

ICSX™ Call Management Server

The ICSX Call Management Server (CMS) is a PacketCable™-compliant CMS platform focused on the delivery of primary line CLASS 5 voice services over packet-based hybrid fiber-coaxial (HFC) networks.

FEATURES & BENEFITS

- ▶ **PacketCable™-compliant**
- ▶ **Industry leading price and performance**
- ▶ **Carrier-ready Class 5 features**
- ▶ **Unmatched scalability in a virtual switch configuration:**
 - 3.2M BHCA**
 - 160,000 concurrent calls**
 - 1.6M subscriber lines**
 - 880 calls per second**

A highly cost-effective solution for cable operators seeking to add voice to their service bundle, the ICSX provides full call agent, gate controller, media gateway controller, and announcement controller functionality as defined in the PacketCable architecture.

Delivering revolutionary scale, performance and economics, the ICSX CMS operates in Cohesion-based cable telephony networks and interoperates with a wide range of other PacketCable-based products to ensure the rapid delivery of voice services. With support for regulatory and CLASS features, the ICSX CMS meets the requirements for cable operators to deliver primary line Voice over IP services.

The Cohesion™ Cable Telephony Solution

Convergent Networks' Cohesion Cable Telephony Solution leverages deployment-hardened components, including the ICS2000™ media gateway, the ICSX™ call management server, the ICSP™ tandem proxy, the ICSG™ signaling gateway and the ICView™ management system. Deployed in carrier networks for over two years, Cohesion systems have proven PSTN experience and carry more than 3 billion minutes of live traffic per month.

The Cohesion platform fully complies with PacketCable 1.0 and 1.1 specifications, and is also designed to support PacketCable 1.2 and 2.0, which offer superior performance, scale and enhanced application integration.

Primary Line Services

The ICSX CMS supports all requirements for cable operators who choose to deliver primary line services, including E911, operator services and busy line interrupt, CALEA, warm dial-tone and local number portability. Further, the ICSX supports all basic and enhanced features as defined by PacketCable specifications.

Additional Revenue Opportunity

The ICSX allows cable operators to leverage new IP applications and service creation environments from multiple vendors to create enhanced and revenue-generating voice services. With support for CMSS and SIP, the solution provides an immediate opportunity for carriers to deliver enhanced applications and premium service offerings, such as carrier hosted IP PBX, IP VPN services, advanced messaging and conferencing services.

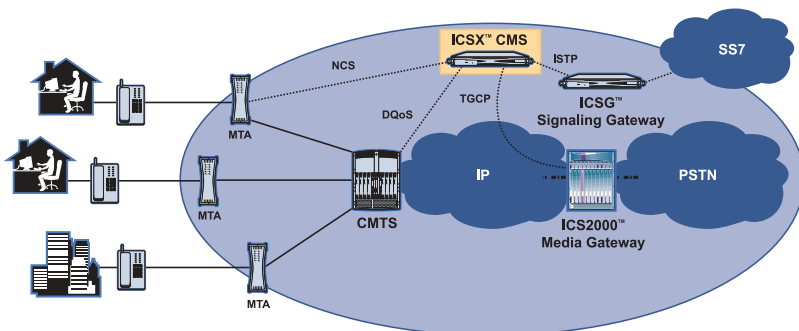
Standards Compliance

Based on PacketCable specifications, the ICSX supports NCS, DQoS, TGCP, Event Messaging, ISTP, Security, and both Basic and Enhanced residential features.

- = The call agent function of the ICSX provides signaling services using the NCS protocol to Media Terminal Adapters (MTAs) at the customer premise.
- = The gate controller function coordinates quality of service authorization and control using the DQoS specification.
- = The media gateway controller manages signaling to PSTN Gateways, such as the Cohesion ICS2000.
- = The announcement controller function manages network announcement servers.

In addition to these functions, the ICSX provides CLASS features, call routing and other call services to provide a complete Class 5 softswitch solution for voice over cable services. The ICSX supports extensive PacketCable-based third-party interoperability, allowing cable providers to choose best-of-breed equipment for maximum network flexibility.

PACKETCABLE™ 1.0/1.1 COMPLIANCE



High Scalability and Density

As cable operators grow their networks and add customers, they must be able to scale their systems to meet demands in the market. The ICSX CMS addresses both small and large deployment needs with industry leading scale and density, and unparalleled price and performance. The ICSX can support more than 40,000 subscriber lines in two rack units of space, allowing cable operators to increase subscriber lines without increasing operational costs.

Further, the complete Cohesion solution, scales in modular, cost effective increments to provide support from 5,000 to more than 100,000 PacketCable subscriber lines in a single seven-foot telco rack.

High Availability

The high-performance capabilities of the ICSX CMS can withstand the demands of carrier-class voice networks, providing a carrier-grade platform for robust and reliable voice service delivery. The ICSX provides extreme high-availability through Active – Active redundancy. Call state, subscriber and line information are mirrored in the redundant nodes to support call preservation during rapid and automated fail-over.

Implemented from the ground up for carrier-class availability, all Cohesion components exceed Telcordia availability recommendations for telephony systems.

Simplified Element Management and Billing

The ICView management system, which includes the ICView Element Management System (EMS), the ICView Billing Mediation Platform (BMP) and the ICView Subscriber Management Portal (SMP), provides a common and centralized operational view for cable operator network administrators.

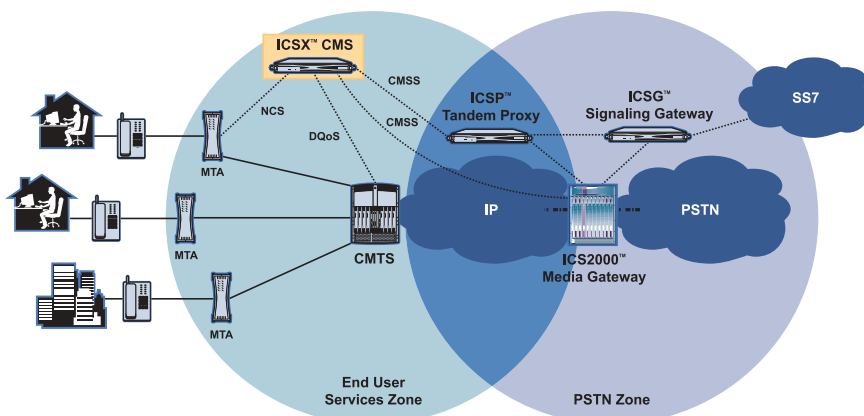
ICView enables conversion of PacketCable event messages (EM) into any format required, such as Telcordia Technologies' Automatic Message Accounting (AMA) format based on GR-1100, GR-1083 and GR-508. Common open northbound

interfaces, such as XML, SNMP V1/3 and TL1, facilitate tight integration with the cable operators' OSS to ensure back office interoperability for fast service deployment.

The Cohesion™ Advantage

At Convergent Networks, our cutting-edge technology is helping guide service providers to the next generation of broadband communications. Unmatched in its scalability and versatility, Cohesion supports PacketCable-based networks and allows converged service delivery over broadband networks. Our commitment to providing a complete solution to ensure cable operators' success is further extended by CohesionPS™, a comprehensive portfolio of professional and technical support services.

PACKETCABLE™ 1.2 COMPLIANCE



ICSX™ CMS SPECIFICATIONS

Server Platform

Sun Netra120 or Netra20 platforms, Solaris 9, NEBS certified

Protocols:

Signaling: NCS Call Agent, TGCP Media Gateway Controller, MGCP, SIP, CMSS
 Quality of Service: DQoS, COPS
 Security: IPsec / IKE-, PKInit, Kerberos, Radius
 SS7: ANSI ISUP
 Service Environment: IN, AIN

Availability:

Meets or exceeds GR-1110-CORE requirements. 1:1 Active – Active redundancy or 1:N cluster, all stable calls maintained on CMS failure, Non-disruptive software upgrades and serviceability

OAM&P:

SNMP v1/V3, XML / SOAP, HTTP

Billing:

PacketCable EM, Automatic Message Accounting (AMA) format based on GR-1100, GR-1083 and GR-508

Features:

PacketCable PKT-TR-VolPBRF-000608 Basic Residential Features, including Calling Number Delivery, Calling Name Delivery, Calling Identity Blocking (*67/*82), Calling Identity Delivery on Call Waiting, Call Waiting, Cancel Call Waiting (*70), Call Forwarding Variable and Usage Sensitive Call Forwarding (*72/*73), Call Forwarding Busy Line (*68/*40/*88), Call Forwarding Don't Answer (*68/*42/*88), Selective Call Forwarding (*63/*83), Selective Call Rejection (*60/*80), Automatic Recall (*69), Automatic Callback (*66), Visual Message Waiting Indicator (CPE Light and Stutter Dial Tone), Customer Originated Trace (*57), Three Way Calling and Usage Sensitive Three Way Calling (*71), Distinctive Ringing / Call Waiting (*61/*81), Speed Calling (*74/*75)

PacketCable PKT-TR-VolPERF-00831, including Residence Distinctive Alerting Service, Remote Activation of Call Forwarding, Call Forwarding Combination, Outside Calling Area Alerting, Line Service Restriction, Do Not Disturb, Curfew on Calls, Calling Identity with Enhanced Screening, No Solicitation Announcement, Anonymous Call Rejection (*77/*87), Automatic Callback Restrict, Automatic Call Blocking



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