



Rotating Through Dial Strings

Feature History

Release	Modification
12.2(8)T	This feature was introduced.

This document describes the Rotating Through Dial Strings feature in Cisco IOS Release 12.2(8)T and includes the following sections:

- [Feature Overview, page 1](#)
- [Supported Platforms, page 2](#)
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- [Prerequisites, page 3](#)
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Feature Overview

The Cisco IOS software allows multiple dial strings (telephone numbers) to be configured for outgoing calls. In previous releases of the Cisco IOS software, the dial string used for a particular outgoing call was always the first telephone number in the dial string list. It was not possible to customize the selection or otherwise participate in deciding which dial string should be used first. But in Cisco IOS Release 12.2(8)T, the Rotating Through Dial Strings feature allows the order in which dial strings should be dialed to be specified.

Benefits

The Rotating Through Dial Strings feature allows you to specify the dialing order when multiple dial strings are configured. Options for dialing order are as follows:

- Sequential—Dial using the first dial string configured in a list of multiple strings.
- Round-robin—Dial using the dial string *following* the most recently successful dial string.
- Last successful call—Dial using the most recently successful dial string.

This feature takes advantage of information available from a previous call attempt, such as the call was unsuccessful or the line was busy, and thereby increases the rate of successful calls.

Related Documents

Additional information about configuring networks that can take advantage of the Rotating Through Dial Strings feature can be found in the [Cisco IOS Dial Technologies Configuration Guide](#), Release 12.2. Refer to the chapter “Configuring Peer-to-Peer DDR with Dialer Profiles” in the part “Dial-on-Demand Routing Configuration.” In the same manual, also refer to the chapter “Configuring ISDN Caller ID Callback,” in the part “Callback and Bandwidth Allocation Configuration.”

Supported Platforms

- Cisco 1400 series
- Cisco 1600 series
- Cisco 1710
- Cisco 1720
- Cisco 1721
- Cisco 1750
- Cisco 1751
- Cisco 2400 series
- Cisco 2600 series
- Cisco 3620
- Cisco 3631
- Cisco 3640
- Cisco 3660
- Cisco 3725
- Cisco 3745
- Cisco 7100
- Cisco 7200
- Cisco 7500
- Cisco 7700
- Cisco 800 series
- Cisco 805
- Cisco 806
- Cisco 828
- Cisco MC3810
- Universal Route Module (URM)
- ubr7200

Determining Platform Support Through Feature Navigator

Cisco IOS software is packaged in feature sets that support specific platforms. To get updated information regarding platform support for this feature, access Feature Navigator. Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Feature Navigator is a web-based tool that enables you to quickly determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image.

To access Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions at <http://www.cisco.com/register>.

Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Feature Navigator home page at the following URL:

<http://www.cisco.com/go/fn>

Supported Standards, MIBs, and RFCs

Standards

None

MIBs

None

To obtain lists of supported MIBs by platform and Cisco IOS release, and to download MIB modules, go to the Cisco MIB website on Cisco.com at the following URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

RFCs

None

Prerequisites

The Rotating Through Dial Strings feature is used in configurations that apply to both legacy dialers and dialer profiles. The dialing order you configure applies to dial strings configured on an interface by the **dialer string** and **dialer map** configuration commands. See the documents listed in the “[Related Documents](#)” section for more information about using these commands to configure dial strings.

Configuration Tasks

See the following sections for the configuration tasks for this feature. Each task in the list is identified as either required or optional.

- [Configuring the Order of Dial Strings](#) (required)
- [Verifying Dial String Order](#) (optional)

Configuring the Order of Dial Strings

To specify the order in which dial strings should be dialed, use the following command in interface configuration mode:

Command	Purpose
Router(config-if)# dialer order [sequential round-robin last-successful]	<p>Specifies the dialing order when multiple dial strings are configured. Use one of the following optional keywords:</p> <ul style="list-style-type: none"> • sequential—Starts dialing the first dial string configured in a list of multiple strings. • round-robin—Starts dialing using the dial string that occurs after the most recently successful dial string. • last-successful—Starts dialing using the most recently successful dial string.

The **dialer order** command keywords can be configured on a per-interface basis. You can use this command in interface configurations that apply to both legacy dialers and dialer profiles. See the [“Configuration Examples”](#) section to see how this command is used with both these dialer types.

Verifying Dial String Order

To verify that the dial string order is configured correctly, perform the following step:

- Step 1** To check the dial string order configuration, enter the **show running-config interface** command with the appropriate interface type at the privileged EXEC prompt:

```
Router# show running-config interface dialer 1
Building configuration...
```

```
Current configuration : 96 bytes
!
interface Dialer1
 no ip address
 dialer pool 1
 dialer order round-robin
 no cdp enable
end
```

Check that a **dialer order** command is listed in the configuration displayed. If no **dialer order** command is listed, that indicates the default sequential dial string order is configured.

- Step 2** To see a report of the call types, telephone numbers, and call duration, enter the **show isdn history** command at the privileged EXEC prompt:

```
Router# show isdn history
```

Troubleshooting Tips

To troubleshoot the Rotating Through Dial Strings feature, use the **debug dialer** command in privileged EXEC mode.

Monitoring and Maintaining the Rotating Through Dial Strings Feature

To monitor and maintain the Rotating Through Dial Strings feature, use the EXEC commands included in the steps in the [“Verifying Dial String Order”](#) section.

Configuration Examples

This section provides the following configuration examples:

- Legacy Dialer with Multiple Dial Strings Example
- Dialer Profile Configuration with Multiple Dial Strings Example

Legacy Dialer with Multiple Dial Strings Example

The following example configures the dialing software to try the telephone number (dial string) of the last successful call when starting a new call, rather than the first telephone number in the list:

```
interface Serial0/0
 ip address 10.2.1.130 255.255.255.0
 encapsulation ppp
 dialer in-band
 dialer map ip 10.2.1.131 name jones1 modem-script test 5554004
 dialer map ip 10.2.1.131 name jones1 modem-script test 5554005
 dialer map ip 10.2.1.131 name jones1 modem-script test 5554006
 dialer-group 1
 dialer order last-successful
```

Dialer Profile Configuration with Multiple Dial Strings Example

The following example configures the dialing software to try the telephone number following the most recently used telephone number (dial string) when starting a new call, rather than the first telephone number in the list:

```
interface Dialer0
 ip address 10.1.1.130 255.255.255.0
 encapsulation ppp
 dialer pool 1
 dialer string 1904
 dialer string 1905
 dialer-group 1
 dialer order round-robin
```

Command Reference

This section documents the new **dialer order** command. All other commands used with this feature are documented in the Cisco IOS Release 12.2 command reference publications.

dialer order

To specify the dialing order when multiple dial strings are configured, use the **dialer order** command in interface configuration mode. To change or remove the dialing order, use the **no** form of this command.

dialer order [sequential | round-robin | last-successful]

no dialer order [sequential | round-robin | last-successful]

Syntax Description

sequential	(Optional) Always starts dialing the first dial string configured in a list of multiple strings, and continues to the next dial string when a call fails. This keyword allows dial string order to be prioritized, and is the default.
round-robin	(Optional) Always starts dialing using the dial string that follows the most recently used dial string. If no calls have previously been made, the dialer uses the first dial string. When a call fails, the dialer tries the next dial string until all dial strings have been tried. This keyword allows calls to be shared equally among the configured dial strings. However, if the dial strings are associated with multiple ISDN B channels on the same remote device, a call may be placed to bring up a second B channel without trying to call the number associated with the first B channel.
last-successful	(Optional) Always starts dialing using the most recently successful dial string, and continues to the next dial string in a list when a call fails. This keyword reduces the time needed to find a dial string that successfully completes a call when the dial strings are not likely to be equally successful.

Defaults

Dial order is sequential.

Command Modes

Interface configuration

Command History

Release	Modification
12.2(8)T	This command was introduced.

Usage Guidelines

The **dialer order** command keywords can be configured on a per-interface basis. The configuration rules are as follows:

- The keyword you configure applies to dial strings configured on an interface by the **dialer map** and **dialer string** configuration commands.
- The keyword you configure for a dialer interface is effective for all destinations defined by that interface.

You can use the **dialer order** command in configurations that apply to both legacy dialers and dialer profiles. The command is also compatible with the following dialer features and protocols:

- Dialer redial
- Dialer Watch feature
- Dialer Persistent feature
- Bandwidth Allocation Protocol (BACP)
- Bandwidth on demand
- Multilink PPP

Examples

The following legacy dialer configuration shows how to set the dialing software to try the telephone number of the last successful call when starting a new call, rather than the first telephone number in the list (555-4004):

```
interface Serial0/0
 ip address 10.2.1.130 255.255.255.0
 encapsulation ppp
 dialer in-band
 dialer map ip 10.2.1.131 name jones1 modem-script scr-3 5554004
 dialer map ip 10.2.1.131 name jones1 modem-script scr-3 5554005
 dialer map ip 10.2.1.131 name jones1 modem-script scr-3 5554006
 dialer-group 1
 dialer order last-successful
```

If in a previous attempt to dial network 10.2.1.131 the telephone number 555-4006 was successful, because the dial order is set to **last-successful**, the next attempt to dial network 10.2.1.131 will start again with the 555-4006 telephone number.

The following dialer profile configuration shows how to set the dialing software to try the telephone number that occurs after the most recently used dial string when starting a new call, rather than the first telephone number in the list (1904):

```
interface Dialer0
 ip address 10.1.1.130 255.255.255.0
 encapsulation ppp
 dialer pool 1
 dialer string 1904
 dialer string 1905
 dialer string 1906
 dialer string 1907
 dialer-group 1
 dialer order round-robin
```

If in a previous attempt to dial network 10.1.1.130 the telephone number 1906 was successful, because the dial order is set to **round-robin**, the next attempt to dial network 10.1.1.130 will start with the 1907 telephone number.

Related Commands

Command	Description
dialer map	Configures a serial interface or ISDN interface to call one or multiple sites, or to receive calls from multiple sites.
dialer string	Specifies the string (telephone number) to be used when placing a call from an interface.