



# AAA-SERVER-MIB Set Operation

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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.
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## 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](http://www.cisco.com/go/cfn). An account on Cisco.com is not required.

## 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.



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

## 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

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

In Cisco IOS XE Release 2.1, the CISCO-AAA-SERVER-MIB supports both the get and set operations. 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.

- [Verifying RADIUS Server Configuration and Server Statistics, page 2](#)

## Verifying RADIUS Server Configuration and Server Statistics

RADIUS server configuration and server statistics 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
<b>Step 1 enable</b>  <b>Example:</b> Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<b>Step 2 show running-config   include radius-server host</b>  <b>Example:</b> Router# show running-config   include radius-server host	Displays all the RADIUS servers that are configured in the global configuration mode.
<b>Step 3 show aaa servers</b>  <b>Example:</b> 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

- [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
Configuring SNMP	Configuring SNMP Support in the <i>Cisco IOS XE Network Management Configuration Guide</i> , Release 2
SNMP commands	<i>Cisco IOS Network Management Command Reference</i>
Security commands	<i>Cisco IOS Security Command Reference</i>
Cisco IOS XE commands	<i>Cisco IOS Master Commands List</i>

### 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
CISCO-AAA-SERVER-MIB	To locate and download MIBs for selected platforms, Cisco IOS XE software releases , and feature sets, use Cisco MIB Locator found at the following URL:  <a href="http://www.cisco.com/go/mibs">http://www.cisco.com/go/mibs</a>

**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
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

## Feature Information for AAA-SERVER-MIB Set Operation

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

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**Table 1**      **Feature Information for AAA-SERVER-MIB Set Operation**

<b>Feature Name</b>	<b>Releases</b>	<b>Feature Information</b>
AAA-SERVER-MIB Set Operation	Cisco IOS XE Release 2.1	This feature was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

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