



Junos[®] OS

CLI-based Subscriber Services Feature Guide

Release

14.1



Published: 2014-04-25

Juniper Networks, Inc.
1194 North Mathilda Avenue
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

Juniper Networks, Junos, Steel-Belted Radius, NetScreen, and ScreenOS are registered trademarks of Juniper Networks, Inc. in the United States and other countries. The Juniper Networks Logo, the Junos logo, and JunosE are trademarks of Juniper Networks, Inc. All other trademarks, service marks, registered trademarks, or registered service marks are the property of their respective owners.

Juniper Networks assumes no responsibility for any inaccuracies in this document. Juniper Networks reserves the right to change, modify, transfer, or otherwise revise this publication without notice.

Junos[®] OS CLI-based Subscriber Services Feature Guide

14.1

Copyright © 2014, Juniper Networks, Inc.

All rights reserved.

The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at <http://www.juniper.net/support/eula.html>. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

Table of Contents

	About the Documentation	vii
	Documentation and Release Notes	vii
	Supported Platforms	vii
	Using the Examples in This Manual	vii
	Merging a Full Example	viii
	Merging a Snippet	viii
	Documentation Conventions	ix
	Documentation Feedback	xi
	Requesting Technical Support	xi
	Self-Help Online Tools and Resources	xi
	Opening a Case with JTAC	xii
Part 1	Overview	
Chapter 1	CLI-Based Management for Subscriber Services	3
	CLI-Activated Subscriber Services	3
	Default Subscriber Service Overview	4
	Subscriber Services with Multiple Instances Overview	5
	Subscriber Service Instances and Service Parameters	5
	CLI Deactivation of Subscriber Services with Multiple Instances	6
	Subscriber Services with Multiple Instances in RADIUS Accounting Messages	6
Part 2	Configuration	
Chapter 2	Configuration Tasks	11
	Activating and Deactivating Subscriber Services Locally with the CLI	11
	Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers	14
	Using the CLI to Globally Modify a Traffic-Control Profile Currently Applied to Multiple Subscribers	15
	Using the CLI to Modify a Traffic-Control Profile for a Specific Current Subscriber	15
	Configuring a Default Subscriber Service	16
	Deactivating a Single Instance of a Subscriber Service with Multiple Instances	17
	Deactivating All Instances of a Subscriber Service with Multiple Instances	19
	Verifying and Managing Subscriber Services with Multiple Instances	21

Chapter 3	Configuration Statements	23
	dynamic-profile (DHCP Local Server)	24
	dynamic-profile (DHCP Relay Agent)	25
	request network-access aaa subscriber add session-id	26
	request network-access aaa subscriber delete session-id	28
	request network-access aaa subscriber modify session-id	30
	service-profile (DHCP Local Server)	31
	service-profile (DHCP Relay Agent)	32
Part 3	Administration	
Chapter 4	Monitoring Commands	35
	show network-access aaa subscribers session-id	36
Part 4	Troubleshooting	
Chapter 5	Acquiring Troubleshooting Information	43
	Collecting Subscriber Access Logs Before Contacting Juniper Technical Support	43
Part 5	Index	
	Index	49

List of Tables

	About the Documentation	vii
	Table 1: Notice Icons	ix
	Table 2: Text and Syntax Conventions	ix
Part 1	Overview	
Chapter 1	CLI-Based Management for Subscriber Services	3
	Table 3: Subscriber Services and Service Parameters in RADIUS Accounting Messages	7
Part 2	Configuration	
Chapter 3	Configuration Statements	23
	Table 4: Service Activation/Deactivation Error Messages	26
	Table 5: Service Activation/Deactivation Error Messages	28
	Table 6: Service Activation/Deactivation Error Messages	30
Part 3	Administration	
Chapter 4	Monitoring Commands	35
	Table 7: show network-access aaa subscribers session-id Output Fields	36

About the Documentation

- Documentation and Release Notes on page vii
- Supported Platforms on page vii
- Using the Examples in This Manual on page vii
- Documentation Conventions on page ix
- Documentation Feedback on page xi
- Requesting Technical Support on page xi

Documentation and Release Notes

To obtain the most current version of all Juniper Networks[®] technical documentation, see the product documentation page on the Juniper Networks website at <http://www.juniper.net/techpubs/>.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at <http://www.juniper.net/books>.

Supported Platforms

For the features described in this document, the following platforms are supported:

- MX Series

Using the Examples in This Manual

If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

If the example configuration contains the top level of the hierarchy (or multiple hierarchies), the example is a *full example*. In this case, use the **load merge** command.

If the example configuration does not start at the top level of the hierarchy, the example is a *snippet*. In this case, use the **load merge relative** command. These procedures are described in the following sections.

Merging a Full Example

To merge a full example, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration example into a text file, save the file with a name, and copy the file to a directory on your routing platform.

For example, copy the following configuration to a file and name the file **ex-script.conf**. Copy the **ex-script.conf** file to the **/var/tmp** directory on your routing platform.

```
system {
  scripts {
    commit {
      file ex-script.xml;
    }
  }
}
interfaces {
  fxp0 {
    disable;
    unit 0 {
      family inet {
        address 10.0.0.1/24;
      }
    }
  }
}
```

2. Merge the contents of the file into your routing platform configuration by issuing the **load merge** configuration mode command:

```
[edit]
user@host# load merge /var/tmp/ex-script.conf
load complete
```

Merging a Snippet

To merge a snippet, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration snippet into a text file, save the file with a name, and copy the file to a directory on your routing platform.

For example, copy the following snippet to a file and name the file **ex-script-snippet.conf**. Copy the **ex-script-snippet.conf** file to the **/var/tmp** directory on your routing platform.

```
commit {
  file ex-script-snippet.xml; }
```

2. Move to the hierarchy level that is relevant for this snippet by issuing the following configuration mode command:


```
[edit]
user@host# edit system scripts
[edit system scripts]
```

3. Merge the contents of the file into your routing platform configuration by issuing the **load merge relative** configuration mode command:

```
[edit system scripts]
user@host# load merge relative /var/tmp/ex-script-snippet.conf
load complete
```

For more information about the **load** command, see the *CLI User Guide*.

Documentation Conventions

Table 1 on page ix defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page ix defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the configure command: user@host> configure

Table 2: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
Fixed-width text like this	Represents output that appears on the terminal screen.	<code>user@host> show chassis alarms</code> <code>No alarms currently active</code>
<i>Italic text like this</i>	<ul style="list-style-type: none">Introduces or emphasizes important new terms.Identifies guide names.Identifies RFC and Internet draft titles.	<ul style="list-style-type: none">A policy <i>term</i> is a named structure that defines match conditions and actions.<i>Junos OS CLI User Guide</i>RFC 1997, <i>BGP Communities Attribute</i>
<i>Italic text like this</i>	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# set system domain-name <i>domain-name</i>
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none">To configure a stub area, include the stub statement at the [edit protocols ospf area area-id] hierarchy level.The console port is labeled CONSOLE.
< > (angle brackets)	Encloses optional keywords or variables.	stub <default-metric metric>;
(pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	broadcast multicast (string1 string2 string3)
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	rsvp { # Required for dynamic MPLS only
[] (square brackets)	Encloses a variable for which you can substitute one or more values.	community name members [<i>community-ids</i>]
Indentation and braces ({ })	Identifies a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop address; retain; } } }
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	<ul style="list-style-type: none">In the Logical Interfaces box, select All Interfaces.To cancel the configuration, click Cancel.

Table 2: Text and Syntax Conventions (*continued*)

Convention	Description	Examples
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select Protocols>Ospf .

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to techpubs-comments@juniper.net, or fill out the documentation feedback form at <https://www.juniper.net/cgi-bin/docbugreport/>. If you are using e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release version (if applicable)

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or JNASC support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at <http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <http://www.juniper.net/support/warranty/>.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: <http://www.juniper.net/customers/support/>
- Search for known bugs: <http://www2.juniper.net/kb/>
- Find product documentation: <http://www.juniper.net/techpubs/>
- Find solutions and answer questions using our Knowledge Base: <http://kb.juniper.net/>
- Download the latest versions of software and review release notes: <http://www.juniper.net/customers/csc/software/>

- Search technical bulletins for relevant hardware and software notifications:
<http://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum:
<http://www.juniper.net/company/communities/>
- Open a case online in the CSC Case Management tool: <http://www.juniper.net/cm/>

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: <https://tools.juniper.net/SerialNumberEntitlementSearch/>

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at <http://www.juniper.net/cm/>.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see <http://www.juniper.net/support/requesting-support.html>.

PART 1

Overview

- [CLI-Based Management for Subscriber Services on page 3](#)

CHAPTER 1

CLI-Based Management for Subscriber Services

- [CLI-Activated Subscriber Services on page 3](#)
- [Default Subscriber Service Overview on page 4](#)
- [Subscriber Services with Multiple Instances Overview on page 5](#)

CLI-Activated Subscriber Services

Subscriber management enables you to use the Junos OS CLI to locally activate and deactivate dynamic subscriber services. CLI-based activation and deactivation provides local control for dynamic subscriber services that is similar to subscriber management's change of authorization (CoA) feature. CoA is considered a remote activation method because the commands, or triggers, are received from a remote server, such as a RADIUS or provisioning server. Both the CoA and CLI-based methods enable you to manage services for subscribers who are currently logged in to the network—you can activate a new service for the subscriber or deactivate a current service.

The CLI-based feature activates the specified service—you cannot use it to modify a subscriber's dynamic profile instantiation or to modify user-defined variables in a dynamic profile. You can, however, include variables that are defined for the service in the dynamic profile.

Subscriber management does not support accounting for CLI-activated subscriber services. Accounting for any service is disabled by default. Therefore when you use the CLI to activate a service, it is activated with accounting disabled, and there is no way to explicitly enable accounting for the service. CLI deactivation of a service previously activated (such as by RADIUS) has no effect on accounting for that service.

CLI-based activation and deactivation is useful in service provider networks that do not use provisioning servers or RADIUS servers to activate and deactivate subscriber services. The local control provided by the CLI-based operations enables service providers to add and remove services for existing subscribers without requiring that the subscriber log out and then log in again to complete the change. For example, a service provider might allow subscribers to log in and initially use the default service, which provides basic features. After the default service is established, the provider might then use CLI-activation to upgrade qualified subscribers to an advanced service, in addition to retaining the initial service. Later, the provider can use CLI-deactivation to terminate the subscriber's

advanced service session. The subscriber retains the initial service until the service is deactivated.

CLI-based activation or deactivation of a subscriber service fails if any of the following conditions exist:

- A RADIUS CoA operation or a previous CLI-based activation or deactivation is currently in progress for the subscriber. Only one dynamic request can be active for the subscriber.
- A unified in-service software upgrade (unified ISSU) operation is active.
- The specified service could not be activated or deactivated.

A CLI-based activation or deactivation of a subscriber service also fails if a PCRF has successfully activated any services for the subscriber. You must override the PCRF provisioning to be able to activate or deactivate services for such a subscriber. For more information, see *Disabling PCRF Control of a Subscriber Session*.

Related Documentation

- [Activating and Deactivating Subscriber Services Locally with the CLI on page 11](#)
- [Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers on page 14](#)
- [Default Subscriber Service Overview on page 4](#)

Default Subscriber Service Overview

Subscriber management enables you to specify a default subscriber service for DHCP subscribers. The default service (dynamic profile) is applied to subscribers when the subscriber logs in. By configuring a default service, you can apply a particular service (for example, a basic service) to subscribers who are not explicitly assigned a service.

When a subscriber logs in, the configured default service is always activated, even when remote service provisioning or RADIUS service activation is configured for the subscriber. The default service is deactivated only when the subscriber is successfully provisioned by the PCRF by means of the GX-Plus application. (Remote provisioning is configured by the **provisioning-order** statement at the **[edit access profile]** hierarchy level.)

In all other cases, the default service remains active. For example, if RADIUS authentication is configured but service activation is not, the default subscriber service remains activated. Likewise, if RADIUS authentication is not configured, the default subscriber service remains activated.

Default services can also be deactivated either with a RADIUS CoA deactivate request or with the **request network-access aaa subscriber delete session-id** command.

To create and assign a default subscriber service, you must complete the following operations:

- Create the service—Ensure that the service you want to use has been configured in a dynamic profile. The actual service is no different than any other service used for subscriber management.

- Specify the default service—Use the Junos OS CLI to specify the service that is used as the default service.
- Specify the interfaces on which the default service is assigned —Use the Junos OS CLI to specify that the default service is used globally, for a group of interfaces, or for a specific interface.

**Related
Documentation**

- [Configuring a Default Subscriber Service on page 16](#)
- [CLI-Activated Subscriber Services on page 3](#)
- [Activating and Deactivating Subscriber Services Locally with the CLI on page 11](#)
- *Understanding Gx-Plus Interactions Between the Router and the PCRF*

Subscriber Services with Multiple Instances Overview

Services are activated for subscribers either at login, or by using Change of Authorization (CoA) RADIUS messages or command-line interface (CLI) requests. A subscriber can have multiple instances of the same named service, provided that each instance of the subscriber service has a different set of parameters. Support for multiple instances of a subscriber service enables you to use service parameters to customize the same service to meet different needs for a particular subscriber.

- [Subscriber Service Instances and Service Parameters on page 5](#)
- [CLI Deactivation of Subscriber Services with Multiple Instances on page 6](#)
- [Subscriber Services with Multiple Instances in RADIUS Accounting Messages on page 6](#)

Subscriber Service Instances and Service Parameters

In a subscriber access network, each subscriber has its own set of services. You can configure a specific *service instance* for a particular subscriber by specifying a *service name*, also referred to as a *service profile*, and unique service parameters for that service instance. *Service parameters* can include a combination of policy lists, filters, rate-limit profiles, class of service (CoS) profiles, and interface profiles.

For example, `filter-service(up-filter,down-filter)` and `filter-service(upstream-filter,downstream-filter)` are considered two different instances of the same service (`filter-service`) because their parameters, enclosed in parentheses after the service name, are different.

Each service instance is uniquely identified by the combination of its service name and service parameters. In CoA messages, the router identifies a subscriber service by its complete activation string, which consists of the service name and, if configured, one or more service parameters in the order specified.

CLI Deactivation of Subscriber Services with Multiple Instances

You can use the Junos OS CLI to deactivate subscriber services with multiple instances in either of the following ways:

- Deactivate a single instance of a subscriber service by specifying the name and parameters of the service to be deactivated.

With this feature, you can deactivate a particular instance of a subscriber service while other instances of that same service remain active. For example, assume that a subscriber identified by a particular session ID has two instances of filter-service activated: filter-service(up-filter,down-filter) and filter-service(upstream-filter,downstream-filter). If you specify “filter-service(up-filter,down-filter)” in the **request network-access aaa subscriber delete session-id** command, the router deactivates only filter-service(up-filter,down-filter); filter-service(upstream-filter,downstream-filter) remains active.

The ability to use both service names and service parameters to identify the particular service instance to be deactivated is analogous to the subscriber service deactivation feature in use on Juniper Networks E Series Broadband Services Routers that run JunosE Software.

- Deactivate all instances of a subscriber service by specifying only the name of the service to be deactivated, with no service parameters.

With this feature, you can deactivate all instances of the same subscriber service with a single operational command. Using the same subscriber service example, if you specify “filter-service” in the **request network-access aaa subscriber delete session-id** command, the router deactivates both filter-service(up-filter,down-filter) and filter-service(upstream-filter,downstream-filter).

Subscriber Services with Multiple Instances in RADIUS Accounting Messages

RADIUS Acct-Start, Interim-Acct, and Acct-Stop accounting messages include the subscriber service name and, if configured, service parameters. If RADIUS logging is enabled, the router logs all subscriber service attributes, including service names and parameters, in messages sent to and received from the RADIUS authentication server.

For example, assume that the router receives the following RADIUS Access-Accept message from the RADIUS server:

```
Jul 13 12:37:02 radius-access-accept: Activate-Service (Juniper-ERX-VSA) received:  
Tag (1) filter-service(up-filter,down-filter)
```

[Table 3 on page 7](#) shows sample logged RADIUS Acct-Start, Interim-Acct, and Acct-Stop messages that the router sends to the RADIUS server in response to the Access-Accept message. In each of these accounting messages, the Activate-Service-Session-Name is the full activation string that includes both the service name (filter-service) and service parameters (up-filter,down-filter) to identify the service instance.

Table 3: Subscriber Services and Service Parameters in RADIUS Accounting Messages

RADIUS Accounting Message Type	RADIUS Accounting Message Text
Acct-Start	Jul 13 12:37:02 radius-acct-start: Activate-Service-Session-Name (Juniper-ERX-VSA) added: filter-service(up-filter,down-filter)
Interim-Acct	Jul 13 12:47:00 radius-acct-interim: Activate-Service-Session-Name (Juniper-ERX-VSA) added: filter-service(up-filter,down-filter)
Acct-Stop	Jul 13 12:53:59 radius-acct-stop: Activate-Service-Session-Name (Juniper-ERX-VSA) added: filter-service(up-filter,down-filter)

Related Documentation

- [Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17](#)
- [Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19](#)
- [Verifying and Managing Subscriber Services with Multiple Instances on page 21](#)

PART 2

Configuration

- [Configuration Tasks on page 11](#)
- [Configuration Statements on page 23](#)

CHAPTER 2

Configuration Tasks

- [Activating and Deactivating Subscriber Services Locally with the CLI on page 11](#)
- [Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers on page 14](#)
- [Configuring a Default Subscriber Service on page 16](#)
- [Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17](#)
- [Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19](#)
- [Verifying and Managing Subscriber Services with Multiple Instances on page 21](#)

Activating and Deactivating Subscriber Services Locally with the CLI

Subscriber management enables you to use the Junos OS CLI to locally activate or deactivate dynamic subscriber services for subscribers who are currently logged in to the network. You can activate an initial service for the subscriber, provide an additional service, or deactivate the subscriber's current service.



NOTE:

A CLI-based activation or deactivation of a subscriber service fails if any of the following conditions exist:

- A RADIUS CoA operation or a previous CLI-based activation or deactivation is active for the subscriber.
- A unified in-service software upgrade (unified ISSU) operation is active.
- The specified service could not be activated or deactivated.

A CLI-based activation or deactivation of a subscriber service also fails if a PCRF has successfully activated any services for the subscriber. You must override the PCRF provisioning to be able to activate or deactivate services for such a subscriber. For more information, see *Disabling PCRF Control of a Subscriber Session*.

To use the CLI to activate a subscriber service:

1. (Optional) Verify the subscriber's ID, and ensure that provisioning is not enabled. To display the session IDs of all current subscribers, use the **show subscribers detail** or **show network-access aaa subscribers** command.

```
user@host> show network-access aaa subscribers session-id 55 detail
Type: dhcp
Username: larry@isp5.net
Stripped username: larry
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:retail-onlinecompany-ca
Access-profile:retailer-onlinecompany-sjc
Session ID: 55
Accounting Session ID: 55
Multi Accounting Session ID: 0
IP Address: 192.168.44.104
Authentication State: AuthStateActive
Accounting State: Acc-Start-Send
Provisioning-type: none
Service name: basic-service
Service State: SvcActive
Session ID: 56
Session uptime: 00:01:45
```

2. Activate the service for the subscriber.

```
user@host> request network-access aaa subscriber add session-id 55 service-profile
gold-service
```

3. (Optional) Verify that the new service is activated for the subscriber. (The initial **basic-service** is also listed because it has not been deactivated.)

```
user@host> show network-access aaa subscribers session-id 55 detail
Type: dhcp
Username: larry@isp5.net
Stripped username: larry
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:retail-onlinecompany-ca
Access-profile:retailer-onlinecompany-sjc
Session ID: 55
Accounting Session ID: 55
Multi Accounting Session ID: 0
IP Address: 192.168.44.104
Authentication State: AuthStateActive
Accounting State: Acc-Start-Send
Provisioning-type: none
Service name: basic-service
Service State: SvcActive
Session ID: 56
Session uptime: 00:02:15
Service name: gold-service
Service State: SvcActive
Session ID: 57
Session uptime: 00:00:30
```

To use the CLI to deactivate a subscriber service:

1. Display the active services for the specified subscriber. The following example shows that the **basic-service** and **gold-service** are active.


```

user@host> show network-access aaa subscribers session-id 55 detail
Type: dhcp
Username: larry@isp5.net
Stripped username: larry
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:retail-onlinecompany-ca
Access-profile:retailer-onlinecompany-sjc
Session ID: 55
Accounting Session ID: 55
Multi Accounting Session ID: 0
IP Address: 192.168.44.104
Authentication State: AuthStateActive
Accounting State: Acc-Start-Send
Provisioning-type: none
Service name: basic-service
  Service State: SvcActive
  Session ID: 56
  Session uptime: 00:02:15
Service name: gold-service
  Service State: SvcActive
  Session ID: 57
  Session uptime: 00:00:30

```

2. Deactivate the service for the subscriber. The following example deletes the subscriber's **basic-service** service.

```

user@host> request network-access aaa subscriber delete session-id 55 service-profile
basic-service

```

3. (Optional) Verify that the deleted service is no longer active for the subscriber. (The **gold-service** is still listed because it has not been deactivated.)

```

user@host> show network-access aaa subscribers session-id 55 detail
Type: dhcp
Username: larry@isp5.net
Stripped username: larry
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:retail-onlinecompany-ca
Access-profile:retailer-onlinecompany-sjc
Session ID: 55
Accounting Session ID: 55
Multi Accounting Session ID: 0
IP Address: 192.168.44.104
Authentication State: AuthStateActive
Accounting State: Acc-Start-Send
Provisioning-type: none
Service name: gold-service
  Service State: SvcActive
  Session ID: 57
  Session uptime: 00:00:30

```

Related Documentation

- [CLI-Activated Subscriber Services on page 3](#)
- [Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers on page 14](#)
- [Default Subscriber Service Overview on page 4](#)

Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers

Subscriber management enables you to use the CLI to modify a traffic-control profile that is currently applied to existing subscribers. This feature allows you to update subscribers who are initially assigned the default traffic-control profile, which might have limited features.



TIP: You specify the default traffic-control profile with the **predefined-variable-defaults** statement and the **cos-traffic-control-profile** variable at the **[edit dynamic-profiles *profile-name* class-of-service]** hierarchy level.

There are two methods you can use to modify an traffic-control profile that is in use—global and per-subscriber. The global method modifies the traffic-control profile for all subscribers currently using the traffic-control profile. The per-subscriber method modifies the traffic-control profile for a particular subscriber—all other subscribers currently using the traffic-control profile remain unaffected.

The global and per-subscriber methods share the following characteristics:

- They modify traffic-control profiles that are currently applied to active subscribers.
- Neither method creates new traffic-control profiles; they modify existing traffic-control profiles that have been previously created using the **traffic-control-profiles** statement at the **[edit dynamic-profiles *profile-name* class-of-service]** hierarchy level.
- Modifications are transparent to the active subscribers who are using the modified profile. The modified traffic-control profile is assigned without requiring any action by the subscriber.
- Both methods are useful when updating subscribers who are initially assigned the default traffic-control profile, which might have limited features. You specify the default traffic-control profile with the **predefined-variable-defaults** statement and the **cos-traffic-control-profile** variable at the **[edit dynamic-profiles *profile-name* class-of-service]** hierarchy level.



NOTE: To support CLI modification of traffic-control profiles in an IPv4/IPv6 dual-stack environment, you must have the `aggregate-clients replace` statement enabled at the `[edit system services dhcp-local-server group group-name dynamic-profile profile-name]` hierarchy

This topic includes the following tasks:

- [Using the CLI to Globally Modify a Traffic-Control Profile Currently Applied to Multiple Subscribers on page 15](#)
- [Using the CLI to Modify a Traffic-Control Profile for a Specific Current Subscriber on page 15](#)

Using the CLI to Globally Modify a Traffic-Control Profile Currently Applied to Multiple Subscribers

To make a global modification for all current subscribers assigned a particular traffic-control profile, you change one or more parameters for the traffic-control profile and **commit** the changes.

In this example, the statement changes the shaping rate for the existing traffic-control profile named **TCP-silver**. After the change, the new shaping rate applies to all subscribers currently using **TCP-silver**.

1. Access the traffic-control profile you want to modify.

```
[edit dynamic-profiles business-profile class-of-service]
user@host# edit traffic-control-profiles TCP-silver
```

2. Specify the parameters that you want to modify in the traffic-control profile.

```
[edit dynamic-profiles business-profile class-of-service traffic-control-profiles
TCP-silver]
user@host# set shaping-rate 20m
```

3. Commit the configuration change to update the traffic-control profile. All current subscribers using **TCP-silver** now have the new **shaping-rate**.

Using the CLI to Modify a Traffic-Control Profile for a Specific Current Subscriber

To make a per-subscriber modification for a specific subscriber that is currently assigned a traffic-control profile, you specify the name of the new traffic-control profile to use.

In this example, the command replaces the existing traffic-control profile with the profile named **TCP-gold**. The new traffic-control profile applies only to the subscriber identified by session ID **2551**.

- Request that the traffic-control profile named **TCP-gold** be applied to session ID 2551.

```
user@host> request network-access aaa subscriber modify session-id 2551
junos-cos-traffic-control-profile TCP-gold
```

The system then displays the status message, **Successful completion**, indicating that the modification is successful. The subscriber identified by session ID 2551 now uses the **TCP-gold** traffic-control profile.

Configuring a Default Subscriber Service

Subscriber management enables you to specify a default subscriber service for DHCP (and DHCPv6) local server and DHCP relay agent. The default service is the service (dynamic profile) that is applied to subscribers when they log in.

Default services are subsequently deactivated in any of the following circumstances:

- A PCRF responds to AAA for the subscriber.
- A RADIUS CoA deactivation request is issued.
- You deactivate the service manually through the CLI.

To configure a default subscriber service:

1. Ensure that the service you want to use as the default has been configured in a dynamic profile.
2. Specify the default service.

The following example configures the default service for DHCP local server subscribers.

```
[edit system services dhcp-local-server]
user@host# set service-profile retailer1-subscriber
```

3. Attach the default service—you can attach the profile globally, for a group of interfaces, or for a specific interface.

The following example attaches the profile to a named group of interfaces for DHCP local server.

- Specify the group to which the default service is attached.

```
[edit system services dhcp-local-server]
user@host# set group subscriber-svl
```

- Specify the dynamic profile that defines the default service.

```
[edit system services dhcp-local-server group subscriber-svl]
user@host# set dynamic-profile retailer1-subscriber
```

Related Documentation

- [Default Subscriber Service Overview on page 4](#)
- *Attaching Dynamic Profiles to DHCP Subscriber Interfaces or DHCP Client Interfaces*

Deactivating a Single Instance of a Subscriber Service with Multiple Instances

For subscriber services that have multiple instances, you can use the Junos OS CLI to deactivate a service in either of the following ways:

- Deactivate a single instance of a service by specifying the name and parameters of the service to be deactivated.
- Deactivate all instances of a service by specifying only the name of the service to be deactivated.

This topic describes how to deactivate a single instance of a subscriber service.

To use the Junos OS CLI to deactivate a single instance of a subscriber service with multiple instances:

1. Display the active services for the subscriber identified by the specified session ID.

```
user@host> show network-access aaa subscribers session-id subscriber-session-id detail
```

For example, the following command displays the active services for the DHCP subscriber identified by session ID 6. In this example, two instances of economy-service are active: **economy-service(up-filter,down-filter)** and **economy-service(upstrm-filter,dwnstrm-filter)**. A single instance of premium-service named **premium-service(up-filter,down-filter)** is also active.

```
user@host> show network-access aaa subscribers session-id 6 detail
```

```
Type: dhcp
Stripped username: fran2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: economy-service(up-filter,down-filter)
  Service State: SvcActive
  Service Family: inet
  Service Activation Source: Radius
  Session ID: 7
  Session uptime: 00:04:36
  Accounting status: on/volume+time
  Service accounting session ID: 6:7-1354811427
  Service accounting state: Acc-Start-Sent
  Accounting interim interval: 600
Service name: economy-service(upstrm-filter,dwnstrm-filter)
  Service State: SvcActive
  Service Family: inet
  Service Activation Source: Radius
  Session ID: 8
  Session uptime: 00:04:36
  Accounting status: on/volume+time
  Service accounting session ID: 6:8-1354811427
  Service accounting state: Acc-Start-Sent
```

```

Accounting interim interval: 600
Service name: premium-service(up-filter,down-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius
Session ID: 9
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:9-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

2. Deactivate the specified instance of a subscriber service by specifying its service name and parameters.

```

user@host> request network-access aaa subscriber delete session-id subscriber-session-id
service-profile "profile-name(parameters)"

```

For example, the following command deactivates only the instance of economy-service named economy-service(up-filter,down-filter).

```

user@host> request network-access aaa subscriber delete session-id 6 service-profile
"economy-service(up-filter,down-filter)"

```

3. (Optional) Verify that the deactivated service instance is no longer active for the subscriber.

```

user@host> show network-access aaa subscribers session-id subscriber-session-id detail

```

For example, the following command displays the services still active for the DHCP subscriber identified by session ID 6. In this example, **economy-service(up-filter,down-filter)** is no longer listed because it was deactivated, but **economy-service(upstrm-filter,dwnstrm-filter)** and **premium-service(up-filter,down-filter)** are still active.

```

user@host> show network-access aaa subscribers session-id 6 detail
Type: dhcp
Stripped username: fran2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: economy-service(upstrm-filter,dwnstrm-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius
Session ID: 8
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:8-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600
Service name: premium-service(up-filter,down-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius
Session ID: 9

```

```

Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:9-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

- Related Documentation**
- [Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19](#)
 - [Verifying and Managing Subscriber Services with Multiple Instances on page 21](#)
 - [Subscriber Services with Multiple Instances Overview on page 5](#)

Deactivating All Instances of a Subscriber Service with Multiple Instances

For subscriber services that have multiple instances, you can use the Junos OS CLI to deactivate a service in either of the following ways:

- Deactivate a single instance of a service by specifying the name and parameters of the service to be deactivated.
- Deactivate all instances of a service by specifying only the name of the service to be deactivated.

This topic describes how to deactivate all instances of a subscriber service.

To use the Junos OS CLI to deactivate all instances of a subscriber service with multiple instances:

1. Display the active services for the subscriber identified by the specified session ID.

```
user@host> show network-access aaa subscribers session-id subscriber-session-id detail
```

For example, the following command displays the active services for the DHCP subscriber identified by session ID 6. In this example, two instances of economy-service are active: **economy-service(up-filter,down-filter)** and **economy-service(upstrm-filter,dwnstrm-filter)**. A single instance of premium-service named **premium-service(up-filter,down-filter)** is also active.

```
user@host> show network-access aaa subscribers session-id 6 detail
```

```

Type: dhcp
Stripped username: fran2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: economy-service(up-filter,down-filter)
  Service State: SvcActive
  Service Family: inet
  Service Activation Source: Radius
  Session ID: 7
  Session uptime: 00:04:36

```

```

Accounting status: on/volume+time
Service accounting session ID: 6:7-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600
Service name: economy-service(upstrm-filter,dwnstrm-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius
Session ID: 8
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:8-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600
Service name: premium-service(up-filter,down-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius
Session ID: 9
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:9-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

2. Deactivate all instances of the specified service by specifying the service name without parameters.

```

user@host> request network-access aaa subscriber delete session-id subscriber-session-id
service-profile "profile-name"

```

For example, the following command deactivates both instances of economy-service.

```

user@host> request network-access aaa subscriber delete session-id 6 service-profile
"economy-service"

```

3. (Optional) Verify that all instances of the deactivated service are no longer active for the subscriber.

```

user@host> show network-access aaa subscribers session-id subscriber-session-id detail

```

In the following example, only **premium-service(up-filter,down-filter)** is still active.

Neither **economy-service(up-filter,down-filter)** nor

economy-service(upstrm-filter,dwnstrm-filter) is listed because all instances of economy-service were deactivated.

```

user@host> show network-access aaa subscribers session-id 6 detail
Type: dhcp
Stripped username: fran2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: premium-service(up-filter,down-filter)
Service State: SvcActive
Service Family: inet
Service Activation Source: Radius

```



```

Session ID: 9
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:9-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

- Related Documentation**
- [Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17](#)
 - [Verifying and Managing Subscriber Services with Multiple Instances on page 21](#)
 - [Subscriber Services with Multiple Instances Overview on page 5](#)

Verifying and Managing Subscriber Services with Multiple Instances

Purpose Display information about the active services for a subscriber identified by the specified session ID.

Action The following example displays information about the active services for the DHCP subscriber identified by session ID 6.

```
user@host> show network-access aaa subscribers session-id 6 detail
```

```

Type: dhcp
Stripped username: fms2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: economy-service(up-filter,down-filter)

```

```
Service State: SvcActive
```

```

Service Family: inet
Service Activation Source: Radius
Session ID: 7
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:7-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

```
Service name: economy-service(upstrm-filter,dwnstrm-filter)
```

```
Service State: SvcActive
```

```

Service Family: inet
Service Activation Source: Radius
Session ID: 8
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:8-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600

```

```
Service name: premium-service
```

```
Service State: SvcActive
```

```
Service Family: inet
```

```
Service Activation Source: Radius
Session ID: 9
Session uptime: 00:04:36
Accounting status: on/volume+time
Service accounting session ID: 6:9-1354811427
Service accounting state: Acc-Start-Sent
Accounting interim interval: 600
```

Meaning If parameters are configured when a subscriber service with multiple instances is activated, the **Service name** field in the **show network-access aaa subscribers session-id** command displays both the service name and, in parentheses following the service name, the service parameters. If parameters are not configured for a particular service, the **show network-access aaa subscribers session-id** command displays only the service name. The value **SvcActive** in the **Service State** field indicates that the service is active.

In this example, two instances of economy-service are active: **economy-service(up-filter,down-filter)** and **economy-service(upstrm-filter,dwnstrm-filter)**. For **premium-service**, which is also active, the command output displays only the service name, indicating that no parameters were configured for this service.

- Related Documentation**
- [Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17](#)
 - [Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19](#)

CHAPTER 3

Configuration Statements

- `dynamic-profile` (DHCP Local Server) on page 24
- `dynamic-profile` (DHCP Relay Agent) on page 25
- `request network-access aaa subscriber add session-id`
- `request network-access aaa subscriber delete session-id`
- `request network-access aaa subscriber modify session-id`
- `service-profile` (DHCP Local Server) on page 31
- `service-profile` (DHCP Relay Agent) on page 32

dynamic-profile (DHCP Local Server)

Syntax	<pre>dynamic-profile <i>profile-name</i> { aggregate-clients (merge replace); use-primary <i>primary-profile-name</i>; }</pre>
Hierarchy Level	<pre>[edit system services dhcp-local-server], [edit system services dhcp-local-server dhcpv6], [edit system services dhcp-local-server dhcpv6 group <i>group-name</i>], [edit system services dhcp-local-server dhcpv6 group <i>group-name</i> interface <i>interface-name</i>], [edit system services dhcp-local-server group <i>group-name</i>], [edit system services dhcp-local-server group <i>group-name</i> interface <i>interface-name</i>], [edit logical-systems <i>logical-system-name</i> system services dhcp-local-server ...], [edit logical-systems <i>logical-system-name</i> routing-instances <i>routing-instance-name</i> system services dhcp-local-server ...], [edit routing-instances <i>routing-instance-name</i> system services dhcp-local-server ...]</pre>
Release Information	<p>Statement introduced in Junos OS Release 9.2.</p> <p>Statement introduced in Junos OS Release 12.3R2 for EX Series switches.</p> <p>Options aggregate-clients and use-primary introduced in Junos OS Release 9.3.</p> <p>Support at the [edit ... interface] hierarchy levels introduced in Junos OS Release 11.2.</p>
Description	Specify the dynamic profile that is attached to all interfaces, a named group of interfaces, or a specific interface.
Options	<p><i>profile-name</i>—Name of the dynamic profile.</p> <p>The remaining statements are explained separately.</p>
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none">• <i>Attaching Dynamic Profiles to DHCP Subscriber Interfaces or DHCP Client Interfaces</i>• Configuring a Default Subscriber Service on page 16

dynamic-profile (DHCP Relay Agent)

Syntax	<pre>dynamic-profile <i>profile-name</i> { aggregate-clients (merge replace); use-primary <i>primary-profile-name</i>; }</pre>
Hierarchy Level	<pre>[edit forwarding-options dhcp-relay], [edit forwarding-options dhcp-relay dhcpv6], [edit forwarding-options dhcp-relay dhcpv6 group <i>group-name</i>], [edit forwarding-options dhcp-relay dhcpv6 group <i>group-name</i> interface <i>interface-name</i>], [edit forwarding-options dhcp-relay group <i>group-name</i>], [edit forwarding-options dhcp-relay group <i>group-name</i> interface <i>interface-name</i>], [edit logical-systems <i>logical-system-name</i> forwarding-options dhcp-relay ...], [edit logical-systems <i>logical-system-name</i> routing-instances <i>routing-instance-name</i> forwarding-options dhcp-relay ...], [edit routing-instances <i>routing-instance-name</i> forwarding-options dhcp-relay ...]</pre>
Release Information	<p>Statement introduced in Junos OS Release 9.2.</p> <p>Support at the [edit ... dhcpv6] hierarchy levels introduced in Junos OS Release 11.4.</p> <p>Statement introduced in Junos OS Release 12.1 for EX Series switches.</p>
Description	<p>Specify the dynamic profile that is attached to all interfaces, to a named group of interfaces, or to a specific interface.</p> <p>M120 and M320 routers do not support DHCPv6.</p>
Options	<p><i>profile-name</i>—Name of the dynamic profile.</p> <p>The remaining statements are explained separately.</p>
Required Privilege Level	<p>interface—To view this statement in the configuration.</p> <p>interface-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>dhcp-relay</i> • <i>Attaching Dynamic Profiles to DHCP Subscriber Interfaces or DHCP Client Interfaces</i> • <i>Grouping Interfaces with Common DHCP Configurations</i> • Configuring a Default Subscriber Service on page 16

request network-access aaa subscriber add session-id

Syntax	<code>request network-access aaa subscriber add session-id <i>subscriber-session-id</i> service-profile <i>profile-name</i></code>
Release Information	Command introduced in Junos OS Release 11.2.
Description	Locally activate a dynamic subscriber service for a subscriber who is currently logged in to the network.
Options	<p><i>profile-name</i>—Name of service-profile to activate.</p> <p><i>subscriber-session-id</i>—ID of the subscriber session for which the service will be added.</p>
Required Privilege Level	view
Related Documentation	<ul style="list-style-type: none"> • CLI-Activated Subscriber Services on page 3 • Activating and Deactivating Subscriber Services Locally with the CLI on page 11 • request network-access aaa subscriber delete session-id on page 28
List of Sample Output	request network-access aaa subscriber add session-id service-profile on page 27
Output Fields	When you enter this command, you are provided feedback on the status of your request. Table 4 on page 26 lists possible error messages that might be returned if the service activation fails.

Table 4: Service Activation/Deactivation Error Messages

Message	Description	Corrective Action
Command failed: <i>reason</i>	—	—
Error: AUTHD ISSU in progress	A unified ISSU operation is active.	Wait until the unified ISSU operation completes and then retry the service activation/deactivation.
Provisioning is already active	Remote provisioning by a JSRC server or Gx-plus server is active.	—
Service activation/deactivation already in progress	Another service activation/deactivation operation is currently in progress.	Wait until the active operation completes and then retry the activation/deactivation operation.
Session identifier is not for a subscriber session	The session ID is incorrect.	Verify the correct session ID for the subscriber and then retry the activation/deactivation operation.

Sample Output

`request network-access aaa subscriber add session-id service-profile`

```
user@host> request network-access aaa subscriber add session-id 49 service-profile
service-bronze
Successful completion
```

request network-access aaa subscriber delete session-id

Syntax	<code>request network-access aaa subscriber delete session-id <i>subscriber-session-id</i> service-profile <i>profile-name</i></code>
Release Information	Command introduced in Junos OS Release 11.2.
Description	Deactivate a dynamic subscriber service for a subscriber who is currently logged in to the network.
Options	<p><i>profile-name</i>—Name of the service-profile to deactivate. To deactivate a single instance of a subscriber service that has multiple instances, you can specify the service-profile name and its service parameters.</p> <p><i>subscriber-session-id</i>—ID of the subscriber session for which the service will be deleted.</p>
Required Privilege Level	view
Related Documentation	<ul style="list-style-type: none"> • CLI-Activated Subscriber Services on page 3 • Activating and Deactivating Subscriber Services Locally with the CLI on page 11 • Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17 • Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19 • request network-access aaa subscriber add session-id on page 26
List of Sample Output	<p>request network-access aaa subscriber delete session-id service-profile on page 29</p> <p>request network-access aaa subscriber delete session-id service-profile (Deactivating a Single Server Instance) on page 29</p> <p>request network-access aaa subscriber delete session-id service-profile (Deactivating All Server Instances) on page 29</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request. Table 5 on page 28 lists possible error messages that might be returned if the service deactivation fails.

Table 5: Service Activation/Deactivation Error Messages

Message	Description	Corrective Action
Command failed: <i>reason</i>	Error condition that caused the command to fail.	Correct the error condition.
Error: AUTHD ISSU in progress	A unified ISSU operation is active.	Wait until the unified ISSU operation completes and then retry the service activation/deactivation.

Table 5: Service Activation/Deactivation Error Messages (*continued*)

Message	Description	Corrective Action
Provisioning is already active	Remote provisioning by a JSRC server or Gx-plus server is active.	Disable provisioning.
Service activation/deactivation already in progress	Another service activation/deactivation operation is currently in progress.	Wait until the active operation completes and then retry the activation/deactivation operation.
Session identifier is not for a subscriber session	The session ID is incorrect.	Verify the correct session ID for the subscriber and then retry the activation/deactivation operation.

Sample Output

request network-access aaa subscriber delete session-id service-profile

```
user@host> request network-access aaa subscriber delete session-id 49 service-profile
service-silver
Successful completion
```

request network-access aaa subscriber delete session-id service-profile (Deactivating a Single Server Instance)

```
user@host> request network-access aaa subscriber delete session-id 6 service-profile
economy-service(up-filter,down-filter)
Successful completion
```

request network-access aaa subscriber delete session-id service-profile (Deactivating All Server Instances)

```
user@host> request network-access aaa subscriber delete session-id 6 service-profile
economy-service
Successful completion
```

request network-access aaa subscriber modify session-id

Syntax	<code>request network-access aaa subscriber modify session-id <i>subscriber-session-id</i> <i>predefined-variable</i> <i>variable-option</i></code>
Release Information	Command introduced in Junos OS Release 11.2.
Description	Modify a predefined variable that is applied to a subscriber who is currently logged in to the network.
Options	<p><i>predefined-variable</i>—Name of the predefined variable that you want to modify.</p> <p><i>subscriber-session-id</i>—ID of the subscriber session.</p> <p><i>variable-option</i>—Name of the variable option that you want to apply to the predefined variable.</p>
Required Privilege Level	view
Related Documentation	<ul style="list-style-type: none"> • Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers on page 14 • CLI-Activated Subscriber Services on page 3
List of Sample Output	request network-access aaa subscriber modify session-id on page 30
Output Fields	When you enter this command, you are provided feedback on the status of your request. Table 6 on page 30 lists possible messages that might be returned.

Table 6: Service Activation/Deactivation Error Messages

Message	Description	Corrective Action
Successful completion	Variable was successfully modified	—
Error: AUTHD ISSU in progress	A unified ISSU operation is active.	Wait until the unified ISSU operation completes and then retry the service activation/deactivation.

Sample Output

request network-access aaa subscriber modify session-id

```
user@host> request network-access aaa subscriber modify session-id 49
junos-cos-traffic-control-profile TCP-gold
Successful completion
```

service-profile (DHCP Local Server)

Syntax	<code>service-profile <i>dynamic-profile-name</i>;</code>
Hierarchy Level	<code>[edit system services dhcp-local-server],</code> <code>[edit system services dhcp-local-server dhcpv6],</code> <code>[edit system services dhcp-local-server dhcpv6 group <i>group-name</i>],</code> <code>[edit system services dhcp-local-server dhcpv6 group <i>group-name</i> interface <i>interface-name</i>],</code> <code>[edit system services dhcp-local-server group <i>group-name</i>],</code> <code>[edit system services dhcp-local-server group <i>group-name</i> interface <i>interface-name</i>],</code> <code>[edit logical-systems <i>logical-system-name</i> system services dhcp-local-server ...],</code> <code>[edit logical-systems <i>logical-system-name</i> routing-instances <i>routing-instance-name</i> system</code> <code>services dhcp-local-server ...],</code> <code>[edit routing-instances <i>routing-instance-name</i> system services dhcp-local-server ...]</code>
Release Information	<p>Statement introduced in Junos OS Release 11.2.</p> <p>Statement introduced in Junos OS Release 12.3R2 for EX Series switches.</p>
Description	<p>Specify the default subscriber service or DHCP client management service, which is activated when the subscriber or client logs in and no other service is activated by a RADIUS server or a provisioning server.</p> <ul style="list-style-type: none"> To specify the default service for all DHCP local server clients, include the service-profile statement at the [edit system services dhcp-local-server] hierarchy level. To specify the default service for a named group of interfaces, include the service-profile statement at the [edit system services dhcp-local-server group <i>group-name</i>] hierarchy level. To specify the default service for a particular interface within a named group of interfaces, include the service-profile statement at the [edit system services dhcp-local-server group <i>group-name</i> interface <i>interface-name</i>] hierarchy level. For DHCPv6 clients, use the service-profile statement at the [edit system services dhcp-local-server dhcpv6] hierarchy level.
Options	<i>dynamic-profile-name</i> —Name of the dynamic profile that defines the service.
Required Privilege Level	<p>system—To view this statement in the configuration.</p> <p>system-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> Extended DHCP Local Server Overview Default Subscriber Service Overview on page 4 Configuring a Default Subscriber Service on page 16

service-profile (DHCP Relay Agent)

Syntax	<code>service-profile <i>dynamic-profile-name</i>;</code>
Hierarchy Level	<code>[edit forwarding-options dhcp-relay],</code> <code>[edit forwarding-options dhcp-relay dhcpv6],</code> <code>[edit forwarding-options dhcp-relay group <i>group-name</i>],</code> <code>[edit forwarding-options dhcp-relay group <i>group-name</i> interface <i>interface-name</i>],</code> <code>[edit forwarding-options dhcp-relay dhcpv6 group <i>group-name</i>],</code> <code>[edit forwarding-options dhcp-relay dhcpv6 group <i>group-name</i> interface <i>interface-name</i>],</code> <code>[edit logical-systems <i>logical-system-name</i> forwarding-options dhcp-relay ...],</code> <code>[edit logical-systems <i>logical-system-name</i> routing-instances <i>routing-instance-name</i></code> <code>forwarding-options dhcp-relay ...],</code> <code>[edit routing-instances <i>routing-instance-name</i> forwarding-options dhcp-relay ...]</code>
Release Information	Statement introduced in Junos OS Release 11.2. Statement introduced in Junos OS Release 12.3R2 for EX Series switches. Support at the <code>[edit ... dhcpv6 ...]</code> hierarchy levels introduced in Junos OS Release 11.4.
Description	<p>Specify the default subscriber service (or the default DHCP client management service), which is activated when the subscriber (or client) logs in and no other service is activated by a RADIUS server or a provisioning server.</p> <ul style="list-style-type: none">• To specify the default service for all DHCP relay agent clients, include the service-profile statement at the <code>[edit forwarding-options dhcp relay]</code> hierarchy level.• To specify the default service for a named group of interfaces, include the service-profile statement at the <code>[edit forwarding-options dhcp relay group <i>group-name</i>]</code> hierarchy level.• To specify the default service for a particular interface within a named group of interfaces, include the service-profile statement at the <code>[edit forwarding-options dhcp relay group <i>group-name</i> interface <i>interface-name</i>]</code> hierarchy level.
Options	<i>dynamic-profile-name</i> —Name of the dynamic profile.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>dhcp-relay</i>• <i>Attaching Dynamic Profiles to DHCP Subscriber Interfaces or DHCP Client Interfaces</i>• <i>Grouping Interfaces with Common DHCP Configurations</i>• Default Subscriber Service Overview on page 4• Configuring a Default Subscriber Service on page 16

PART 3

Administration

- [Monitoring Commands on page 35](#)

CHAPTER 4

Monitoring Commands

- `show network-access aaa subscribers session-id`

show network-access aaa subscribers session-id

Syntax	show network-access aaa subscribers session-id <i>session-id</i> <brief detail>
Release Information	Command introduced in Junos OS Release 10.0.
Description	Display information about the specified subscriber session.
Options	<i>session-id</i> —ID of the subscriber session. brief detail —(Optional) Display the specified level of information.
Required Privilege Level	view
Related Documentation	<ul style="list-style-type: none"> • Verifying and Managing Subscriber AAA Information • Activating and Deactivating Subscriber Services Locally with the CLI on page 11 • Deactivating a Single Instance of a Subscriber Service with Multiple Instances on page 17 • Deactivating All Instances of a Subscriber Service with Multiple Instances on page 19 • Verifying and Managing Subscriber Services with Multiple Instances on page 21
List of Sample Output	show network-access aaa subscribers session-id brief on page 39 show network-access aaa subscribers session-id detail on page 39 show network-access aaa subscribers session-id detail (Service with Multiple Instances) on page 39
Output Fields	Table 7 on page 36 lists the output fields for the show network-access aaa subscribers session-id command. Output fields are listed in the approximate order in which they appear.

Table 7: show network-access aaa subscribers session-id Output Fields

Field Name	Field Description	Level of Output
Type and Client type	Type of client.	All levels
Accounting	Status of accounting, and type of accounting if accounting is on.	brief
Service type	Type of accounting: volume , time , volume+time , or na .	brief
Quota	Quota for service: volume (in Mbps) or time (seconds).	brief
Username	Name of the user logged in to the session.	detail

Table 7: show network-access aaa subscribers session-id Output Fields (continued)

Field Name	Field Description	Level of Output
Stripped username	Username after the domain has been removed.	detail
Logical system/Routing instance and AAA Logical system/Routing instance	Name of the routing instance, logical system name, or both used for the session.	All levels
Target Logical system/Routing instance	Logical system/routing instance to which the session is mapped.	detail
Access-profile	Access profile used for AAA services for the session.	detail
Session ID	ID of the subscriber session. The session ID value displayed under Service name is the service session ID.	detail
Accounting Session ID	ID of the accounting session (RADIUS attribute 44). The ID appears in decimal or description format, as specified by the accounting-session-id-format statement.	detail
Multi Accounting Session ID	Bundle ID for MLPPP sessions. Acct-Multi-Session-Id (RADIUS attribute 50) uses the value of the session database bundle session ID to enable RADIUS to link together multiple related sessions. The value of this field is zero when no MLPPP sessions exist.	detail
IP Address	IP address of the subscriber.	detail
Authentication State	State of the subscriber authentication session: AuthInit , AuthStart , AuthChallenge , AuthRedirect , AuthClntRespWait , AuthAcctVolStatsAckWait , AuthAcctStopAckWait , AuthServCreateRespWait , AuthLogoutStart , AuthStateActive , AuthClntLogoutRespWait , AuthProfileUpdateWait , AuthProvisionRespWait , AuthProvisionServiceCreationWait	detail

Table 7: show network-access aaa subscribers session-id Output Fields (continued)

Field Name	Field Description	Level of Output
Gx-Plus Provisioning State	State of Gx-Plus provisioning: <ul style="list-style-type: none"> ignored—Subscriber has no IPv4 address or NAS-Port-ID. in-progress—Provisioning is in progress. logout—Subscriber logout is in progress. logout-done—Logout response has been received. response-received—Provisioning response has been received. 	detail
Accounting State	State of the subscriber accounting session: Acc-Init, Acc-Start-Sent, Imm-Update-Stats-Pending, Acc-Interim-Sent, Acc-Stop-Stats-Pending, Acc-Stop-Sent, Acc-Stop-On-Fail-Deny-Sent, Acc-Stop-Ackd	detail
Provisioning-type	Provisioning type for this session: <ul style="list-style-type: none"> gx-plus—Subscriber service uses Gx-Plus provisioning. jsrc—Subscriber service uses JSRC provisioning. none—Provisioning is not enabled. 	detail
Service name	Name of the attached service or policy. <ul style="list-style-type: none"> For RADIUS-activated and CLI-activated services, displays the full activation string for the service. If the activation string includes service parameters, then both the service name and service parameters are displayed. For JSRC-activated policies—displays the policy name. 	All levels
Service State	State of the service provided in the subscriber session.	detail
Session uptime	How long the session has been up, in <i>HH:MM:SS</i> .	All levels
Accounting status	Status of the accounting configuration for the service, on or off , and the type of accounting, time or volume+time . Configured in RADIUS Service-Statistics VSA [26-69].	detail
Service accounting session ID	ID of the service accounting session; RADIUS Acct-Session-Id attribute (44). The ID appears in decimal or description format, as specified by the accounting-session-id-format statement.	detail
Service accounting state	State of the service accounting session: Acc-Init, Acc-Start-Sent, Imm-Update-Stats-Pending, Acc-Interim-Sent, Acc-Stop-Stats-Pending, Acc-Stop-Sent, Acc-Stop-On-Fail-Deny-Sent, Acc-Stop-Ackd	detail

Table 7: show network-access aaa subscribers session-id Output Fields (continued)

Field Name	Field Description	Level of Output
Accounting interim interval	Amount of time between interim accounting updates for this service, in seconds; RADIUS Service-Interim-Acct-Interval VSA [26-140] or Diameter Acct-Interim-Interval AVP (85).	detail

Sample Output

show network-access aaa subscribers session-id brief

```
user@host> show network-access aaa subscribers session-id 6 brief
Logical system/Routing instance  Client type  Session uptime  Accounting
default:default                 dhcp      00:01:29       on/time
Service name                    Service type  Quota           Accounting
filter-service                  -na-         -na-            off
filter-service-2                volume+time  77.00MB/120secs off
1337994190863204450            -na-         -na-            off
```

show network-access aaa subscribers session-id detail

```
user@host> show network-access aaa subscribers session-id 5 detail
Type: dhcp
Username: larry@isp5.net
Stripped username: larry
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:retail-onlinecompany-ca
Access-profile:retailer-onlinecompany-sjc
Session ID: 5
Accounting Session ID: jnpr ge-1/0/0.101:1
Multi Accounting Session ID: 0
IP Address: 192.168.44.104
Authentication State: AuthStateActive
Gx-Plus Provisioning State: response-received
Accounting State: Acc-Interim-Sent
Provisioning-type: jsrsc
Service name: filter-service-1
Service State: SvcActive
Session ID: 7
Session uptime: 00:01:33
Service name: 1337994190863204450
Service State: SvcActive
Session ID: 8
Session uptime: 00:01:33
Accounting status: on/volume+time
Service accounting session ID: 1:2-1322506006
Service accounting state: Acc-Interim-Sent
Accounting interim interval: 600
```

show network-access aaa subscribers session-id detail (Service with Multiple Instances)

```
user@host> show network-access aaa subscribers session-id 6 detail
Type: dhcp
Stripped username: fms2
AAA Logical system/Routing instance: default:default
Target Logical system/Routing instance: default:default
```

```
Access-profile: attr_test_profile1
Session ID: 6
Accounting Session ID: 6
Multi Accounting Session ID: 0
IP Address: 100.20.0.10
Authentication State: AuthStateActive
Accounting State: Acc-Interim-Sent
Provisioning Type: None
Service name: economy-service(up-filter,down-filter)
  Service State: SvcActive
  Service Family: inet
  Service Activation Source: Radius
  Session ID: 7
  Session uptime: 00:04:36
  Accounting status: on/volume+time
  Service accounting session ID: 6:7-1354811427
  Service accounting state: Acc-Start-Sent
  Accounting interim interval: 600
Service name: economy-service(upstrm-filter,dwnstrm-filter)
  Service State: SvcActive
  Service Family: inet
  Service Activation Source: Radius
  Session ID: 8
  Session uptime: 00:04:36
  Accounting status: on/volume+time
  Service accounting session ID: 6:8-1354811427
  Service accounting state: Acc-Start-Sent
  Accounting interim interval: 600
```

PART 4

Troubleshooting

- [Acquiring Troubleshooting Information on page 43](#)

CHAPTER 5

Acquiring Troubleshooting Information

- [Collecting Subscriber Access Logs Before Contacting Juniper Technical Support on page 43](#)

Collecting Subscriber Access Logs Before Contacting Juniper Technical Support

Problem When you experience a subscriber access problem in your network, we recommend that you collect certain logs before you contact Juniper Technical Support. This topic shows you the most useful logs for a variety of network implementations. In addition to the relevant log information, you must also collect standard troubleshooting information and send it to Juniper Technical Support in your request for assistance.

Solution To collect standard troubleshooting information:

- Redirect the command output to a file.

```
user@host> request support information | save rsi-1
```

To configure logging to assist Juniper Technical Support:

1. Review the following blocks of statements to determine which apply to your configuration.

[edit]

```
set system syslog archive size 100m files 25
set system auto-configuration traceoptions file filename
set system auto-configuration traceoptions file filename size 100m files 25
set protocols ppp-service traceoptions file filename size 100m files 25
set protocols ppp-service traceoptions level all
set protocols ppp-service traceoptions flag all
set protocols ppp traceoptions file filename size 100m files 25
set protocols ppp traceoptions level all
set protocols ppp traceoptions flag all
set protocols ppp monitor-session all
set interfaces pp0 traceoptions flag all
set demux traceoptions file filename size 100m files 25
set demux traceoptions level all
set demux traceoptions flag all
set system processes dhcp-service traceoptions file filename
set system processes dhcp-service traceoptions file size 100m
set system processes dhcp-service traceoptions file files 25
set system processes dhcp-service traceoptions flag all
set class-of-service traceoptions file filename
set class-of-service traceoptions file size 100m
set class-of-service traceoptions flag all
set class-of-service traceoptions file files 25
set routing-options traceoptions file filename
set routing-options traceoptions file size 100m
set routing-options traceoptions flag all
set routing-options traceoptions file files 25
set interfaces traceoptions file filename
set interfaces traceoptions file size 100m
set interfaces traceoptions flag all
set interfaces traceoptions file files 25
set system processes general-authentication-service traceoptions file filename
set system processes general-authentication-service traceoptions file size 100m
set system processes general-authentication-service traceoptions flag all
set system processes general-authentication-service traceoptions file files 25
```

2. Copy the relevant statements into a text file and modify the log filenames as you want.
3. Copy the statements from the text file and paste them into the CLI on your router to configure logging.
4. Commit the logging configuration to begin collecting information.



NOTE: The maximum file size for DHCP local server and DHCP relay log files is 1 GB. The maximum number of log files for DHCP local server and DHCP relay is 1000.



BEST PRACTICE: Enable these logs only to collect information when troubleshooting specific problems. Enabling these logs during normal operations can result in reduced system performance.

**Related
Documentation**

- *Compressing Troubleshooting Logs from /var/logs to Send to Juniper Technical Support*

PART 5

Index

- [Index on page 49](#)

Index

Symbols

#, comments in configuration statements.....	x
(), in syntax descriptions.....	x
< >, in syntax descriptions.....	x
[], in configuration statements.....	x
{ }, in configuration statements.....	x
(pipe), in syntax descriptions.....	x

A

AAA	
subscriber sessions	
displaying.....	36
activating subscriber services.....	26
CLI-based.....	11

B

braces, in configuration statements.....	x
brackets	
angle, in syntax descriptions.....	x
square, in configuration statements.....	x

C

comments, in configuration statements.....	x
conventions	
text and syntax.....	ix
CoS	
subscriber access	
modifying.....	14
traffic-control profiles.....	14
curly braces, in configuration statements.....	x
customer support.....	xi
contacting JTAC.....	xi

D

deactivating subscriber services.....	28
CLI-based.....	11
CLI-based for services with multiple	
instances.....	17, 19
default subscriber service.....	4
configuring.....	16

DHCP local server statements	
dynamic-profile.....	24
service-profile.....	31
DHCP relay agent statements	
dynamic-profile.....	25
service-profile.....	32
documentation	
comments on.....	xi
dynamic-profile statement	
DHCP local server.....	24
DHCP relay agent.....	25

F

font conventions.....	ix
-----------------------	----

L

log files	
collecting for Juniper Technical Support.....	43

M

manuals	
comments on.....	xi
modifying subscriber services.....	30

P

parentheses, in syntax descriptions.....	x
--	---

R

request network-access aaa subscriber add	
session-id command.....	26
request network-access aaa subscriber delete	
session-id command.....	28
request network-access aaa subscriber modify	
session-id command.....	30

S

service-profile statement	
DHCP local server.....	31
DHCP relay agent.....	32
services with multiple instances	
deactivating all instances with CLI.....	19
deactivating single instance with CLI.....	17
overview.....	5
show network-access aaa subscriber session-id	
command.....	36
subscriber service	
activating with CLI.....	3
deactivating with CLI.....	3
default.....	4, 16

subscriber services	
activating.....	26
activating with CLI.....	11
deactivating.....	28
deactivating with CLI.....	11
local activation and deactivation.....	11
modifying.....	30
subscriber services with multiple instances	
deactivating all instances with CLI.....	19
deactivating single instance with CLI.....	17
local deactivation with CLI.....	17, 19
overview.....	5
support, technical See technical support	
syntax conventions.....	ix

T

technical support	
collecting logs for.....	43
contacting JTAC.....	xi
trace operations	
collecting logs for Juniper technical support.....	43
traffic-control profiles	
global modification.....	15
modifying.....	14
per-subscriber modification.....	15
troubleshooting subscriber access	
collecting logs for Juniper Technical Support.....	43