

Telemetry Command Reference

This command reference is applicable to the following switches and software versions:

H3C S5560S-EI switch series (Release 6309P01 and later)

H3C S5560S-SI switch series (Release 6310 and later)

H3C S5500V3-SI switch series (Release 6310 and later)

H3C MS4520V2 switch series (MS4520V2-28S and MS4520V2-24TP switches) (Release 6310 and later)

H3C WS5850-WiNet switch series (Release 6308P01 and later)

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Preface

This command reference describes gRPC configuration commands.

This preface includes the following topics about the documentation:

- [Audience](#)
- [Conventions](#)
- [Documentation feedback](#)

Audience

This documentation is intended for:

- Network planners.
- Field technical support and servicing engineers.
- Network administrators.

Conventions

The following information describes the conventions used in the documentation.

Command conventions

Convention	Description
Boldface	Bold text represents commands and keywords that you enter literally as shown.
<i>Italic</i>	<i>Italic</i> text represents arguments that you replace with actual values.
[]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x y ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x y ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x y ... }*	Asterisk marked braces enclose a set of required syntax choices separated by vertical bars, from which you select a minimum of one.
[x y ...]*	Asterisk marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in Boldface. For example, the New User window opens; click OK .
>	Multi-level menus are separated by angle brackets. For example, File > Create > Folder .

Symbols

Convention	Description
 WARNING!	An alert that calls attention to important information that if not understood or followed can result in personal injury.
 CAUTION:	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
 IMPORTANT:	An alert that calls attention to essential information.
NOTE:	An alert that contains additional or supplementary information.
 TIP:	An alert that provides helpful information.

Network topology icons

Convention	Description
	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.
	Represents an access controller, a unified wired-WLAN module, or the access controller engine on a unified wired-WLAN switch.
	Represents an access point.
	Represents a wireless terminator unit.
	Represents a wireless terminator.
	Represents a mesh access point.
	Represents omnidirectional signals.
	Represents directional signals.
	Represents a security product, such as a firewall, UTM, multiservice security gateway, or load balancing device.
	Represents a security module, such as a firewall, load balancing, NetStream, SSL VPN, IPS, or ACG module.

Examples provided in this document

Examples in this document might use devices that differ from your device in hardware model, configuration, or software version. It is normal that the port numbers, sample output, screenshots, and other information in the examples differ from what you have on your device.

Documentation feedback

You can e-mail your comments about product documentation to info@h3c.com.

We appreciate your comments.

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gRPC commands

gRPC dial-in mode commands

display grpc

Use `display grpc` to display gRPC dial-in mode information.

Syntax

```
display grpc
```

Views

Any view

Predefined user roles

network-admin
network-operator

Examples

```
# Display gRPC dial-in mode information.
```

```
<Sysname> display grpc
gRPC status : enabled.
gRPC port : 50051
gRPC idle-timeout : 3 minutes
Session count: 1.
  Session ID: 1
    User name: test
    Login time:2018-01-05 06:46:43 Idle time : 2 mins 56 s
    Client IP address : 169.254.100.170:40810
    Received RPCs      : 0          Received error RPCs : 0
    Received subscription: 0      Output notifications: 0
```

Table 1 Command output

Field	Description
gRPC status	Status of the gRPC service: <ul style="list-style-type: none">• enabled—The gRPC service is enabled.• disabled—The gRPC service is disabled.
gRPC idle-timeout	Setting for the gRPC session idle timeout timer.
Session count	Number of gRPC sessions.
Idle time	Duration in which the session idle timeout timer will expire. If the value of this field is 0, gRPC sessions will never be timed out.
Received error RPCs	Number of received erroneous gRPC requests.
Received subscription	Number of received gRPC subscription requests.

grpc enable

Use `grpc enable` to enable the gRPC service.

Use `undo grpc enable` to disable the gRPC service.

Syntax

```
grpc enable
undo grpc enable
```

Default

The gRPC service is disabled.

Views

System view

Predefined user roles

network-admin

Usage guidelines

If this command fails, use the `display tcp` or `display ipv6 tcp` command to verify whether the gRPC service port number has been used by another feature. If yes, specify a free port as the gRPC service port number and try to enable the gRPC service again.

Examples

```
# Enable the gRPC service.
<Sysname> system
[Sysname] grpc enable
```

Related commands

```
display ipv6 tcp (Layer 3—IP Services Command Reference)
display tcp (Layer 3—IP Services Command Reference)
grpc port
```

grpc idle-timeout

Use `grpc idle-timeout` to set the gRPC session idle timeout timer.

Use `undo grpc idle-timeout` to restore the default.

Syntax

```
grpc idle-timeout minutes
undo grpc idle-timeout
```

Default

The gRPC session idle timeout timer is 5 minutes.

Views

System view

Predefined user roles

network-admin

Parameters

minutes: Specifies the gRPC session idle timeout timer in minutes, in the range of 0 to 30. To disable gRPC sessions from being timed out, set it to 0.

Usage guidelines

If no gRPC packet exchanges occur on the session between a gRPC and the server before the idle timeout timer expires, the device closes the session.

Examples

```
# Set the gRPC session idle timeout timer to 6 minutes.
<Sysname> system
[Sysname] grpc idle-timeout 6
```

grpc port

Use **grpc port** to specify the gRPC service port number.

Use **undo grpc port** to restore the default.

Syntax

```
grpc port port-number
undo grpc port
```

Default

The gRPC service port number is 50051.

Views

System view

Predefined user roles

network-admin

Parameters

port-number: Specifies the gRPC service port number, in the range of 1 to 65535.

Usage guidelines

Changing the gRPC service port number reboots the gRPC service and terminates all gRPC sessions to the gRPC server. The gRPC clients must re-initiate the sessions.

If you execute this command multiple times, the most recent configuration takes effect.

Examples

```
# Set the gRPC service port number to 50052.
<Sysname> system
[Sysname] grpc port 50052
```

Related commands

```
grpc enable
```

gRPC dial-out mode commands

destination-group (subscription view)

Use **destination-group** to specify a destination group for a subscription.

Use **undo destination-group** to remove a destination group from a subscription.

Syntax

destination-group *group-name*

undo destination-group *group-name*

Default

A subscription does not have a destination group.

Views

Subscription view

Predefined user roles

network-admin

Parameters

group-name: Specifies a destination group by its name, a case-sensitive string of 1 to 31 characters.

Usage guidelines

A subscription binds sensor groups to destination groups. Then, the device pushes data from the specified sensors to the collectors.

The specified destination group must have been created by using the **destination-group** command in telemetry view.

You can specify a maximum of five destination groups for a subscription.

Examples

```
# Specify destination group collector1 for subscription A.
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] subscription A
[Sysname-telemetry-subscription-A] destination-group collector1
```

Related commands

destination-group (telemetry view)

destination-group (telemetry view)

Use **destination-group** to create a destination group and enter its view, or enter the view of an existing destination group.

Use **undo destination-group** to delete a destination group.

Syntax

destination-group *group-name*

undo destination-group *group-name*

Default

No destination groups exist.

Views

Telemetry view

Predefined user roles

network-admin

Parameters

group-name: Specifies the destination group name, a case-sensitive string of 1 to 31 characters.

Usage guidelines

As a best practice, configure a maximum of five destination groups. Configuring too many destination groups might degrade the system performance.

To delete a destination group that is already used by a subscription, you must remove the destination group from the subscription first.

Examples

```
# Create a destination group named collector1.
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] destination-group collector1
[Sysname-telemetry-destination-group-collector1]
```

Related commands

destination-group (subscription view)
subscription

ipv4-address

Use **ipv4-address** to add an IPv4 collector to a destination group.

Use **undo ipv4-address** to remove an IPv4 collector from a destination group.

Syntax

```
ipv4-address ipv4-address [ port port-number ] [ vpn-instance vpn-instance-name ]
undo ipv4-address ipv4-address [ port port-number ] [ vpn-instance vpn-instance-name ]
```

Default

A destination group does not have IPv4 collectors.

Views

Destination group view

Predefined user roles

network-admin

Parameters

ipv4-address: Specifies the IPv4 address of the collector.

port *port-number*: Specifies the listening port of the collector, in the range of 1 to 65535. The default is 50051.

vpn-instance *vpn-instance-name*: Specifies the VPN instance to which the collector belongs. The *vpn-instance-name* argument represents the VPN instance name, a case-sensitive string of 1 to 31 characters. If the collector belongs to the public network, do not specify this option.

Usage guidelines

To add multiple collectors to a destination group, execute this command multiple times.

One collector must have a different address, port, or VPN instance than the other collectors.

You can specify a maximum of five collectors for a destination group.

To modify the collector configuration for a destination group that is already used by a subscription, you must remove the destination group from the subscription first.

Examples

```
# Add a collector that uses IPv4 address 192.168.21.21 and the default port number to destination group collector1.
```

```
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] destination-group collector1
[Sysname-telemetry-destination-group-collector1] ipv4-address 192.168.21.21
```

Related commands

destination-group (subscription view)

subscription

ipv6-address

Use **ipv6-address** to add an IPv6 collector to a destination group.

Use **undo ipv6-address** to remove an IPv6 collector from a destination group.

Syntax

```
ipv6-address ipv6-address [ port port-number ] [ vpn-instance vpn-instance-name ]
```

```
undo ipv6-address ipv6-address [ port port-number ] [ vpn-instance vpn-instance-name ]
```

Default

A destination group does not have IPv6 collectors.

Views

Destination group view

Predefined user roles

network-admin

Parameters

ipv6-address: Specifies the IPv6 address of the collector.

port *port-number*: Specifies the listening port of the collector, in the range of 1 to 65535. The default is 50051.

vpn-instance *vpn-instance-name*: Specifies the VPN instance to which the collector belongs. The *vpn-instance-name* argument represents the VPN instance name, a case-sensitive string of 1 to 31 characters. If the collector belongs to the public network, do not specify this option.

Usage guidelines

To add multiple collectors to a destination group, execute this command multiple times.

One collector must have a different address, port, or VPN instance than the other collectors.

You can specify a maximum of five collectors for a destination group.

To modify the collector configuration for a destination group that is already used by a subscription, you must remove the destination group from the subscription first.

Examples

```
# Add a collector that uses IPv6 address 1::1 and the default port number to destination group collector1.
```

```
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] destination-group collector1
[Sysname-telemetry-destination-group-collector1] ipv6-address 1::1
```

Related commands

destination-group (subscription view)

subscription

sensor path

Use **sensor path** to configure a sensor path.

Use **undo sensor path** to delete a sensor path.

Syntax

```
sensor path path
```

```
undo sensor path path
```

Default

No sensor paths exist.

Views

Sensor group view

Predefined user roles

network-admin

Parameters

path: Specifies a data path. For information about the available paths, enter a question mark (?) in the position of this argument.

Usage guidelines

To configure multiple sensor paths, execute this command multiple times.

The device supports a maximum of 128 sensor paths.

If the device does not support the specified sensor path, the command displays an error message.

To modify the sensor path configuration for a sensor group that is already used by a subscription, you must remove the sensor group from the subscription first.

Examples

```
# Configure sensor path ifmgr/devicecapabilities/ for sensor group test.
```

```
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] sensor-group test
```

```
[Sysname-telemetry-sensor-group-test] sensor path ifmgr/devicecapabilities/
```

Related commands

sensor-group (subscription view)

subscription

sensor-group (subscription view)

Use **sensor-group** to specify a sensor group for a subscription.

Use **undo sensor-group** to remove a sensor group from a subscription.

Syntax

```
sensor-group group-name [ sample-interval interval ]
```

```
undo sensor-group group-name
```

Default

A subscription does not have a sensor group.

Views

Subscription view

Predefined user roles

network-admin

Parameters

group-name: Specifies a sensor group by its name, a case-sensitive string of 1 to 31 characters.

sample-interval *interval*: Specifies the data sampling interval in seconds. The value range is 1 to 86400.

Usage guidelines

Specify the **sample-interval** *interval* option for periodic sensor paths and only for periodic sensor paths.

- If you specify the option for event-triggered sensor paths, the sensor paths do not take effect.
- If you do not specify the option for periodic sensor paths, the device does not sample or push data.

The specified sensor group must have been created by using the **sensor-group** command in telemetry view.

Examples

Specify sensor group **test** for subscription **A**. Set the data sampling interval to 10 seconds.

```
<Sysname> system-view
```

```
[Sysname] telemetry
```

```
[Device-telemetry] subscription A
```

```
[Device-telemetry-subscription-A] sensor-group test sample-interval 10
```

Related commands

sensor path

sensor-group (telemetry view)

sensor-group (telemetry view)

Use **sensor-group** to create a sensor group and enter its view, or enter the view of an existing sensor group.

Use **undo sensor-group** to delete a sensor group.

Syntax

```
sensor-group group-name
```

```
undo sensor-group group-name
```

Default

No sensor groups exist.

Views

Telemetry view

Predefined user roles

network-admin

Parameters

group-name: Specifies the sensor group name, a case-sensitive string of 1 to 31 characters.

Usage guidelines

The device supports a maximum of 32 sensor groups.

To delete a sensor group that is already used by a subscription, you must remove the sensor group from the subscription first.

Examples

```
# Create a sensor group named test.
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] sensor-group test
[Sysname-telemetry-sensor-group-test]
```

Related commands

```
sensor-group (subscription view)
subscription
```

source-address

Use **source-address** to specify the source IP address for packets sent to collectors.

Use **undo source-address** to restore the default.

Syntax

```
source-address { ipv4-address | interface interface-type
interface-number | ipv6 ipv6-address }
```

```
undo source-address
```

Default

The device uses the primary IPv4 address of the output interface for the route to the collectors as the source address.

Views

Subscription view

Predefined user roles

network-admin

Parameters

ipv4-address: Specifies an IPv4 address.

interface *interface-type interface-number*: Specifies an interface by its type and number. In the current software version, you must specify a loopback interface. The device will use the interface's primary IPv4 address as the source address. If the interface does not have a primary IPv4 address, the device uses the primary IPv4 address of the output interface for the route to the collectors.

ipv6 *ipv6-address*: Specifies an IPv6 address.

Usage guidelines

If you execute this command multiple times, the most recent configuration takes effect.

Changing the source IP address for packets sent to collectors causes the device to re-establish the connection to the gRPC server.

Examples

```
# Specify the source IPv4 address of 169.254.1.1 for packets sent to collectors.
<Sysname> system-view
[Sysname] telemetry
[Sysname-telemetry] subscription A
[Sysname-telemetry-subscription-A] source-address 169.254.1.1
```

subscription

Use **subscription** to create a subscription and enter its view, or enter the view of an existing subscription.

Use **undo sensor-group** to delete a subscription.

Syntax

```
subscription subscription-name
undo subscription subscription-name
```

Default

No subscription groups exist.

Views

Telemetry view

Predefined user roles

network-admin

Parameters

subscription-name: Specifies the subscription name, a case-sensitive string of 1 to 31 characters.

Usage guidelines

The device supports a maximum of 10 subscriptions.

Examples

```
# Configure a subscription named A.  
<Sysname> system-view  
[Sysname] telemetry  
[Sysname-telemetry] subscription A  
[Sysname-telemetry-subscription-A]
```

Related commands

destination-group (subscription view)
sensor-group (subscription view)

telemetry

Use **telemetry** to enter telemetry view.

Syntax

```
telemetry
```

Views

System view

Predefined user roles

network-admin

Usage guidelines

In telemetry view, you can configure telemetry parameters.

Examples

```
# Enter telemetry view.  
<Sysname> system-view  
[Sysname] telemetry  
[Sysname-telemetry]
```