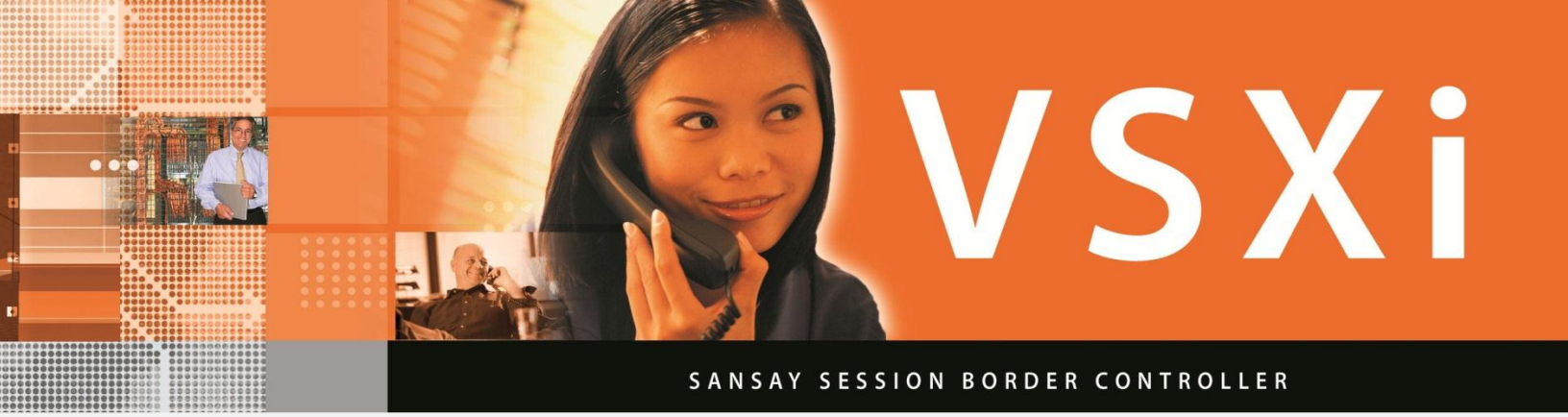


VSXi

SANSAY SESSION BORDER CONTROLLER

The VSXi from Sansay ushers in the next generation of session controllers. Designed to keep pace with the most dynamic telecom markets and demanding customers, the VSXi offers critical capabilities for communications service providers determined to stay a step ahead of the competition. The VSXi delivers superior results through an advanced product architecture that is built from the ground-up to achieve breakthrough levels of flexibility, scalability, and reliability.

System Overview

The VSXi session controller provides critical functions for communications service providers, including security, network address translation, protocol interworking, and traffic management.

The VSXi is deployed to support network peering traffic, selecting the optimal route for communications traffic and assuring effective interworking with outside networks.

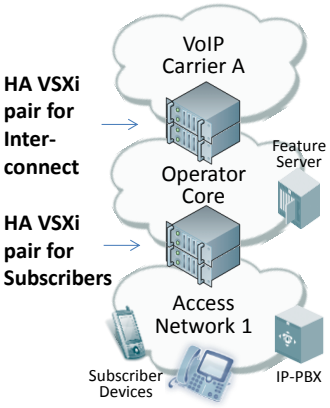
The product is also deployed to manage subscriber-facing traffic, providing packet-header manipulation and digit mapping for automatic number identification (ANI) and dialed number identification services (DNIS) manipulation.

Customer Deployments

The VSXi has been commercially deployed by over 300 communications service providers, worldwide. Customers use the VSXi to support services that include hosted business VoIP, SIP trunking, residential VoIP, wholesale VoIP, wireless broadband, and video communications.

The VSXi also supports specialty applications for communications providers such as media transcoding and lawful intercept / CALEA.

Product Capabilities



VSXi deployed for interconnect and subscriber-facing applications

- Network topology protection and resource hiding
- Firewall & network address translation (NAT) traversal, near & far end
- Local number portability (LNP) dipping & complete control of inbound / outbound RN handling
- Session-routing based on ANI & DNIS jurisdictional control
- Manages 60M routes in 1000 different route tables
- Generate call detail records (CDR) w/ retrieval via RADIUS, FTP, RSync, SCP
- Performance monitoring w/metrics updated in real-time
- Protocol interworking for SIP and H.323

Benefit Highlights

Flexibility: Uses "network license model" that dynamically distributes network session capacity across a cluster of VSXi nodes. Allows provisioning via intuitive GUI or SOAP API with XML files.

Reliability: Delivers non-stop uptime and hitless upgrades though high-availability architecture.

Scalability: Switches up to 1,500 cps & 50,000 sessions per HA node. Combine up to 8 nodes in a cluster for 12,000 cps & 400,000 sessions.

sansay™

VSXi

SANSAY SESSION BORDER CONTROLLER

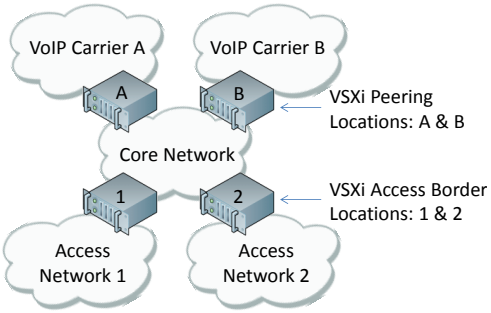
Unmatched Flexibility and Reliability

The VSXi was designed and engineered from inception to maximize flexibility and reliability. High availability and geographic resilience is achieved through n+1, active-active redundancy approach.

The VSXi uses a "network licensing model" that lets operators cost effectively add nodes without incurring additional license charges. Licensed session capacity is spread across the pool of access or peering systems.

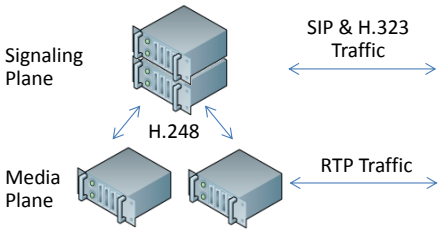
On the diagram to the right, the operator shares a pool of session capacity across the peering nodes, A & B, or subscriber nodes, 1 & 2.

The operator can cost-effectively add nodes to increase network resilience or optimize traffic management. This approach is especially appealing for highly distributed networks or operators seeking maximum up-time.



VSXi nodes deployed across multiple peering & access interconnect locations

Optimal Scaling for Service Providers



The VSXi can be configured to separate signaling and media handling on different servers

The VSXi offers configurations that scale up to support the largest operators or can be scaled down for starter, lab, and specialty use applications.

Starter configurations combine signaling and media handling functions onto a single server. As shown on the left, signaling and media functions can be deployed on specialized hardware resources for increased performance.

Media servers can be further distributed to optimize traffic flows and services performance.

Through this scaling model and Sansay's relentless focus on performance, the VSXi achieves traffic handling that is unmatched in the industry. This breakthrough is expressed in VSXi's call handling performance at 1,500 cps / node, excellent for handling call "bursts".

Security Capabilities and Countermeasures

Theft of Service Attacks: The VSXi remains highly opaque in the network and uses dynamic access control lists (ACL) to respond to a minimal number of unknown devices. The ACL for registered users is more complex. The VSXi tracks the number of failed registrations by IP address and will block an offending IP address almost instantly.

Denial of Service Attacks: A common approach to take down networks is through a flood of Register attacks. The VSXi uses a Register per Second throttle to avoid overwhelming the feature server. Registered users and new registrations are managed independently, enabling persistent service to subscribers through the duration of the attack.

Transcoding

The VSXi brings the ability to transcode sessions with the same flexibility, scalability, and reliability as its other media management functionality. Transcoding is provided through cards configured on the Media Server. Sessions that require transcoding are intelligently routed to media server ports with the necessary transcoding capabilities.

Specifications

Certifications:
FCC: Part 15, Class A
UL 1950, CSA 950
CE EN60950
CISPR 22/EN55022
NEBS GR-63, GR-1089
ETSI 300 386, 300 019, 753

Protocols:
RFC 3261, RFC 2543, RFC 2833
H.323 GK, GW
ENUM-GSMA Cert.

Digit Manipulations:
Full digit, host, and user control
Conditional dual stage outbound prepend / append
Conditional dual stage inbound stripping / prepending DNSI or LRN

Power and Physical:
19 inch rack mountable
1U or 2U options
1U server / 25 lbs
- 300W; Universal AC / Autoswitched
2U server / 37 lbs
- 700W; AC or DC

Licensing:
System licenses start at 250 sessions with increasing increment blocks to 100,000 sessions

Interoperability
Feature Servers: BroadSoft, Metaswitch, Genband, Cisco, IVR Tech, Asterisk, Metaswitch, Sonus
IP PBXs: Avaya (Nortel), Cisco, Microsoft Lync, Alcatel-Lucent, Mitel, Asterisk, and more
Billing Systems: APEX, Fastlink, BillCall, Oculeus, Orcawave Teledynamicx, MCL, WebCDR, RiverRock Systems, Logisense
LCR Applications: Neustar, GCS, BillCall, Teledynamicx, AutoLCR, Orcawave, Pulse
Media Gateways:, TelcoBridges, Dialogic, Audiocodes, Cisco

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