R Commands

This chapter describes the Cisco Nexus 1000V commands that begin with the letter R.

radius-server deadtime

To configure the dead-time interval for all RADIUS servers used by a device, use the **radius-server deadtime** command. To revert to the default, use the **no** form of this command.

radius-server deadtime *minutes*

no radius-server deadtime *minutes*

Syntax Description

minutes	Number of minutes for the dead-time interval. The range is from 1 to 1440 minutes.

Defaults

0 minutes

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

The dead-time interval is the number of minutes before the device checks a RADIUS server that was previously unresponsive.

Note The default idle timer value is 0 minutes. When the idle time interval is 0 minutes, periodic RADIUS server monitoring is not performed.

Examples

This example shows how to configure the global dead-time interval for all RADIUS servers to perform periodic monitoring:

```
n1000v# config t
n1000v(config)# radius-server deadtime 5
```

This example shows how to revert to the default for the global dead-time interval for all RADIUS servers and disable periodic server monitoring:

```
n1000v# config t
n1000v(config)# no radius-server deadtime 5
```

Related Commands

Command	Description
show radius-server	Displays RADIUS server information.

radius-server directed-request

To allow users to send authentication requests to a specific RADIUS server when logging in, use the **radius-server directed request** command. To revert to the default, use the **no** form of this command.

radius-server directed-request

no radius-server directed-request

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

You can specify the *username*@*vrfname*:*hostname* during login, where *vrfname* is the virutal routing and forwarding (VRF) instance to use and *hostname* is the name of a configured RADIUS server. The username is sent to the RADIUS server for authentication.

Examples

This example shows how to allow users to send authentication requests to a specific RADIUS serve when logging in:

```
n1000v# config t
n1000v(config)# radius-server directed-request
```

This example shows how to disallow users to send authentication requests to a specific RADIUS server when logging in:

```
n1000v# config t
n1000v(config)# no radius-server directed-request
```

Related Commands

Command	Description
show radius-server directed-request	Displays the directed request RADIUS server configuration.

radius-server host

To configure RADIUS server parameters, use the **radius-server host** command. To revert to the default, use the **no** form of this command.

radius-server host {*hostname* | *ipv4-address* | *ipv6-address*}
[**key** [**0** | **7**] *shared-secret* [**pac**]] [**accounting**]
[**acct-port** *port-number*] [**auth-port** *port-number*] [**authentication**] [**retransmit** *count*]
[**test** {**idle-time** *time* | **password** *password* | **username** *name*}]
[**timeout** *seconds* [**retransmit** *count*]]

no radius-server host {*hostname* | *ipv4-address* | *ipv6-address*}
[**key** [**0** | **7**] *shared-secret* [**pac**]] [**accounting**]
[**acct-port** *port-number*] [**auth-port** *port-number*] [**authentication**] [**retransmit** *count*]
[**test** {**idle-time** *time* | **password** *password* | **username** *name*}]
[**timeout** *seconds* [**retransmit** *count*]]

Syntax Description

hostname	RADIUS server Domain Name Server (DNS) name. The name is alphanumeric, case sensitive, and has a maximum of 256 characters.
ipv4-address	RADIUS server IPv4 address in the *A.B.C.D* format.
ipv6-address	RADIUS server IPv6 address in the *X:X:X::X* format.
key	(Optional) Configures the RADIUS server preshared secret key.
0	(Optional) Configures a preshared key specified in clear text to authenticate communication between the RADIUS client and server. This is the default.
7	(Optional) Configures a preshared key specified in encrypted text (indicated by 7) to authenticate communication between the RADIUS client and server.
shared-secret	Preshared key to authenticate communication between the RADIUS client and server. The preshared key can include any printable ASCII characters (white spaces are not allowed), is case sensitive, and has a maximum of 63 characters.
pac	(Optional) Enables the generation of Protected Access Credentials (PAC) on the RADIUS Cisco Access Control Server (ACS) for use with Cisco TrustSec.
accounting	(Optional) Configures accounting.
acct-port *port-number*	(Optional) Configures the RADIUS server port for accounting. The range is from 0 to 65535.
auth-port *port-number*	(Optional) Configures the RADIUS server port for authentication. The range is from 0 to 65535.
authentication	(Optional) Configures authentication.
retransmit *count*	(Optional) Configures the number of times that the device tries to connect to a RADIUS server(s) before reverting to local authentication. The range is from 1 to 5 times and the default is 1 time.
test	(Optional) Configures parameters to send test packets to the RADIUS server.
idle-time *time*	Specifies the time interval (in minutes) for monitoring the server. The range is from 1 to 1440 minutes.
password *password*	Specifies a user password in the test packets. The password is alphanumeric, case sensitive, and has a maximum of 32 characters.

username *name*	Specifies a username in the test packets. The is alphanumeric, not case sensitive, and has a maximum of 32 characters.
timeout *seconds*	Specifies the timeout (in seconds) between retransmissions to the RADIUS server. The default is 5 seconds and the range is from 1 to 60 seconds.

Defaults

Parameter	Default
Accounting port	1813
Authentication port	1812
Accounting	enabled
Authentication	enabled
Retransmission count	1
Idle-time	none
Server monitoring	disabled
Timeout	5 seconds
Test username	test
Test password	test

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

When the idle time interval is 0 minutes, periodic RADIUS server monitoring is not performed.

Examples

This example shows how to configure RADIUS server authentication and accounting parameters:

```
n1000v# config terminal
n1000v(config)# radius-server host 10.10.2.3 key HostKey
n1000v(config)# radius-server host 10.10.2.3 auth-port 2003
n1000v(config)# radius-server host 10.10.2.3 acct-port 2004
n1000v(config)# radius-server host 10.10.2.3 accounting
n1000v(config)# radius-server host radius2 key 0 abcd
n1000v(config)# radius-server host radius3 key 7 1234
n1000v(config)# radius-server host 10.10.2.3 test idle-time 10
n1000v(config)# radius-server host 10.10.2.3 test username tester
n1000v(config)# radius-server host 10.10.2.3 test password 2B9ka5
```

Related Commands

Command	Description
show radius-server	Displays RADIUS server information.

radius-server key

To configure a RADIUS shared secret key, use the **radius-server key** command. To remove a configured shared secret, use the **no** form of this command.

radius-server key [**0** | **7**] *shared-secret*

no radius-server key [**0** | **7**] *shared-secret*

Syntax Description

0	(Optional) Configures a preshared key specified in clear text to authenticate communication between the RADIUS client and server.
7	(Optional) Configures a preshared key specified in encrypted text to authenticate communication between the RADIUS client and server.
shared-secret	Preshared key used to authenticate communication between the RADIUS client and server. The preshared key can include any printable ASCII characters (white spaces are not allowed), is case sensitive, and has a maximum of 63 characters.

Defaults

Clear text

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

You must configure the RADIUS preshared key to authenticate the switch on the RADIUS server. The length of the key is restricted to 63 characters and can include any printable ASCII characters (white spaces are not allowed). You can configure a global key to be used for all RADIUS server configurations on the switch. You can override this global key assignment for an individual host by using the **key** keyword in the **radius-server host** command.

Examples

This example shows how to provide various scenarios to configure RADIUS authentication:

```
n1000v# config terminal
n1000v(config)# radius-server key AnyWord
n1000v(config)# radius-server key 0 AnyWord
n1000v(config)# radius-server key 7 public pac
```

Related Commands

Command	Description
show radius-server	Displays RADIUS server information.

radius-server retransmit

To specify the number of times that the device should try a request with a RADIUS server, use the **radius-server retransmit** command. To revert to the default, use the **no** form of this command.

radius-server retransmit *count*

no radius-server retransmit *count*

Syntax Description

count	Number of times that the device tries to connect to a RADIUS server(s) before reverting to local authentication. The range is from 1 to 5 times.

Defaults

1 retransmission

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Examples

This example shows how to configure the number of retransmissions to RADIUS servers:

```
n1000v# config t
n1000v(config)# radius-server retransmit 3
```

This example shows how to revert to the default number of retransmissions to RADIUS servers:

```
n1000v# config t
n1000v(config)# no radius-server retransmit 3
```

Related Commands

Command	Description
show radius-server	Displays RADIUS server information.

radius-server timeout

To specify the time between retransmissions to the RADIUS servers, use the **radius-server timeout** command. To revert to the default, use the **no** form of this command.

radius-server timeout *seconds*

no radius-server timeout *seconds*

Syntax Description

seconds	Number of seconds between retransmissions to the RADIUS server. The range is from 1 to 60 seconds.

Defaults

5 seconds

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Examples

This example shows how to configure the timeout interval:

```
n1000v# config t
n1000v(config)# radius-server timeout 30
```

This example shows how to revert to the default interval:

```
n1000v# config t
n1000v(config)# no radius-server timeout 30
```

Related Commands

Command	Description
show radius-server	Displays RADIUS server information.

rate-mode dedicated

To set the dedicated rate mode for the specified ports, use the **rate-mode dedicated** command.

rate-mode dedicated

no rate-mode

Syntax Description

This command has no arguments or keywords.

Command Default

Shared rate mode is the default.

Command Modes

Interface Configuration (config-if)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Use the **rate-mode dedicated** command to set the dedicated rate mode for the specified ports.

On a 32-port 10-Gigabit Ethernet module, each set of four ports can handle 10 gigabits per second (Gb/s) of bandwidth. You can use the rate-mode parameter to dedicate that bandwidth to the first port in the set of four ports or share the bandwidth across all four ports.

Note When you dedicate the bandwidth to one port, you must first administratively shut down the ports in the group, change the rate mode to dedicated, and then bring the dedicated port administratively up.

Table 1-1 identifies the ports that are grouped together to share each 10 Gb/s of bandwidth and which port in the group can be dedicated to utilize the entire bandwidth.

Table 1-1 Dedicated and Shared Ports

Ports Groups that Can Share Bandwidth	Ports that Can be Dedicated to Each 10-Gigabit Ethernet of Bandwidth
1, 3, 5, 7	1
2, 4, 6, 8	2
9, 11, 13, 15	9
10, 12, 14, 16	10

Table 1-1 Dedicated and Shared Ports

Ports Groups that Can Share Bandwidth	Ports that Can be Dedicated to Each 10-Gigabit Ethernet of Bandwidth
17, 19, 21, 23	17
18, 20, 22, 24	18
25, 27, 29, 31	25
26, 28, 30, 32	26

When you enter the **rate-mode dedicated** command, the full bandwidth of 10 Gb is dedicated to one port. When you dedicate the bandwidth, all subsequent commands for the port are for dedicated mode.

Examples

This example shows how to configure the dedicated rate mode for Ethernet ports 4/17, 4/19, 4/21, and 4/23:

```
n1000v# config t
n1000v(config)# interface ethernet 4/17, ethernet 4/19, ethernet 4/21, ethernet 4/23
n1000v(config-if)# shutdown
n1000v(config-if)# interface ethernet 4/17
n1000v(config-if)# rate-mode dedicated
n1000v(config-if)# no shutdown
n1000v(config-if)#
```

Related Commands

Command	Description
show interface	Displays interface information, which includes the current rate mode dedicated.

record

To configure a flow record, use the **record** command. To remove the flow record configuration, use the **no** form of the command.

record {*name* | **netflow ipv4** {**original-input** | **original-output** | **protocol-port**} | **netflow-original**}

no record {*name* | **netflow ipv4** {**original-input** | **original-output** | **protocol-port**} | **netflow-original**}

Syntax Description

name	Specifies the name of a new flow record.
netflow ipv4	Specifies a predefined flow record that uses traditional IPv4 NetFlow collection schemes.
original-input	Specifies a predefined flow record that uses traditional IPv4 input NetFlow.
original-output	Specifies a predefined flow record that uses traditional IPv4 output NetFlow.
protocol-port	Specifies the flow record that uses the protocol and ports aggregation scheme for the record.
netflow-original	Specifies a flow record that uses traditional IPv4 input NetFlow with origin ASs.

Defaults

None

Command Modes

Flow monitor (config-flow-monitor)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

A flow record defines the information that NetFlow gathers, such as packets in the flow and the types of counters gathered per flow. You can define new flow records or use the pre-defined flow record.

Examples

This example shows how to configure a flow record to use a the predefined traditional IPv4 input NetFlow record:

```
n1000v# config t
n1000v(config)# flow monitor testmon
n1000v(config-flow-monitor)# record netflow ipv4 original-input
n1000v(config-flow-monitor)#
```

This example shows how to remove the predefined traditional IPv4 input NetFlow flow record configuration:

```
n1000v# config t
n1000v(config)# flow monitor testmon
n1000v(config-flow-monitor)# no record netflow ipv4 original-input
n1000v(config-flow-monitor)#
```

Related Commands

Command	Description
show flow monitor	Displays NetFlow monitor configuration information.
show flow record	Displays NetFlow record configuration information.

reload module

To reload a module in the device, use the **reload module** command.

reload module *slot* [**force-dnld**]

Syntax Description

slot	Chassis slot number.
force-dnld	(Optional) Forces the download of software to the module.

Defaults

None

Command Modes

Any

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Use the **show hardware** command to display information about the hardware on your device.

Examples

This example shows how to reload a module:

```
n1000v# reload module 2
```

Related Commands

Command	Description
show version	Displays information about the software version.

remote

To connect to remote machines, use the **remote** command. To disconnect, use the **no** form of this command.

remote {**ip address** *address* | **hostname** *name*}

no remote {**ip address** *address* | **hostname** *name*}

Syntax Description

ipaddress	Specifies an IP address.
address	IPv4 address. The format is A.B.C.D.
hostname	Specifies the remote host name.
name	Host name. The range of valid values is 1 to 128.

Defaults

None

Command Modes

SVS connection configuration (config-svs-conn)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to connect to a remote machine:

```
n1000v# configure terminal
n1000v(config)# svs connection svsconn1
n1000v(config-svs-conn)# remote hostname server1
n1000v(config-svs-conn)#
```

Related Commands

Command	Description
show svs	Displays SVS information.

resequence

To resequence an ACL, use the **resequence** command.

resequence {**ip** *name start-number increment* | **mac** *name start-number increment* }

Syntax Description

ip	Specifies the IP address.
access-list	Specifies the access list.
name	Name of the list.
start-number	Starting sequence number.
increment	Step increment.

Defaults

None

Command Modes

Global Configuration (config)

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to MAC ACL:

```
n1000v# configure terminal
n1000v(config)# resequence mac access-list aclOne 1 2
n1000v(config)#
```

Related Commands

Command	Description
show acl	Displays ACLs.

rmdir

To remove a directory, use the **rmdir** command.

rmdir [*filesystem*:[*//module/*]]*directory*

Syntax Description

filesystem:	(Optional) Name of a file system. The name is case sensitive.
//module/	(Optional) Identifier for a supervisor module. Valid values are **sup-active**, **sup-local**, **sup-remote**, or **sup-standby**. The identifiers are case sensitive.
directory	Name of a directory. The name is case sensitive.

Defaults

Removes the directory from the current working directory.

Command Modes

Any

SupportedUserRoles

network-admin

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Usage Guidelines

Examples

This example shows how to remove a directory:

```
n1000v# rmdir my_files
```

Related Commands

Command	Description
cd	Changes the current working directory.
dir	Displays the directory contents.
pwd	Displays the name of the current working directory.

run-script

To run a script in bootflash: or volatile:, use the **run-script** command.

run-script {**bootflash:** | **volatile:**}*filename*

Syntax Description

bootflash:	Specifies bootflash:.
volatile:	Specifies volatile:.
filename	Name of the command file. The name is case sensitive.

Defaults

None

Command Modes

Any

SupportedUserRoles

network-admin
network-operator

Command History

Release	Modification
4.0(4)SV1(1)	This command was introduced.

Examples

This example shows how to run a script file called Sample on the volatile flash:

```
n1000v(config)# run-script volatile:Sample
n1000v(config)#
```

Related Commands

Command	Description
cd	Changes the current working directory.
copy	Copies files.
dir	Displays the directory contents.
pwd	Displays the name of the current working directory.