



AAA-SERVER-MIB Set Operation

The AAA-SERVER-MIB Set Operation feature allows you to extend and expand your ability to configure authentication, authorization, and accounting (AAA) servers using the CISCO-AAA-SERVER-MIB. Using this feature, you can do the following:

- Create and add new AAA servers.
- Modify the “KEY” under the CISCO-AAA-SERVER-MIB.
- Delete the AAA server configuration.

History for the AAA-SERVER-MIB Set Operation Feature

Release	Modification
12.4(4)T	This feature was introduced.

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.

Contents

- [Prerequisites for AAA-SERVER-MIB Set Operation, page 2](#)
- [Restrictions for AAA-SERVER-MIB Set Operation, page 2](#)
- [Information About AAA-SERVER-MIB Set Operation, page 2](#)
- [How to Configure AAA-SERVER-MIB Set Operation, page 3](#)
- [Configuration Examples for AAA-SERVER-MIB Set Operation, page 3](#)
- [Additional References, page 5](#)



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

Copyright © 2005 Cisco Systems, Inc. All rights reserved.

Prerequisites for AAA-SERVER-MIB Set Operation

AAA must have been enabled on the router, that is, the **aaa new-model** command must have been configured. If this configuration has not been accomplished, the set operation fails.

Restrictions for AAA-SERVER-MIB Set Operation

Currently, the CISCO SNMP set operation is supported only for the RADIUS protocol. Therefore, only RADIUS servers in global configuration mode can be added, modified, or deleted.

Information About AAA-SERVER-MIB Set Operation

Before using the AAA-SERVER-MIB Set Operation feature, you should understand the following concepts:

- [CISCO-AAA-SERVER-MIB, page 2](#)
- [CISCO-AAA-SERVER-MIB Set Operation, page 2](#)

CISCO-AAA-SERVER-MIB

The CISCO-AAA-SERVER-MIB provides that statistics reflect both the state of the AAA server operation with the server itself and of AAA communications with external servers. The CISCO-AAA-SERVER-MIB provides the following information:

- Statistics for each AAA operation
- Status of servers that are providing AAA functions
- Identities of external AAA servers

CISCO-AAA-SERVER-MIB Set Operation

Before Cisco IOS Release 12.4(4)T, the CISCO-AAA-SERVER-MIB supported only the “get” operation. Effective with this release, the CISCO-AAA-SERVER-MIB supports the set operation. With the set operation, you can do the following:

- Create or add a new AAA server.
- Modify the KEY under the CISCO-AAA-SERVER-MIB. This “secret key” is used for secure connectivity to the AAA server, which is present with the network access server (NAS) and the AAA server.
- Delete the AAA server configuration.

How to Configure AAA-SERVER-MIB Set Operation

No special configuration is required for this feature. The Simple Network Management Protocol (SNMP) framework can be used to manage MIBs. See the section “[Additional References](#)” for a reference to configuring SNMP.

SNMP values can be verified by performing the following steps.

SUMMARY STEPS

1. **enable**
2. **show running-config | include radius-server host**
3. **show aaa servers**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	show running-config include radius-server host Example: Router# show running-config include radius-server host	Displays all the RADIUS servers that are configured in the global configuration mode.
Step 3	show aaa servers Example: Router# show aaa servers	Displays information about the number of requests sent to and received from authentication, authorization, and accounting (AAA) servers.

Configuration Examples for AAA-SERVER-MIB Set Operation

This section includes the following example:

- [RADIUS Server Configuration and Server Statistics: Example, page 3](#)

RADIUS Server Configuration and Server Statistics: Example

The following output example shows the RADIUS server configuration and server statistics before and after the set operation.

Before the Set Operation

```
Router# show running-config | include radius-server host
```

```
! The following line is for server 1.
radius-server host 172.19.192.238 auth-port 2095 acct-port 2096 key cisco2
! The following line is for server 2.
radius-server host 172.19.192.238 auth-port 1645 acct-port 1646
```

Server Statistics

```
Router# show aaa servers
```

```
RADIUS: id 2, priority 1, host 172.19.192.238, auth-port 2095, acct-port 2096
State: current UP, duration 25s, previous duration 0s
      Dead: total time 0s, count 7
Authen: request 8, timeouts 8
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 2
Author: request 0, timeouts 0
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 0
Account: request 0, timeouts 0
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 0
Elapsed time since counters last cleared: 5m
```

```
RADIUS: id 3, priority 2, host 172.19.192.238, auth-port 1645, acct-port 1646
State: current UP, duration 5s, previous duration 0s
      Dead: total time 0s, count 2
Authen: request 8, timeouts 8
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 4
Author: request 0, timeouts 0
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 0
Account: request 0, timeouts 0
        Response: unexpected 0, server error 0, incorrect 0, time 0ms
        Transaction: success 0, failure 0
Elapsed time since counters last cleared: 3m
```

SNMP Get Operation to Check the Configuration and Statistics of the RADIUS Servers

```
aaa-server5:/users/smetri> getmany 10.0.1.42 casConfigTable
casAddress.2.2 = 172.19.192.238
casAddress.2.3 = 172.19.192.238
casAuthenPort.2.2 = 2095
casAuthenPort.2.3 = 1645
casAcctPort.2.2 = 2096
casAcctPort.2.3 = 1646
casKey.2.2 =
casKey.2.3 =
! The following line shows priority for server 1.
casPriority.2.2 = 1
! The following line shows priority for server 2.
casPriority.2.3 = 2
casConfigRowStatus.2.2 = active(1)
casConfigRowStatus.2.3 = active(1)
aaa-server5:/users/smetri>
```

SNMP Set Operation

The key of the existing RADIUS server is being changed. The index “1” is being used. That index acts as a wildcard for addition, deletion, or modification of any entries.

Change the key for server 1:=>

```
aaa-server5:/users/smetri> setany -v2c 10.0.1.42 public casAddress.2.1 -a 172.19.192.238
casAuthenPort.2.1 -i 2095 casAcctPort.2.1 -i 2096 casKey.2.1 -o king
casAddress.2.1 = 172.19.192.238
casAuthenPort.2.1 = 2095
casAcctPort.2.1 = 2096
casKey.2.1 = king
aaa-server5:/users/smetri>
```

After the Set Operation

After the above SNMP set operation, the configurations on the router change. The following output shows the output after the set operation.

```
Router# show running-config | include radius-server host
```

```
radius-server host 172.19.192.238 auth-port 1645 acct-port 1646
! The following line shows a change in the key value to "king."
radius-server host 172.19.192.238 auth-port 2095 acct-port 2096 key king
```

```
Router# show aaa servers
```

```
RADIUS: id 3, priority 1, host 172.19.192.238, auth-port 1645, acct-port 1646
State: current UP, duration 189s, previous duration 0s
  Dead: total time 0s, count 2
Authen: request 8, timeouts 8
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
  Transaction: success 0, failure 4
Author: request 0, timeouts 0
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
  Transaction: success 0, failure 0
Account: request 0, timeouts 0
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
  Transaction: success 0, failure 0
Elapsed time since counters last cleared: 6m

! The following line shows a new server with new statistics.
RADIUS: id 4, priority 2, host 172.19.192.238, auth-port 2095, acct-port 2096
State: current UP, duration 209s, previous duration 0s
  Dead: total time 0s, count 7
Authen: request 0, timeouts 0
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
  Transaction: success 0, failure 0
Author: request 0, timeouts 0
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
  Transaction: success 0, failure 0
Account: request 0, timeouts 0
  Response: unexpected 0, server error 0, incorrect 0, time 0ms
```

Additional References

The following sections provide references related to the AAA-SERVER-MIB Set Operation feature.

Related Documents

Related Topic	Document Title
Cisco IOS commands, including show commands	Cisco IOS Master Commands List , Release 12.4
Configuring SNMP	The chapter “ Configuring SNMP Support ” in the <i>Cisco IOS Network Management Configuration Guide</i> , Release 12.4.

Standards

Standard	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

MIB	MIBs Link
No new or modified MIBs are supported by this feature, and support for existing MIBs has not been modified by this feature.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFC	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/techsupport

CCVP, the Cisco logo, and Welcome to the Human Network are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, MeetingPlace, MGX, Networkers, Networking Academy, Network Registrar, PIX, ProConnect, ScriptShare, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website 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. (0711R)

Copyright © 2005 Cisco Systems, Inc. All rights reserved.

