Overview of Supplementary Services Features for FXS Ports on Cisco Voice Gateways

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This guide contains information and tasks for configuring supplementary service feature capabilities for analog phones connected to Foreign Exchange Station (FXS) ports on Cisco Integrated Services Routers (ISRs) or Cisco VG224 Analog Phone Gateways, including call transfer and forward, conferencing, caller ID, speed dial and redial, and more.

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Contents

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Information About Supplementary Services Features for FXS Ports on Cisco Voice Gateways

To enable supplementary services feature capabilities for analog phones connected to FXS ports on Cisco voice gateways, you should understand the following concepts:

- Cisco Voice Gateway Interoperability with Cisco Unified Communications Manager or Cisco Unified CME, page 12

- Supported Gateways, Modules, and Voice Interface Cards, page 13

Cisco Voice Gateway Interoperability with Cisco Unified Communications Manager or Cisco Unified CME

A standard telephone can be directly connected to an FXS port, which supplies the ring feature, voltage, and the dial tone. Cisco IOS Release 12.4(2)T and later releases provide supplementary feature capabilities for analog phones connected to FXS ports on a Cisco ISR or Cisco VG224.

Calls through analog FXS ports are controlled by a Cisco call-control system, such as Cisco Unified Communications Manager or Cisco Unified CME. The SCCP telephony control (STC) application on the Cisco voice gateway functions as a proxy to translate call-control messages between the Cisco call-control system and the Cisco voice gateway.

The STC application identifies locally attached analog telephones as individual endpoints to the call-control system, which allows the analog phones to be controlled in the same way as IP phones. With this capability, organizations such as retailers are able to connect traditional analog telephones to a Cisco voice gateway and share the same telephony features that are available on IP phones directly connected to Cisco Unified CME.

Figure 1 shows analog phones connected through the Cisco voice gateway to a remote Cisco Unified Communications Manager system. Figure 2 shows analog phones connected through the voice gateway to a local Cisco Unified CME router.

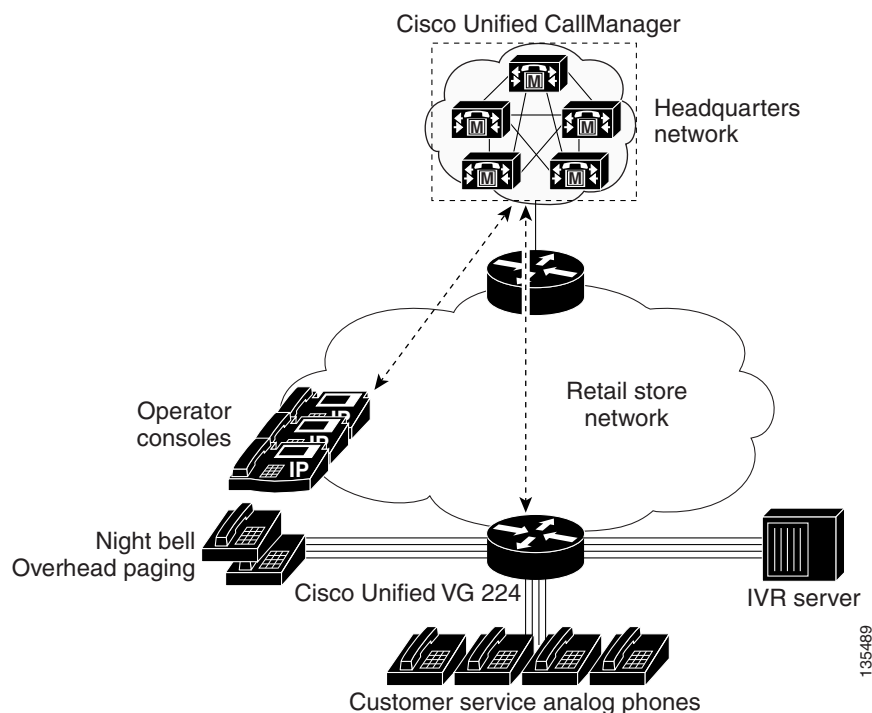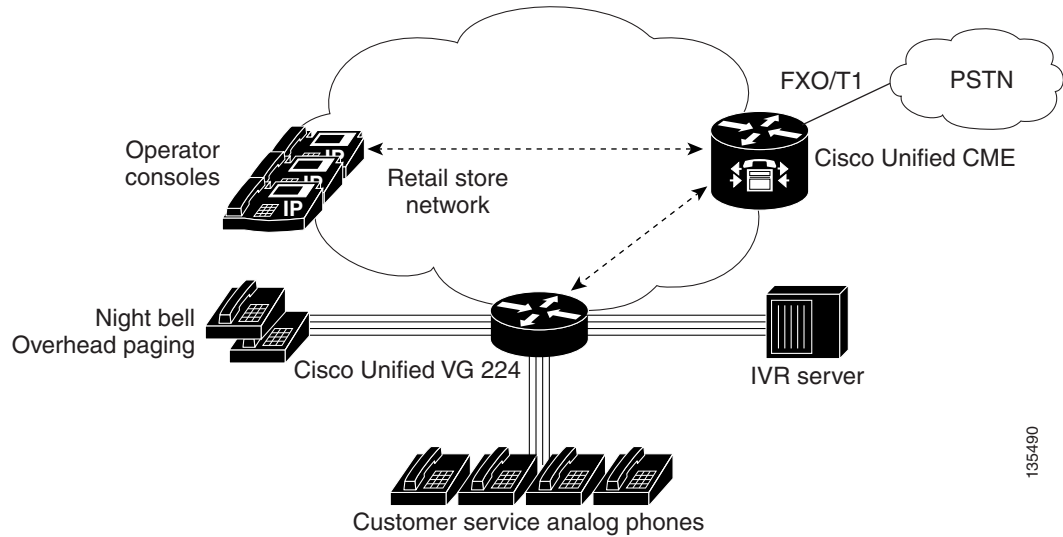*Figure 1*   *Analog Endpoints Managed by Cisco Unified Communications Manager*

Figure 2   *Analog Endpoints Managed by Cisco Unified CME*

Supported Gateways, Modules, and Voice Interface Cards

Table 1 lists Cisco voice gateways, modules, and voice interface cards (VICs) on which supplementary services for FXS ports are supported.

Note Not all supplementary feature capabilities for FXS ports are supported on all gateways, modules, and VICs. If a feature is not supported on a certain hardware configuration, it is specified in the module for that feature.

Table 1   *Supported Gateways, Modules, and VICs*

Supported Gateways	Supported Extension Modules	Supported Network Modules and Expansion Modules	Supported VICs
• Cisco 1861	—	• HWIC-1T1/E1	—
• Cisco 2801	—	• NM-HD-1V	• VIC2-2FXS
• Cisco 2811		• NM-HD-2V	• VIC-4FXS/DID
• Cisco 2821		• NM-HD-2VE	• VIC2-2BRI-NT/TE
• Cisco 2851			
• Cisco 3825			
• Cisco 3845			

Table 1   *Supported Gateways, Modules, and VICs*

Supported Gateways	Supported Extension Modules	Supported Network Modules and Expansion Modules	Supported VICs
• Cisco 2801 • Cisco 2821 • Cisco 2851 • Cisco 3825 • Cisco 3845	• EVM-HD	• EVM-HD-8FXS/DID • EM-3FXS/4FXO • EM-HDA-8FXS • EM-4BRI-NT/TE	—
• Cisco 2801 • Cisco 2811 • Cisco 2821 • Cisco 2851 • Cisco 3825 • Cisco 3845	—	• NM-HDV2 • NM-HDV2-1T1/E1 • NM-HDV2-2T1/E1	• VIC2-2FXS • VIC-4FXS/DID • VIC2-2BRI-NT/TE
• Cisco Unified 500 Series	—	—	• VIC3-2FXS/DID[*] • VIC-4FXS/DID[*] • VIC3-4FXS/DID[*] • VIC2-2BRI-NT/TE[*]
• Cisco VG202 • Cisco VG204 • Cisco VG224	—	—	—

* Factory option. Only one optional VIC can be factory-installed in a Cisco Unified 500 Series.

Additional References

The following sections provide references related to support for supplementary services on FXS ports on the Cisco voice gateway.

Related Documents

Related Topic	Document Title
Cisco Unified Communications Manager	*Cisco Unified Communications Manager*
Cisco Unified Communications Manager Express	*Cisco Unified Communications Manager Express*
Cisco IOS debugging	*Cisco IOS Debug Command Reference*
Cisco IOS voice commands	*Cisco IOS Voice Command Reference*
Cisco IOS voice configuration	*Cisco IOS Voice Configuration Library*

Related Topic	Document Title
Cisco voice gateway	• *Cisco VG200 Series Gateways*
	• *Cisco 1800 Series Integrated Services Routers*
	• *Cisco 2800 Integrated Services Routers*
	• *Cisco 3800 Series Integrated Services Routers*
	• *Cisco Unified 500 Series for Small Business*
Conferencing and transcoding resources	• "Configuring Enhanced Conferencing and Transcoding for Voice Gateway Routers" chapter in the *Cisco Unified CallManager and Cisco IOS Interoperability Guide*.
	• *Cisco CallManager and IOS Gateway DSP Farm Configuration Example*

Technical Assistance

Description	Link
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http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.