



Configuring MCID for Cisco IOS Voice Gateways

Last Updated: December 14, 2011

The MCID for Cisco IOS Voice Gateways feature supports the Malicious Call Identification (MCID) supplementary service that enables Cisco Unified Communications Manager to identify the source of malicious calls.

Feature History for MCID for Cisco IOS Voice Gateways

Release	Modification
12.3(8)XY	This feature was introduced.
12.3(11)T	This feature was integrated into Cisco IOS Release 12.3(11)T.
12.3(14)T	Support was added for the new Cisco IOS command structure for voice applications in the HTTP Client API for TCL IVR feature.

Finding Support Information for Platforms and Cisco IOS Software Images

Use Cisco Feature Navigator to find information about platform support and Cisco IOS software image support. Access Cisco Feature Navigator at <http://www.cisco.com/go/fn> . You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click **Cancel** at the login dialog box and follow the instructions that appear.

For more information about this and related Cisco IOS voice features, see the following:

- "Overview of Cisco Unified Communications Manager and Cisco IOS Interoperability" on page 13 .
- Entire Cisco IOS Voice Configuration Library--including library preface and glossary, other feature documents, and troubleshooting documentation--at http://www.cisco.com/univercd/cc/td/doc/product/software/ios123/123cgcr/voice_c/vcl.htm .
- [Finding Feature Information, page 2](#)
- [Prerequisites for MCID for Cisco IOS Voice Gateways, page 2](#)
- [Restrictions for MCID for Cisco IOS Voice Gateways, page 2](#)
- [Information About MCID for Cisco IOS Voice Gateways, page 3](#)



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

- [How to Configure MCID for Cisco IOS Voice Gateways, page 4](#)
- [Configuration Examples for MCID for Cisco IOS Voice Gateways, page 10](#)
- [Where to Go Next, page 13](#)
- [Additional References, page 13](#)

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the Feature Information Table at the end of this document.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Prerequisites for MCID for Cisco IOS Voice Gateways

- MCID must be configured in Cisco Unified Communications Manager 4.0 (formerly known as Cisco CallManager 4.0) or later. For information, see the "Malicious Call Identification" chapter in the *Cisco Unified CallManager Features and Services Guide*, Release 4.0(1).
- Your platform must support MCID and TCL IVR 2.0.
- You must either use the script `app_mcid.2.0.0.40.tcl` or a later version, or write your own TCL IVR 2.0 script that implements MCID. To download the script, go to the Software Download site at <http://www.cisco.com/cgi-bin/tablebuild.pl/tclware>. To write your own script, see the [TCL IVR API Version 2.0 Programming Guide](#).
- If you require an MCID service log in RADIUS, you can write a script that supports the RADIUS service and uses the **aaa accounting update** command to generate an accounting record.
- Cisco Catalyst 6500 series and Cisco 7600 series Communication Media Module (CMM) requires WS-SVC-CMM-6T1, WS-SVC-CMM-6E1, or WS-SVC-CMM-24 FXS port adapter in H.323 environment.

Restrictions for MCID for Cisco IOS Voice Gateways

- Supported only for NET5 switches that have MCID functionality enabled. Other switch types are not supported.
- Supported only for incoming calls from the ISDN network.
- MCID requests from the central office are ignored by Cisco Unified Communications Manager and are not supported by the Cisco voice gateway.
- Service provider on the time-division multiplexing (TDM) side of the PSTN must have MCID functionality enabled.
- ISDN interface on the voice gateway must have the ISDN switch type set to `primary-net5` with the **isdn switch-type** command and operate in user-side mode (default).
- Voice gateways with PRI interfaces should provide the following capabilities:
 - Receive MCID requests relating to the call from upper layers and relay them to the connected network using the PRI protocol specified for the MCID service.

- Receive MCID related response signals and information from the connected network using the PRI protocol specified for the MCID service. Cisco Unified Communications Manager ignores the signals and information.
- Not supported on the Access Gateway Module (AGM).

Information About MCID for Cisco IOS Voice Gateways

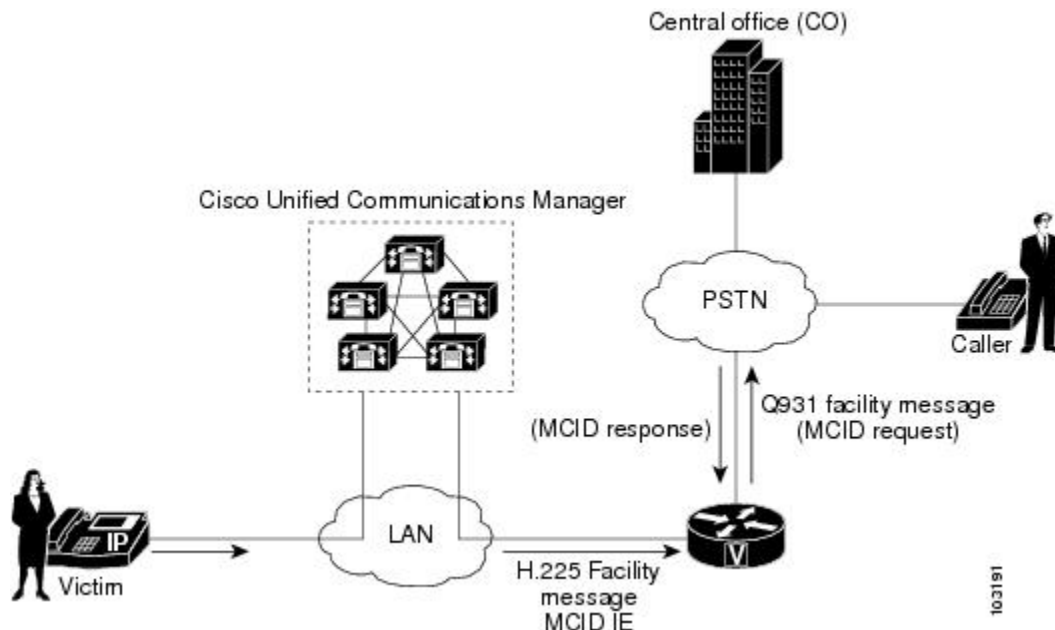
- [MCID, page 3](#)

MCID

Malicious Call Identification (MCID) is a supplementary service that enables Cisco Unified Communications Manager to identify the source of malicious calls. A user who receives a malicious call from another network, typically the PSTN, can select a softkey on the IP phone which immediately notifies the system administrator, flags the call detail record (CDR) for the Cisco Unified Communications Manager cluster, and notifies the PSTN of the malicious nature of the call, allowing the offnet system to take action, such as notifying legal authorities.

The figure below shows an example of the MCID call flow. After receiving an MCID request from an endpoint device (victim), Cisco Unified Communications Manager sends an H.225 Facility message with the MCID information element (IE) to the voice gateway. The gateway sends a Q.931 Facility message with the MCID IE to the ISDN network (central office).

Figure 1 MCID Functionality



A called party invokes MCID by pressing the appropriate softkey on the IP phone. A configurable timer is available when awaiting a response after sending a Facility message to the PSTN. If a response is not received within the specified time, the TCL IVR script is notified. Depending on how the script is written,

it could try to reinvoke MCID or perform some other action, for example, playing a message to the user that the MCID attempt did not work.

How to Configure MCID for Cisco IOS Voice Gateways

- [Enabling the ISDN Interface to Send MCID Requests, page 4](#)
- [Configuring MCID on the Voice Gateway in Cisco IOS Release 12.3T, page 5](#)
- [Configuring MCID on the Voice Gateway in Earlier Release, page 8](#)

Enabling the ISDN Interface to Send MCID Requests

Perform this task to enable an ISDN interface to send MCID requests and to set the timer.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface serial** *slot/port:timeslot*
4. **isdn switch type** {**primary-net5** | **primary-ni**}
5. **isdn incoming-voice** {**data** | **modem** | **voice**}
6. **isdn supp-service mcid**
7. **isdn t-activate** *msec*
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password when prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	interface serial <i>slot/port:timeslot</i> Example: Router(config)# interface serial 2/1:23	Enters interface configuration mode and specifies a serial interface created on a channelized E1 or channelized T1 controller.

Command or Action	Purpose
<p>Step 4 <code>isdn switch type {primary-net5 primary-ni}</code></p> <p>Example:</p> <pre>Router(config-if)# isdn switch-type primary-net5</pre>	<p>Specifies the user-side switch type.</p> <p>Note Only NET5 switches are supported.</p>
<p>Step 5 <code>isdn incoming-voice {data modem voice}</code></p> <p>Example:</p> <pre>Router(config-if)# isdn incoming-voice voice</pre>	<p>Specifies whether incoming voice calls are handled as data, voice, or modems.</p>
<p>Step 6 <code>isdn supp-service mcid</code></p> <p>Example:</p> <pre>Router(config-if)# isdn supp-service mcid</pre>	<p>Configures the ISDN interface to send the MCID invocation and response on the specified serial interface.</p>
<p>Step 7 <code>isdn t-activate msec</code></p> <p>Example:</p> <pre>Router(config-if)# isdn t-activate 4000</pre>	<p>(Optional) Specifies how long to wait for a response from the PSTN after sending the MCID request.</p> <p>When the timer expires, the TCL IVR script receives an expiration event and depending on your script, it could trigger an announcement or initiate another attempt.</p> <p>Note The timer starts when there is a disconnect message, and both calls legs are reclaimed after the timer expires.</p>
<p>Step 8 <code>end</code></p> <p>Example:</p> <pre>Router(config-if)# end</pre>	<p>Exits to privileged EXEC mode.</p>

Configuring MCID on the Voice Gateway in Cisco IOS Release 12.3T

Use this procedure to define the MCID application on a voice gateway that is running Cisco IOS Release 12.3(14)T or later. To verify your release, use the **show version** command.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **application**
4. **service mcid flash:app_mcid.2.0.0.40.tcl**
5. **param mcid-release-timer** *seconds*
6. **param retry-count** *number*
7. **exit**
8. **dial-peer voice** *tag pots*
9. **service mcid**
10. **incoming called-number** *string*
11. **direct-inward-dial**
12. **port** *slot /port:timeslot*
13. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password when prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	application Example: Router(config)# application	Enters application configuration mode.
Step 4	service mcid flash:app_mcid.2.0.0.40.tcl Example: Router(config-app)# service mcid flash:app_mcid. 2.0.0.40.tcl	Specifies the name and location of the MCID script.

	Command or Action	Purpose
Step 5	<p>param mcid-release-timer <i>seconds</i></p> <p>Example:</p> <pre>Router(config-app-param)# param mcid-release-timer 30</pre>	(Optional) Number of seconds the script waits before releasing both call legs after it receives a disconnect message. Default is 60 seconds.
Step 6	<p>param retry-count <i>number</i></p> <p>Example:</p> <pre>Router(config-app-param)# param retry-count 3</pre>	(Optional) Maximum number of times the called party can trigger MCID if all previous attempts failed. Default is 0, which means the user can invoke MCID as many times as needed.
Step 7	<p>exit</p> <p>Example:</p> <pre>Router(config-app-param)# exit</pre>	Exits to global configuration mode.
Step 8	<p>dial-peer voice <i>tag pots</i></p> <p>Example:</p> <pre>Router(config)# dial-peer voice 250 pots</pre>	Configures incoming dial peer and enters dial-peer configuration mode.
Step 9	<p>service mcid</p> <p>Example:</p> <pre>Router(config-dial-peer)# service mcid</pre>	Configures the incoming dial peer to use the MCID application.
Step 10	<p>incoming called-number <i>string</i></p> <p>Example:</p> <pre>Router(config-dial-peer)# incoming called-number 222....</pre>	Configures the incoming called number for the MCID application.
Step 11	<p>direct-inward-dial</p> <p>Example:</p> <pre>Router(config-dial-peer)# direct-inward-dial</pre>	Configures direct-inward-dial (DID) for the MCID application.

Command or Action	Purpose
Step 12 <code>port slot /port:timeslot</code> Example: <pre>Router(config-dial-peer)# port 3/0:23</pre>	Configures the port for the MCID application. Note The syntax of the port command is platform-specific. For information on the specific syntax for your platform, see the <i>Cisco IOS Voice Command Reference</i> .
Step 13 <code>exit</code> Example: <pre>Router(config-dial-peer)# exit</pre>	Exits to global configuration mode.

Configuring MCID on the Voice Gateway in Earlier Release

Use this procedure to define the MCID application on a voice gateway that is running Cisco IOS Release 12.3(11)T. To verify your release, use the **show version** command.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **call application voice mcid** *location*
4. **call application voice mcid mcid-release-timer** *seconds*
5. **dial-peer voice** *tag pots*
6. **application mcid**
7. **incoming called-number** *string*
8. **direct-inward-dial**
9. **port** *slot /port:timeslot*
10. **exit**

DETAILED STEPS

Command or Action	Purpose
Step 1 <code>enable</code> Example: <pre>Router> enable</pre>	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password when prompted.

	Command or Action	Purpose
Step 2	configure terminal Example: <pre>Router# configure terminal</pre>	Enters global configuration mode.
Step 3	call application voice mcid <i>location</i> Example: <pre>Router(config)# call application voice mcid flash:app_mcid.2.0.0.40.tcl</pre>	Specifies the name and location of the MCID script.
Step 4	call application voice mcid mcid-release-timer <i>seconds</i> Example: <pre>Router(config)# call application voice mcid mcid- release-timer 30</pre>	(Optional) Number of seconds the script waits to release both call legs after it receives a disconnect message. Default is 60 seconds.
Step 5	dial-peer voice <i>tag</i> pots Example: <pre>Router(config)# dial-peer voice 250 pots</pre>	Configures incoming dial peer and enters dial-peer configuration mode.
Step 6	application mcid Example: <pre>Router(config-dial-peer)# application mcid</pre>	Configures the incoming dial peer to use the MCID application.
Step 7	incoming called-number <i>string</i> Example: <pre>Router(config-dial-peer)# incoming called-number 222....</pre>	Configures the incoming called number for the MCID application.
Step 8	direct-inward-dial Example: <pre>Router(config-dial-peer)# direct-inward-dial</pre>	Configures direct-inward-dial (DID) for the MCID application.

Command or Action	Purpose
<p>Step 9 <code>port slot /port:timeslot</code></p> <p>Example:</p> <pre>Router(config-dial-peer)# port 3/0:23</pre>	<p>Configures the port for the MCID application.</p> <p>Note The syntax of the port command is platform-specific. For information on the specific syntax for your platform, see the <i>Cisco IOS Voice Command Reference</i>.</p>
<p>Step 10 <code>exit</code></p> <p>Example:</p> <pre>Router(config-dial-peer)# exit</pre>	<p>Exits to global configuration mode.</p>

Configuration Examples for MCID for Cisco IOS Voice Gateways

- [Configuring MCID on Cisco 2801 Example, page 10](#)
- [Configuring MCID on Cisco 3745 Example, page 12](#)

Configuring MCID on Cisco 2801 Example

The following example is for Cisco IOS Release 12.3(14)T:

```
Current configuration : 1695 bytes
!
version 12.3
no service timestamps debug uptime
no service timestamps log uptime
no service password-encryption
!
hostname router_2801
!
boot-start-marker
boot-end-marker
!
logging buffered 40960 debugging
no logging console
!
no aaa new-model
!
resource manager
!
network-clock-participate wic 2
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
ip subnet-zero
ip cef
!
!
no ip dhcp use vrf connected
!
!
```

```
no ip domain lookup
no ftp-server write-enable
isdn switch-type primary-net5
!
voice-card 0
!
!
!
application
  service mcid flash:app_mcid.2.0.0.40.tcl
  param mcid-release-timer 10
  param retry-count 3
!
!
controller T1 0/2/0
  framing esf
  clock source internal
  linecode b8zs
  pri-group timeslots 1-24
!
controller T1 0/2/1
  framing esf
  linecode b8zs
!
!
interface FastEthernet0/0
  ip address 9.1.0.102 255.255.0.0
  duplex auto
  speed auto
  no keepalive
!
interface FastEthernet0/1
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface Serial0/2/0:23
  no ip address
  isdn switch-type primary-net5
  isdn incoming-voice voice
  isdn supp-service mcid
  isdn T-Activate 5000
  no cdp enable
!
ip classless
!
ip http server
!
disable-eadi
!
!
control-plane
!
!
voice-port 0/2/0:23
!
ccm-manager music-on-hold
!
!
dial-peer voice 500 pots
  service mcid
  destination-pattern 111111....
  incoming called-number 555555....
  direct-inward-dial
  port 0/2/0:23
  prefix 111111
!
dial-peer voice 600 voip
  destination-pattern 555555....
  session target ipv4:9.1.0.2
  incoming called-number 111111....
  playout-delay minimum low
```

```

    codec g711ulaw
    no vad
    !
    !
    line con 0
      exec-timeout 0 0
    line aux 0
    line vty 0 4
      login
    !
    end

```

Configuring MCID on Cisco 3745 Example

The following example is for Cisco IOS Release 12.3(11)T :

```

Current configuration : 1492 bytes
!
version 12.3
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname router_3745
!
!
voice-card 3
  dspfarm
!
no aaa new-model
ip subnet-zero
!
!
ip domain name cisco.com
mpls ldp logging neighbor-changes
no ftp-server write-enable
isdn switch-type primary-4ess
no scripting tcl init
no scripting tcl encdir
!
!
no voice hpi capture buffer
no voice hpi capture destination
!
!
controller T1 3/0
  framing esf
  linecode b8zs
  pri-group timeslots 1-24
!
controller T1 3/1
  framing sf
  linecode ami
!
!
interface FastEthernet0/0
  ip address 10.4.175.116 255.255.0.0
  duplex auto
  speed auto
!
interface FastEthernet0/1
  shutdown
  duplex auto
  speed auto
!
interface Serial3/0:23
  no logging event link-status
  isdn switch-type primary-net5
  isdn incoming-voice voice
  isdn supp-service mcid
  no cdp enable

```

```
!
ip default-gateway 10.4.0.1
ip classless
ip route 0.0.0.0 0.0.0.0 FastEthernet0/0
!
ip http server
!
!
control-plane
!
!
call application voice mcid flash:app_mcid.2.0.0.40.tcl
call application voice mcid mcid-release-timer 10
!
voice-port 3/0:23
!
mgcp call-agent 10.4.175.2 service-type mgcp version 0.1
!
mgcp profile default
!
!
dial-peer voice 1 pots
  application mcid
  destination-pattern 2010
  incoming called-number 2000
  direct-inward-dial
  port 3/0:23
  forward-digits all
!
dial-peer voice 2 voip
  destination-pattern 2000
  session target ipv4:10.4.175.2
!
!
line con 0
line aux 0
line vty 0 4
  login
!
end
```

Where to Go Next

- To configure conferencing, transcoding, and MTP support on a Cisco IOS gateway, see "Configuring Enhanced Conferencing and Transcoding for Voice Gateway Routers" on page 67 .
- To enable MGCP PRI backhaul support, see "Configuring MGCP PRI Backhaul and T1 CAS Support for Cisco Unified Communications Manager" on page 113 .
- To enable MGCP BRI backhaul support, see "Configuring MGCP-Controlled Backhaul of BRI Signaling in Conjunction with Cisco Unified Communications Manager" on page 129 .

Additional References

- "Malicious Call Identification" chapter in the *Cisco Unified Communications Manager Features and Services Guide* --Describes how to configure MCID in Cisco Unified Communications Manager 4.0 (formerly known as Cisco CallManager 4.0).

CCDE, CCENT, CCSI, Cisco Eos, Cisco Explorer, Cisco HealthPresence, Cisco IronPort, the Cisco logo, Cisco Nurse Connect, Cisco Pulse, Cisco SensorBase, Cisco StackPower, Cisco StadiumVision, Cisco TelePresence, Cisco TrustSec, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flipshare (Design), Flip Ultra, Flip Video, Flip Video (Design), Instant Broadband,

and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Capital, Cisco Capital (Design), Cisco:Financed (Stylized), Cisco Store, Flip Gift Card, and One Million Acts of Green are service marks; and Access Registrar, Aironet, AllTouch, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Lumin, Cisco Nexus, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, Continuum, EtherFast, EtherSwitch, Event Center, Explorer, Follow Me Browsing, GainMaker, iLYNX, IOS, iPhone, IronPort, the IronPort logo, Laser Link, LightStream, Linksys, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, PCNow, PIX, PowerKEY, PowerPanels, PowerTV, PowerTV (Design), PowerVu, Prisma, ProConnect, ROSA, SenderBase, SMARTnet, Spectrum Expert, StackWise, WebEx, and the WebEx logo are registered trademarks of Cisco and/or its affiliates in the United States and certain other countries.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2011 Cisco Systems, Inc. All rights reserved.

© 2011 Cisco Systems, Inc. All rights reserved.