



Q&A

Cisco PGW 2200 SoftSwitch

This document provides answers to frequently asked questions about the Cisco® PGW2200 Voice Gateway. When coupled with Cisco Systems® award-winning packet voice gateways, the Cisco PGW2200 provides interoperability between traditional public switched telephone networks (PSTNs) and advanced packet voice and data networks. Additional information, including a data sheet and product overview for the Cisco PGW2200, is available at: <http://www.cisco.com/go/pgw>.

Q. What are call agents, softswitches, and PSTN gateways?

A. Call agent (or media gateway controller) and softswitch are industry-standard terms used to describe the network element that provides call control functions to telephony and packet networks. The Cisco PGW 2200 in call control mode functions as a call agent or softswitch. A PSTN gateway provides the interface between traditional Signaling System 7 (SS7) networks or non-SS7 networks and Media Gateway Control Protocol (MGCP)-, H.323-, and Session Initiation Protocol (SIP)-based networks, including signaling, call control, and time-division multiplexing (TDM)/IP gateway functions. The Cisco PGW 2200, coupled with Cisco media gateways, functions as a PSTN gateway.

Q. What is the difference between configuring the Cisco PGW 2200 to run in signaling mode versus call control mode?

A. The Cisco PGW 2200 is designed to provide maximum support for different IP network architectures. This flexibility helps enable the Cisco PGW 2200 to provide an SS7 interconnect for H.323- or SIP-based networks where the call control resides in the Cisco AS5000 Voice Gateways (signaling mode), or it can provide intelligent call control and routing functions for MGCP-based voice gateways (call control mode) while concurrently providing an H.323 or SIP interface for maximum flexibility and interoperability.

For more details, refer to the Cisco PGW 2200 data sheet at: <http://www.cisco.com/go/pgw>

Q. What applications are supported by the Cisco PGW 2200?

A. The Cisco PGW 2200, in either signaling mode or call control mode, provides a robust, carrier-class interface between the PSTN and IP-based networks. Interworking with Cisco media gateways, the Cisco PGW 2200 supports multiple applications, including the following:

- National and international transit—Supported in signaling and call control mode
 - Voice transit networks are evolving from TDM to IP to take advantage of the cost savings associated with routing traffic over IP backbones, and the ability to quickly introduce new services into a network.
- Dial traffic termination for wholesale or retail dial service—Supported in both signaling and call control mode
- SIP and H.323 PSTN gateway for next-generation applications—Supported in both signaling and call control mode
 - The next-generation applications can range from next-generation messaging systems to ring-tone services.
- SIP and H.323 PSTN gateway for local services platforms—Supported in both signaling and call control mode
 - The Cisco PGW 2200 supports the complex SS7/C7 interconnect requirements of carriers around the world, allowing customers to deploy a stable interface between the IP-based local service (Class 5) platform and the PSTN.

- Business voice services—Supported in call control mode
 - The Cisco PGW 2200 supports multiple business voice applications, primarily by providing interworking and feature transparency for voice services across a range of IP and TDM protocols. It acts as a centralized tandem for private-branch-exchange (PBX) switches within a customer or multiple customer networks.
- Hosted IP contact center (IPCC)—Supported in call control mode
 - The Cisco PGW 2200 provides SS7-enabled PSTN breakout and advanced call manipulation with the Cisco IPCC platform using an ETSI Intelligent Network Application Protocol (INAP) interface

For more details, refer to the Cisco PGW 2200 data sheet at: <http://www.cisco.com/go/pgw>

Q. Which Cisco products are interoperable with the Cisco PGW 2200?

A. Table 1 lists the products that are interoperable with the Cisco PGW2200.

Table 1. Products Interoperable with Cisco PGW2200

Cisco Products	Signaling Mode	Call Control Mode		
	Q.931+*	MGCP	H.323	SIP
Cisco Media Gateways				
Cisco 2600 Series Multiservice Platforms		X	X	
Cisco 3600 Series systems		X	X	
Cisco AS5300 Access Server	X	X	X	X
Cisco AS5350 Universal Gateway	X	X	X	X
Cisco AS5350XM Voice Gateway	X	X	X	X
Cisco AS5400 Universal Gateway	X	X	X	X
Cisco AS5400HPX Universal Gateway	X	X	X	X
Cisco AS5400XM Voice Gateway	X	X	X	X
Cisco AS5850 Universal Gateway	X	X	X	X
Cisco AS5800 Access Server	X			
Cisco MGX® 8880 Media Gateway		X		
Cisco Call Control Products				
Cisco Call Session Control Platform (CSCP)	X**			X
Cisco H.323 Gatekeeper	X**		X	
Cisco Unified CallManager			X	
Cisco BTS 10200 Softswitch	X**			X

* Enhanced to support SS7 parameters and exchange of information regarding the gateways or ports.

** Through Cisco H.323 or SIP media gateways.

Q. Why is SS7/C7 support so important?

A. The Common Channel Signaling System 7 (SS7/C7) is a packet-based signaling network used worldwide by service providers to control PSTN traffic. Although it is based primarily on two families of protocols, ANSI and ITU-T, it has evolved over the years to the point where virtually every country in the world (and many TDM switches) have a custom variant that supports its specific requirements. Within those countries, products that interconnect to the national SS7 network are required to pass stringent interconnection tests before they can pass live traffic.

The Cisco PGW 2200 PSTN Gateway supports rapid development of SS7 variants. The product currently supports more than 90 SS7 variants and is used in more than 50 countries, making it the most widely deployed call agent on the market today.

Q. What hardware platforms are available for the Cisco PGW 2200?

A. The Cisco PGW 2200 runs on the following Network Equipment Building Standards (NEBS)-compliant Sun Microsystems general computing platforms:

- Sunfire v210 servers
- Netra 240 AC/DC servers
- Netra 440 AC/DC servers

Additional platforms supported for the Cisco PGW 2200, but no longer available from Sun, include the following:

- Netra/Sunfire v120 servers
- Netra 1120/1125 servers
- Netra t1 100/105 servers
- Netra 20 servers
- Netra 1400/1405 servers

Q. Where can I get more information about the Cisco PGW 2200?

A. Visit the Cisco PGW 2200 website at: <http://www.cisco.com/go/pgw>

Q. How does the Cisco PGW 2200 fit in the Cisco Voice Infrastructure and Applications (VIA) solution?

A. The Cisco VIA solution is ideal for service providers building next-generation networks. Cisco VIA is a voice-over-IP (VoIP) solution designed to lower network costs and rapidly deliver a multitude of revenue-generating carrier-class voice transport applications and services. The Cisco PGW 2200 is an integral part of the Cisco VIA solution, providing both signaling and call control functions.

- For VoIP transit networks requiring MGCP, the Cisco PGW 2200 is a softswitch that provides centralized call control.
- For H.323- and SIP-based VoIP transit networks, the Cisco PGW 2200 provides signaling control for interconnection with SS7 networks.

Cisco PGW 2200 works in conjunction with the Cisco AS5000 Series and Cisco MGX 8000 Series Gateways.

For more information about Cisco VIA, go to:

http://www.cisco.com/en/US/netso1/ns341/ns396/ns166/ns68/networking_solutions_solution.html.



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