

Configuring SRS Telephony and MGCP Gateway Fallback

Document ID: 29960

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Introduction

If you have both Survival Remote Site Telephony (SRST) version 2.0 or later and Media Gateway Control Protocol (MGCP) fallback configured on the gateway, use this document in order to solve either of these MGCP failover problems:

- A telephone on a Foreign Exchange Station (FXS) port does not get a dial tone, or you cannot make incoming calls through a Foreign Exchange Office (FXO) port or through the ISDN link.
- You cannot make incoming calls with direct inward dial (DID) to an MGCP gateway, configured for MGCP fallback, in a failover situation.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on this software version:

- Cisco IOS[®] Software Release 12.2(11)T and later

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

No Dial Tone on an FXS Port, or Cannot Make Incoming Calls through FXO Ports or ISDN Links

This problem is explained in detail in this section.

You are presented with a telephone on an FXS port that does not get a dial tone, or you cannot make incoming calls through an FXO port or ISDN link. In such situations, this is configured under the relevant plain old telephone service (POTS) dial peer:

```
dial-peer voice X pots
  application mgcpapp
```

Note: For Cisco IOS Software Release 12.3(7)T or later, the **application mgcpapp** command must **not** be applied to the POTS dial peer that supports PRI Backhaul.

In this situation, an error message similar to this appears on the console of the Cisco IOS gateway:

```
*Mar  1 20:41:58.571: %CALL_CONTROL-6-APP_NOT_FOUND:
Application mgcp in dial-peer 10 not found.
Handing callid 13 to the alternate app.
```

Note: For Cisco IOS Software Release 12.4(8c) or later, when the **application mgcpapp** command is applied:

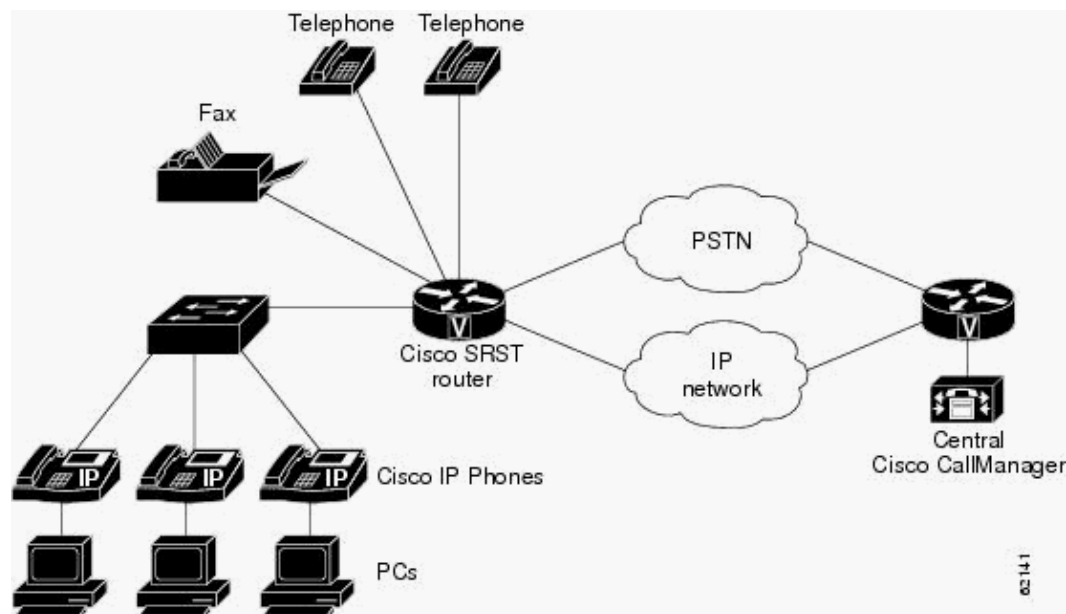
In this situation, a Warning message similar to this appears on the console of the Cisco IOS gateway:

```
Warning: This command has been deprecated and will be automatically
converted to the following:
  service mgcp
```

For Cisco IOS Software Release 12.3(7)T or later, the **application mgcpapp** command should **not** be applied to the POTS dial peer.

Solutions

Figure 1: Branch Office Cisco IP Phones Connected to a Remote Central Cisco CallManager



If the Cisco CallManager becomes inaccessible, phones can use a Cisco voice router for call processing. Phones go into SRST mode when either of these occurs:

- The WAN link to the Cisco CallManager at the central site goes down.
- The connection to the Cisco CallManager is lost.

SRST allows phones in branch offices to continue to function until the WAN link comes up or until the phones can register with a Cisco CallManager again.

Use one of the solutions described in this section to resolve this problem.

Solution 1

For the router to fallback to the default application, configure this command in global configuration mode:

For Cisco IOS Software Release 12.3(13)T or earlier:

```
R(config)#call application alternate default
```

For Cisco IOS Software Release 12.3(14)T or later:

```
R(config)#application
R(config-app)#global
R(config-app-global)#service alternate Default
```

If the MGCP application is not available, the default application takes over.

Solution 2

You must create a different POTS dial-peer (default application H323) to use in the fallback mode.

No Incoming Calls with DID to an MGCP Gateway in Failover

This problem is explained in detail in this section.

You cannot make incoming calls, with DID, to an MGCP gateway configured for MGCP failover in a failover situation even though there is a connection, the phone does not ring. This is an example of the **debug isdn q931** command used on the Cisco IOS gateway, when you verify this problem:

Problem Verification Example	
*Mar 1	20:53:33.511: ISDN Se1/0:15 Q931: RX <- SETUP pd = 8 callref = 0x000A Bearer Capability i = 0x8090A3 Standard = CCITT Transfer Capability = Speech Transfer Mode = Circuit Transfer Rate = 64 kbit/s Channel ID i = 0xA98381 Exclusive, Channel 1 Calling Party Number i = 0x00, 0xA2, '5000' Plan:Unknown, Type:Unknown Called Party Number i = 0xC1, '5002' Plan:ISDN, Type:Subscriber(local)
*Mar 1	20:53:33.543: ISDN Se1/0:15 Q931: TX -> CALL_PROC pd = 8 callref = 0x800A Channel ID i = 0xA98381 Exclusive, Channel 1
*Mar 1	20:53:33.543: ISDN Se1/0:15 Q931: TX -> CONNECT pd = 8 callref = 0x800A

```
*Mar 1 20:53:33.595: ISDN Se1/0:15 Q931: RX <- CONNECT_ACK pd = 8 callref = 0x000A
*Mar 1 20:53:40.045: ISDN Se1/0:15 Q931: RX <- DISCONNECT pd = 8 callref = 0x000A
Cause i = 0x8090 - Normal call clearing
*Mar 1 20:53:40.057: ISDN Se1/0:15 Q931: TX -> RELEASE pd = 8 callref = 0x800A
*Mar 1 20:53:40.073: ISDN Se1/0:15 Q931: RX <- RELEASE_COMP pd = 8 callref = 0x000A
```

Solution

The solution to this problem is explained in detail in this section.

You must verify that you have made these configurations on the relevant POTS dial peer:

```
dial-peer voice X pots
  application mgcpapp
  incoming called-number .
  direct-inward-dial
  port 1/0:15
```

Note: For Cisco IOS Software Release 12.3(7)T or later, the **application mgcpapp** command must **not** be applied to the POTS dial peer that supports PRI Backhaul.

This is an example of a proper configuration:

Configuration Example

```
isdn switch-type primary-net5
!
!
ccm-manager fallback-mgcp
ccm-manager mgcp
ccm-manager config
mta receive maximum-recipients 0
!
controller E1 1/0 . pri-group timeslots 1-12,16 service mgcp
!
controller E1 1/1
!
!
!
interface Ethernet0/0
 ip address 10.48.80.9 255.255.255.0
 duplex auto
 speed auto
!
interface Serial1/0:15
 no ip address
 no logging event link-status
 isdn switch-type primary-net5
 isdn incoming-voice voice
 isdn bind-l3 ccm-manager
 no cdp enable
!
!
!
call rsvp-sync
!
call application alternate DEFAULT
```

*!--- For Cisco IOS® Software Release 12.3(14)T or later,
this command was replaced by the **service** command*

```
in global application configuration mode.
application
  global
    service alternate Default
Refer to Solution 1 for the command syntax.
```

```
!
voice-port 1/0:15
!
mgcp
mgcp dtmf-relay voip codec all mode cisco
mgcp package-capability rtp-package
mgcp sdp simple
!
mgcp profile default
!
!
!
dial-peer cor custom
!
!
!
dial-peer voice 10 pots
application mgcpapp
incoming called-number .
destination-pattern 9T
direct-inward-dial
port 1/0:15

!
!
call-manager-fallback
  limit-dn 7960 2
  ip source-address 10.48.80.9 port 2000
  max-ephones 10
  max-dn 32
  dialplan-pattern 1 704.... extension-length 4
  keepalive 20
  default-destination 5002
  alias 1 5003 to 5002
  call-forward busy 5002
  call-forward noan 5002 timeout 12
  time-format 24
!
!
line con 0
  exec-timeout 0 0
line aux
```

Note: For outgoing calls, you must configure the **destination-pattern** .

Here is a link to a video on the Cisco Support Community that describes the procedure to setup basic SRST:
[Configuring Basic SRST](#)



Verify

This section provides information you can use to confirm your configuration is working properly.

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which allows you to view an analysis of **show** command output.

- **show call-manager-fallback all** Displays the detailed configuration of all Cisco IP Phones, voice ports, and dial peers in your network during Cisco CallManager fallback.
- **show call-manager-fallback dial-peer** Displays output for the dial peers during CiscoCallManager fallback.
- **show ccm-manager fallback-mgcp** Displays a list of Cisco CallManager servers and their current status and availability.
- **Monitoring and Maintaining Cisco SRST** Cisco Survivable Remote Site Telephony (SRST)

Related Information

- [Cisco SRST Telephony Configuration](#)
- [Cisco CallManager and Cisco IOS Interoperability Features Roadmap](#)
- [Configuring MGCP Gateway Support for Cisco CallManager](#)
- [Configuring MGCP-Controlled Backhaul of BRI Signaling in Conjunction with Cisco CallManager](#)
- [Configuring MGCP PRI Backhaul and T1 CAS Support for Cisco CallManager](#)
- [Voice Technology Support](#)
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