RADIUS Attribute 8 Framed-IP-Address in Access Requests

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The RADIUS Attribute 8 (Framed-IP-Address) in Access Requests feature makes it possible for a network access server (NAS) to provide the RADIUS server with a hint of the user IP address in advance of user authentication. An application can be run on the RADIUS server to use this hint and build a table (map) of user names and IP addresses. With the RADIUS server, service applications can begin preparing user login information to have available in advance of a successful user authentication with the RADIUS server.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and 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 module.

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. An account on Cisco.com is not required.

Prerequisites for RADIUS Attribute 8 Framed-IP-Address in Access Requests

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Sending RADIUS attribute 8 in the RADIUS access requests assumes that the login host has been configured to request its IP address from the NAS server. It also assumes that the login host has been configured to accept an IP address from the NAS.

The NAS must be configured with a pool of network addresses on the interface supporting the login hosts.

Information About RADIUS Attribute 8 Framed-IP-Address in Access Requests

When a network device dials in to a NAS that is configured for RADIUS authentication, the NAS begins the process of contacting the RADIUS server in preparation for user authentication. Typically, the IP address of the dial-in host is not communicated to the RADIUS server until after successful user authentication. Communicating the device IP address to the server in the RADIUS access request allows other applications to begin to take advantage of that information.

As the NAS is setting up communication with the RADIUS server, the NAS assigns an IP address to the dial-in host from a pool of IP addresses configured at the specific interface. The NAS sends the IP address of the dial-in host to the RADIUS server as attribute 8. At that time, the NAS sends other user information, such as the user name, to the RADIUS server.

After the RADIUS server receives the user information from the NAS, it has two options:

- If the user profile on the RADIUS server already includes attribute 8, the RADIUS server can override the IP address sent by the NAS with the IP address defined as attribute 8 in the user profile. The address defined in the user profile is returned to the NAS.
- If the user profile does not include attribute 8, the RADIUS server can accept attribute 8 from the NAS, and the same address is returned to the NAS.

The address returned by the RADIUS server is saved in memory on the NAS for the life of the session. If the NAS is configured for RADIUS accounting, the accounting start packet sent to the RADIUS server includes the same IP address as in attribute 8. All subsequent accounting packets, updates (if configured), and stop packets will also include the same IP address provided in attribute 8.

How to Configure RADIUS Attribute 8 Framed-IP-Address in Access Requests

Configuring RADIUS Attribute 8 in Access Requests

To send RADIUS attribute 8 in the access request, perform the following steps:

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **radius-server attribute 8 include-in-access-req**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable**	Enables privileged EXEC mode.
		• Enter your password if prompted.
	Example:	
	`Router> enable`	
Step 2	**configure terminal**	Enters global configuration mode.
	Example:	
	`Router# configure terminal`	
Step 3	**radius-server attribute 8 include-in-access-req**	Sends RADIUS attribute 8 in access-request packets.
	Example:	
	`Router(config)# radius-server attribute 8 include-in-access-req`	

Verifying RADIUS Attribute 8 in Access Requests

To verify that RADIUS attribute 8 is being sent in access requests, perform the following steps. Attribute 8 should be present in all PPP access requests.

SUMMARY STEPS

1. **enable**
2. **more system:running-config**
3. **debug radius**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**enable**	Enables privileged EXEC mode.
		• Enter your password if prompted.
	Example:	
	`Router> enable`	

	Command or Action	Purpose
Step 2	**more system:running-config** **Example:** Router# more system:running-config	Displays the contents of the current running configuration file. (Note that the **more system:running-config** command has replaced the **show running-config** command.)
Step 3	**debug radius** **Example:** Router# debug radius	Displays information associated with RADIUS. The output of this command shows whether attribute 8 is being sent in access requests.

Configuration Examples for RADIUS Attribute 8 Framed-IP-Address in Access Requests

- NAS Configuration That Sends the IP Address of the Dial-in Host to the RADIUS Server in the RADIUS Access Request, page 4

NAS Configuration That Sends the IP Address of the Dial-in Host to the RADIUS Server in the RADIUS Access Request

The following example shows a NAS configuration that sends the IP address of the dial-in host to the RADIUS server in the RADIUS access request. The NAS is configured for RADIUS authentication, authorization, and accounting (AAA). A pool of IP addresses (async1-pool) has been configured and applied at interface Async1.

```
aaa new-model
aaa authentication login default group radius
aaa authentication ppp default group radius
aaa authorization network default group radius
aaa accounting network default start-stop group radius
!
ip address-pool local
!
interface Async1
 peer default ip address pool async1-pool
!
ip local pool async1-pool 209.165.200.225 209.165.200.229
!
radius-server host 172.31.71.146 auth-port 1645 acct-port 1646
radius-server retransmit 3
radius-server attribute 8 include-in-access-req
radius-server key radhost<xxx>: Example
```

Additional References

The following sections provide references related to the RADIUS Attribute 8 (Framed-IP-Address) in Access Requests feature.

Related Documents

Related Topic	Document Title
Configuring authentication and configuring RADIUS	" Configuring Authentication " and "Configuring RADIUS " chapters, *Cisco Security Configuration Guide*
RFC 2138 (RADIUS)	RFC 2138 , Remote Authentication Dial In User Service (RADIUS)

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 Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. 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. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/techsupport

Feature Information for RADIUS Attribute 8 Framed-IP-Address in Access Requests

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. An account on Cisco.com is not required.

Table 1   *Feature Information for RADIUS Attribute 8 (Framed-IP-Address) in Access Requests*

Feature Name	Releases	Feature Information
RADIUS Attribute 8 (Framed-IP-Address) in Access Requests	12.2(11)T 12.2(28)SB 12.2(33)SRC	The RADIUS Attribute 8 (Framed-IP-Address) in Access Requests feature makes it possible for a network access server (NAS) to provide the RADIUS server with a hint of the user IP address in advance of user authentication. An application can be run on the RADIUS server to use this hint and build a table (map) of user names and IP addresses. With the RADIUS server, service applications can begin preparing user login information to have available in advance of a successful user authentication with the RADIUS server. The following commands were introduced or modified: **radius-server attribute 8 include-in-access-req**.