

ICSP™ Service Proxy

An integral part of the Cohesion™ Distributed Softswitch Architecture, the ICSP™ service proxy provides the service intelligence required to route calls and deliver a variety of next-generation and traditional services to residential and enterprise customers.

FEATURES & BENEFITS

- ▶ **Mirrors capabilities of PSTN at a fraction of the cost**
- ▶ **Enables new IP-based services on a common infrastructure**
- ▶ **Scale, performance and resiliency through stateless call handling**

The Cohesion™ Distributed Softswitch Architecture

The Cohesion Distributed Softswitch Architecture is an open, standards-based platform that is uniquely designed to enable advanced services – not just a decoupling of a legacy circuit switch. Designed with a forward-looking approach to voice networks, Cohesion distributes call processing across multiple network elements rather than tying it to one central platform.

The Cohesion architecture consists of the ICS2000™ broadband switch, the ICSP™ service proxy, the ICSX™ feature server, the ICSG™ signaling gateway and the ICView™ management system. The ICSG consolidates and preserves A-links supporting a network of ICS2000 broadband switches and ICSP service proxies. Network routing and service intelligence is distributed on the ICSP platform, while the ICS2000 provides flexible interworking between IP, ATM and TDM circuits for both trunking and access applications. The architecture supports a high performance integrated call management function in the ICS2000, as well as optional external call management in the ICSX, an MGCP-based application server supporting basic Class 5 features. In addition, the Cohesion solution works with a number of third-party SIP-based application and feature servers to facilitate the delivery of advanced services and applications to subscribers.

Linking IP and PSTN Networks

The ICSP service proxy acts as a service mediation point between SIP and AIN domains, linking applications from IP to the PSTN and extending Cohesion network resources to third-party application servers through open standards, such as SIP. The service intelligence of the ICSP, combined with the deployment-hardened ICS2000 broadband switch and other elements of the Cohesion Distributed Softswitch Architecture, provides unparalleled time-to-market, performance, cost and interoperability benefits to service providers.

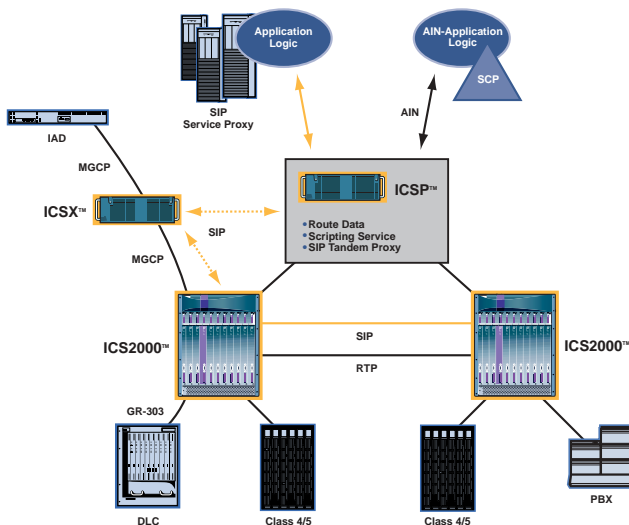
ICSP Service Intelligence

The ICSP provides distributed routing and service intelligence for a network of ICS2000s and application servers. Screening, blocking, number translations and routing functions are provided to other Cohesion network elements via the ICSP, and specific services are applied to a call via the ICSP based on classification of the inbound call that fits a predefined profile.

The Knowledge Base for Carriers

The ICSP aggregates service data typically stored in multiple switches, Service Control Points (SCPs) and network databases, allowing for simplified network operations and scalable execution of large call volumes. The ICSP is also able to route calls from a packet network to the PSTN and from the PSTN to a packet network, directing the call processing through the most efficient path in a large, distributed network.

ICSP™ FUNCTIONALITY



PSTN endpoints on the ICS2000 broadband switch are represented by the ICSP to applications as a set of fully managed SIP endpoints. For calls originating from the PSTN and terminating in the packet network, the ICSP performs a route translation to determine which application element is managing the terminating endpoint. For calls originating in the packet network and terminating in the PSTN, the ICSP first acts as a redirect server to direct the call to the best gateway interface, then performs service selection functions based on the call profile. This simplifies provisioning and allows the service provider to protect and control the details of the network topology.

Simplified Operations

Service related data, typically stored in multiple switches, SCPs and network databases, can be aggregated into a single ICSP service proxy, greatly simplifying network operations. Multiple ICSPs can be distributed in a network, providing the advantages of distributed processing with the benefits of central administration. Service providers can manage all service data centrally through the ICView element management system, easily provisioning associations with ICS2000 broadband switches in the network.

Unrivald Scale, Performance and Availability

The ICSP operates independent of call state and communicates with other network elements using standard protocols, such as SIP, reducing network complexity and eliminating potential network bottlenecks. The ICSP architecture allows flexible deployment and eliminates the need for 1:N topologies required in typical master-slave softswitch architectures. ICS2000 broadband switches control load balancing between ICSPs through a "round robin" or primary and backup mechanism. One ICSP supports a network of ICS2000s and call-processing capacity is increased linearly and economically with additional servers. The ICSP can also be deployed in redundant clusters or distributed geographically for maximum network flexibility. Load balanced N+k deployment supports extreme scale, performance and availability on the ICSP platform within Cohesion-based networks.

OAM&P

The Cohesion network can be managed both directly and remotely via the network element's command line interface and the ICView management system. The command line interface is ideal for basic maintenance and emergency recovery via a low-speed connection, although all management functions, including a flexible scripting capability, are available in this interface for comprehensive administration. The ICView management system provides centralized control of all components in a Cohesion network via a user-friendly Web interface, and integrates with carriers' OSS to ensure backoffice 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. The Cohesion™ Distributed Softswitch Architecture, including the ICS2000™ broadband switch, the ICSP™ service proxy, the ICSX™ feature server, the ICSG™ signaling gateway and the ICView™ management system, provides evolutionary, packet-based platforms for delivering multiple voice and data applications over ATM, TDM and IP networks. Unmatched in its scalability and versatility, Cohesion supports a revolutionary migration path for future service creation and delivery in the New Public Network. Our commitment to providing a complete solution to ensure service providers' success is further extended by CohesionPS,™ a comprehensive portfolio of professional and technical support services.

ICSP™ SUPPORTED CLASS 4 SERVICES

Trunking Support	Routing & Screening	Information Database Services	Multiple Dialing Plans	Enterprise Networks	Reseller Services
Feature Groups	Carrier (CIC) Routing	N00 Services (8xx,900)	NANP Dialing	Dedicated Access Lines	Traffic Partitioning
Equal Access	ANI Screening	AUTH/PIN Codes	International Dialing	ISDN PRI Services	Multi-CIC Arrangements
Inter-machine Trunks	Class of Service Screening	Calling Card Authorization	Subscriber Dial Plans (User Partition)	Virtual Private Networks	Custom Tones & Announcements
Release Link Trunks	Hotline Dialing	Account Codes	VPN Dial Plans	Speed Dial Plans	Travel Cards
Call Detail Recording	Operator Access	N00 Enhancements		Billing Account Detail	Prepaid Cards

ICSP™ SERVICE PROXY

Platform

NEBS-certified Netra servers

Protocol Support

SIP, CMSS, ISTP

Redundancy

N+k load balanced redundancy with full call preservation

Call Processing and Routing Features

PSTN Routing:

Number translations (1-18 digits), equal access, prepended masking, digit manipulation, carrier access code-based or dial around calls, operator services, directory assistance, trunk hunting, NANP, NPA, NPA-NXX, 10-digit routing, international routing including city code, called party number routing, number pooling, alternate routes for called party number, CIC, dial around 101-XXXX routing, CNAM, TCAP proxy, easily recognized codes, 8XX number lookup and translation, LNP



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