



# RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

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The RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level feature allows configurations to be customized for different RADIUS server groups. This flexibility allows customized network access server- (NAS-) port formats to be used instead of global formats.

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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.



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## Prerequisites for RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

- You must be running a Cisco IOS image that contains the authentication, authorization, and accounting (AAA) component.

## Information About RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

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## RADIUS Attribute 5 Format Customization

Prior to Cisco IOS Release 12.3(14)T, Cisco IOS software allowed RADIUS attributes that were sent in access requests or accounting requests to be customized on a global basis. You could customize how each configurable attribute should function when communicating with a RADIUS server. Since the implementation of server groups, global attribute configurations were not flexible enough to address the different customizations that were required to support the various RADIUS servers with which a router might be interacting. For example, if you configured the **global radius-server attribute nas-port format command** option, every service on the router that interacted with a RADIUS server was used in the same way.

Effective with Cisco IOS Release 12.3(14)T, you can configure your router to support override flexibility for per-server groups. You can configure services to use specific named methods for different service types on a RADIUS server. The service types can be set to use their own respective service groups. This flexibility allows customized NAS-port formats to be used instead of the global formats.

## How to Configure RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

- [Configuring the RADIUS Attribute 5 Format on a Per-Server Group Level, page 2](#)
- [Monitoring and Maintaining RADIUS Attribute 5 Format on a Per-Server Group Level, page 4](#)

## Configuring the RADIUS Attribute 5 Format on a Per-Server Group Level

To configure your router to support the RADIUS Attribute 5 format on a per-server group level, perform the following steps.



**Note**

To use this per-server group capability, you must actively use a named method list within your services. You can configure one client to use a specific named method while other clients use the default format.

Before performing these steps, you should first configure method lists for AAA as is applicable for your situation.

**SUMMARY STEPS**

1. **enable**
2. **configure terminal**
3. **aaa group server radius *group-name***
4. **server *ip-address* [auth-port *port-number*] [acct-port *port-number*]**
5. **attribute nas-port format *format-type* [*string*]**

**DETAILED STEPS**

Command or Action	Purpose
<p><b>Step 1</b> <b>enable</b></p> <p><b>Example:</b></p> <pre>Router&gt; enable</pre>	<p>Enables privileged EXEC mode.</p> <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>
<p><b>Step 2</b> <b>configure terminal</b></p> <p><b>Example:</b></p> <pre>Router# configure terminal</pre>	<p>Enters global configuration mode.</p>
<p><b>Step 3</b> <b>aaa group server radius <i>group-name</i></b></p> <p><b>Example:</b></p> <pre>Router (config)# aaa group server radius radius1</pre>	<p>Groups different RADIUS server hosts into distinct lists and distinct methods and enters server-group configuration mode.</p>
<p><b>Step 4</b> <b>server <i>ip-address</i> [auth-port <i>port-number</i>] [acct-port <i>port-number</i>]</b></p> <p><b>Example:</b></p> <pre>Router (server-group)# server 172.101.159.172 auth-port 1645 acct-port 1646</pre>	<p>Configures the IP address of the RADIUS server for the group server.</p>

Command or Action	Purpose
<p><b>Step 5</b> <code>attribute nas-port format <i>format-type</i> [<i>string</i>]</code></p> <p><b>Example:</b></p> <pre>Router (server-group)# attribute nas-port format d</pre>	<p>Configures a service to use specific named methods for different service types.</p> <ul style="list-style-type: none"> <li>The service types can be set to use their own respective server groups.</li> </ul>

## Monitoring and Maintaining RADIUS Attribute 5 Format on a Per-Server Group Level

To monitor and maintain RADIUS Attribute 5 Format on a Per-Server Group Level, perform the following steps (the **debug** commands may be used separately):

### SUMMARY STEPS

- enable
- debug aaa sg-server selection
- debug radius

### DETAILED STEPS

Command or Action	Purpose
<p><b>Step 1</b> <code>enable</code></p> <p><b>Example:</b></p> <pre>Router&gt; enable</pre>	<p>Enables privileged EXEC mode.</p> <ul style="list-style-type: none"> <li>Enter your password if prompted.</li> </ul>
<p><b>Step 2</b> <code>debug aaa sg-server selection</code></p> <p><b>Example:</b></p> <pre>Router# debug aaa sg-server selection</pre>	<p>Displays information about why the RADIUS and TACACS+ server group system in a router is choosing a particular server.</p>
<p><b>Step 3</b> <code>debug radius</code></p> <p><b>Example:</b></p> <pre>Router# debug radius</pre>	<p>Displays information showing that a server group has been selected for a particular request.</p>

# Configuration Examples for RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

- [RADIUS Attribute 5 Format Specified on a Per-Server Level Example, page 5](#)

## RADIUS Attribute 5 Format Specified on a Per-Server Level Example

The following configuration example shows a leased-line PPP client that has chosen to send no RADIUS Attribute 5 while the default is to use format d:

```
interface Serial2/0
  no ip address
  encapsulation ppp
  ppp accounting SerialAccounting
  ppp authentication pap
  aaa accounting network default start-stop group radius
  aaa accounting network SerialAccounting start-stop group group1
  aaa group server radius group1
    server 10.101.159.172 auth-port 1645 acct-port 1646
    attribute nas-port none
  radius-server host 10.101.159.172 auth-port 1645 acct-port 1646
  radius-server attribute nas-port format d
```

## Additional References

The following sections provide references related to RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level.

### Related Documents

Related Topic	Document Title
Cisco IOS commands	<i>Cisco IOS Security Command Reference</i>
Configuring AAA and AAA method lists	<i>Cisco IOS Security Configuration Guide: Securing User Services</i> , Release 12.4T.

### Standards

Standards	Title
None	--

**MIBs**

MIBs	MIBs Link
None	To locate and download MIBs for selected platforms, Cisco IOS 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**

RFCs	Title
None	--

**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 RADIUS Attribute 5 NAS-Port Format Specified on a Per-Server Group Level

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.

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.

**Table 1**      **Feature Information for RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level**

Feature Name	Releases	Feature Information
RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level	12.3(14)T	<p>The RADIUS Attribute 5 (NAS-Port) Format Specified on a Per-Server Group Level feature allows configurations to be customized for different RADIUS server groups. This flexibility allows customized network access server- (NAS-) port formats to be used instead of global formats.</p> <p>This feature was introduced in Cisco IOS Release 12.3(14)T.</p> <p>The following commands were introduced or modified: <b>attribute nas-port format</b>.</p>

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