



Junos[®] OS

Subscriber Management Statements



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Table of Contents

About the Documentation	ix
Documentation and Release Notes	ix
Using the Examples in This Manual	ix
Merging a Full Example	x
Merging a Snippet	x
Documentation Conventions	xi
Documentation Feedback	xiii
Requesting Technical Support	xiii
Self-Help Online Tools and Resources	xiv
Creating a Service Request with JTAC	xiv

Part 1

Chapter 1

A–D

A–D Statements	3
aaa-logical-system (Domain Map)	4
aaa-routing-instance (Domain Map)	5
access-identifier	6
access-profile (Domain Map)	7
accounting (Access Profile)	8
accounting-stop-on-access-deny	9
accounting-stop-on-failure	10
address-assignment (Address-Assignment Pools)	11
address-change-immediate-update	13
address-pool (Domain Map)	14
adjacency-timer	15
advisory-options (Traffic Shaping)	16
ancp	17
attributes (RADIUS Attributes)	19
authentication-order	21
coa-immediate-update	22
coa-no-override service-class-attribute	23
database-replication (Subscriber Session Database)	24
delimiter (Domain Map)	25
dhcp-attributes (Address-Assignment Pools)	26
domain (Domain Map)	32
domain-name-server (Routing Instances and Access Profiles)	33
domain-name-server-inet (Routing Instances and Access Profiles)	34
domain-name-server-inet6 (Routing Instances and Access Profiles)	35
downstream-rate (Traffic Shaping)	36
duplication (Access Profile)	37
dynamic-profile (DHCP Local Server)	38

	dynamic-profile (DHCP Relay Agent)	39
	dynamic-profile (Domain Map)	40
Part 2	E—R	
Chapter 2	E—R Statements	43
	exclude (RADIUS Attributes)	45
	family (Address-Assignment Pools)	52
	host (Address-Assignment Pools)	53
	ietf-mode	54
	immediate-update	54
	interface-description-format	55
	interface-set (ANCP)	56
	interfaces (ANCP)	57
	map (Domain Map)	58
	mask (Domain Map)	59
	maximum-discovery-table-entries	60
	maximum-helper-restart-time	61
	metric (Domain Map)	61
	nas-port-extended-format	62
	nas-port-id-format (Subscriber Management)	64
	nas-port-type (Subscriber Management)	66
	maximum-discovery-table-entries	68
	maximum-helper-restart-time	69
	network	69
	on-demand-ip-address	70
	option-82 (Address-Assignment Pools)	71
	option-match	72
	options (Access Profile)	73
	order	80
	overhead-accounting (ANCP)	81
	padn (Domain Map)	82
	parse-direction (Domain Map)	83
	pool (Address-Assignment Pools)	84
	prefix (Address-Assignment Pools)	86
	pre-ietf-mode	86
	profile (Access)	87
	qos-adjust	93
	qos-adjust-adsl	94
	qos-adjust-adsl2	95
	qos-adjust-adsl2-plus	96
	qos-adjust-sdsl	97
	qos-adjust-vdsl	98
	qos-adjust-vdsl2	99
	radius (Access Profile)	100
	radius-options (Access)	103
	radius-server	104

	range (Address-Assignment Pools)	109
	request network-access aaa subscriber add session-id	110
	request network-access aaa subscriber delete session-id	112
	request network-access aaa subscriber modify session-id	114
	request-rate (Access)	115
	revert-interval (Access)	116
Part 3	S–Z	
Chapter 3	S–Z Statements	119
	secret	120
	service-profile (DHCP Local Server)	121
	service-profile (DHCP Relay Agent)	122
	session-options	124
	statistics (Access Profile)	127
	strip-domain (Domain Map)	128
	target-logical-system (Domain Map)	129
	target-routing-instance (Domain Map)	130
	traceoptions (ANCP)	131
	traceoptions (Subscriber Session Database Replication)	133
	traceoptions (Subscriber Management)	135
	tunnel-profile (Domain Map)	136
	update-interval	137
	underlying-interface (ANCP)	138
	upstream-rate (Traffic Shaping)	139

List of Tables

	About the Documentation	ix
	Table 1: Notice Icons	xi
	Table 2: Text and Syntax Conventions	xii
Part 2	E—R	
Chapter 2	E—R Statements	43
	Table 3: Service Activation/Deactivation Error Messages	110
	Table 4: Service Activation/Deactivation Error Messages	113
	Table 5: Service Activation/Deactivation Error Messages	114

About the Documentation

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

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 <https://www.juniper.net/documentation/>.

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 <https://www.juniper.net/books>.

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 [CLI Explorer](#).

Documentation Conventions

Table 1 on page xi 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 xii 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
Fixed-width text like this	Represents output that appears on the terminal screen.	user@host> show chassis alarms No alarms currently active
<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 <i>metric</i> >;
(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 (<i>string1</i> <i>string2</i> <i>string3</i>)
# (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 [community-ids]
Indentation and braces ({ })	Identifies a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop <i>address</i> ; retain; } } }
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	

GUI Conventions

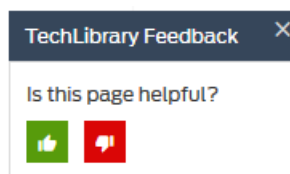
Table 2: Text and Syntax Conventions (continued)

Convention	Description	Examples
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.
> (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 so that we can improve our documentation. You can use either of the following methods:

- Online feedback system—Click TechLibrary Feedback, on the lower right of any page on the [Juniper Networks TechLibrary](#) site, and do one of the following:



- Click the thumbs-up icon if the information on the page was helpful to you.
- Click the thumbs-down icon if the information on the page was not helpful to you or if you have suggestions for improvement, and use the pop-up form to provide feedback.
- E-mail—Send your comments to techpubs-comments@juniper.net. Include the document or topic name, URL or page number, and software 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 Juniper Care or Partner Support Services 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 <https://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf>.
- Product warranties—For product warranty information, visit <https://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:

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- Search for known bugs: <https://prsearch.juniper.net/>
- Find product documentation: <https://www.juniper.net/documentation/>
- Find solutions and answer questions using our Knowledge Base: <https://kb.juniper.net/>
- Download the latest versions of software and review release notes: <https://www.juniper.net/customers/csc/software/>
- Search technical bulletins for relevant hardware and software notifications: <https://kb.juniper.net/InfoCenter/>
- Join and participate in the Juniper Networks Community Forum: <https://www.juniper.net/company/communities/>
- Create a service request online: <https://myjuniper.juniper.net>

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

Creating a Service Request with JTAC

You can create a service request with JTAC on the Web or by telephone.

- Visit <https://myjuniper.juniper.net>.
- 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 <https://support.juniper.net/support/requesting-support/>.

PART 1

A–D

- [A–D Statements on page 3](#)

CHAPTER 1

A–D Statements

- `aaa-logical-system` (Domain Map) on page 4
- `aaa-routing-instance` (Domain Map) on page 5
- `access-identifier` on page 6
- `access-profile` (Domain Map) on page 7
- `accounting` (Access Profile) on page 8
- `accounting-stop-on-access-deny` on page 9
- `accounting-stop-on-failure` on page 10
- `address-assignment` (Address-Assignment Pools) on page 11
- `address-change-immediate-update` on page 13
- `address-pool` (Domain Map) on page 14
- `adjacency-timer` on page 15
- `advisory-options` (Traffic Shaping) on page 16
- `ancp` on page 17
- `attributes` (RADIUS Attributes) on page 19
- `authentication-order` on page 21
- `coa-immediate-update` on page 22
- `coa-no-override service-class-attribute` on page 23
- `database-replication` (Subscriber Session Database) on page 24
- `delimiter` (Domain Map) on page 25
- `dhcp-attributes` (Address-Assignment Pools) on page 26
- `domain` (Domain Map) on page 32
- `domain-name-server` (Routing Instances and Access Profiles) on page 33
- `domain-name-server-inet` (Routing Instances and Access Profiles) on page 34
- `domain-name-server-inet6` (Routing Instances and Access Profiles) on page 35
- `downstream-rate` (Traffic Shaping) on page 36
- `duplication` (Access Profile) on page 37
- `dynamic-profile` (DHCP Local Server) on page 38

- [dynamic-profile \(DHCP Relay Agent\)](#) on page 39
- [dynamic-profile \(Domain Map\)](#) on page 40

aaa-logical-system (Domain Map)

Syntax `aaa-logical-system logical-system-name {
 aaa-routing-instance routing-instance-name;
 }`

Hierarchy Level `[edit access domain map domain-map-name]`

Release Information Statement introduced in Junos OS Release 10.4.

Description Configure a non-default logical system in which the **authd** daemon sends AAA requests for the domain map.



NOTE: Subscriber management is supported in the default logical system only. The `aaa-logical-system` statement is for future extensions of subscriber management and is not supported in current Junos OS releases.

Default Default logical system for the subscriber.

Options *logical-system-name*—Name of the logical system.


The remaining statement is explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level `admin`—To view this statement in the configuration.
 `admin-control`—To add this statement to the configuration.

Related Documentation

- [Specifying an AAA Logical System/Routing Instance in a Domain Map](#)

aaa-routing-instance (Domain Map)

Syntax	<code>aaa-routing-instance (routing-instance-name default);</code>
Hierarchy Level	<code>[edit access domain map domain-map-name],</code> <code>[edit access domain map domain-map-name aaa-logical-system logical-system-name]</code>
Release Information	Statement introduced in Junos OS Release 10.4. default option added in Junos OS Release 13.3.
Description	Configure the routing instance in which the authd daemon sends AAA requests for the domain map.
<div>  <p>NOTE: Subscriber management is supported in the default logical system only. The <code>aaa-logical-system</code> statement, which appears in the CLI, is not supported in current Junos OS releases.</p> </div>	
Default	Routing instance used for the subscriber context.
Options	routing-instance-name —Name of the routing instance. default —The default (master) routing instance.
Required Privilege Level	admin —To view this statement in the configuration. admin-control —To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> <i>Specifying an AAA Logical System/Routing Instance in a Domain Map</i> <i>Domain Mapping Overview</i>

access-identifier

Syntax	<code>access-identifier <i>identifier-string</i>;</code>
Hierarchy Level	[edit protocols ancp interfaces <i>interface-name</i>], [edit protocols ancp interfaces interface-set]
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Associate an access-loop circuit identifier (ACI) with the VLAN or set of VLANs that carry traffic to the subscriber using that access loop; identify a particular subscriber. This statement requires that the name of the interface or interface set is statically configured or deterministic. This means that it can be used with dynamic or static interface sets, VLAN-tagged interface sets, or static VLAN/VLAN demux interfaces.
Options	<i>identifier-string</i> —Unique identifier string for the access loop circuit; also configured on the access node.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Associating an Access Node with Subscribers for ANCP Agent Operations</i>

access-profile (Domain Map)

Syntax	<code>access-profile <i>profile-name</i>;</code>
Hierarchy Level	[edit access domain map <i>domain-map-name</i>]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Access profile that defines the AAA services and options for subscribers associated with the domain map.
Options	<i>profile-name</i> —Name of access profile.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"><i>Specifying an Access Profile in a Domain Map</i>

accounting (Access Profile)

Syntax

```
accounting {
  accounting-stop-on-access-deny;
  accounting-stop-on-failure;
  address-change-immediate-update;
  ancp-speed-change-immediate-update;
  coa-immediate-update;
  coa-no-override service-class-attribute;
  duplication;
  duplication-filter;
  duplication-vrf {
    access-profile-name profile-name;
    vrf-name vrf-name;
  }
  immediate-update;
  order [accounting-method];
  send-acct-status-on-config-change
  statistics (time | volume-time);
  update-interval minutes;
  wait-for-acct-on-ack;
}
```

Hierarchy Level [edit access [profile](#) *profile-name*]

Release Information Statement introduced in Junos OS Release 9.1.
Statement introduced in Junos OS Release 9.1 for EX Series switches.

Description Configure RADIUS accounting parameters and enable RADIUS accounting for an access profile.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Configuring Authentication and Accounting Parameters for Subscriber Access*
- *Configuring Per-Subscriber Session Accounting*
- *Understanding RADIUS Accounting Duplicate Reporting*

accounting-stop-on-access-deny

Syntax	<code>accounting-stop-on-access-deny;</code>
Hierarchy Level	<code>[edit access profile <i>profile-name</i> accounting]</code>
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
Description	Configure RADIUS accounting to send an Acct-Stop message when the AAA server refuses a client request for access.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>

accounting-stop-on-failure

Syntax	accounting-stop-on-failure;
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
Description	<p>Configure RADIUS accounting to send an Acct-Stop message when a subscriber session has been successfully authenticated and authorized, but then fails before an Acct-Start message is sent. By default, an Acct-Stop message is sent only if an Acct-Start message has been exchanged with the accounting server.</p> <p>Consider a situation where RADIUS address pools are used to assign IP/IPv6 addresses. After a subscriber session is successfully authenticated, the RADIUS server authorizes the session by assigning an IP address from the RADIUS address pool and conveying that address in the Framed-IP-Address attribute. If a negotiation failure occurs at this point, the session is terminated before activating. The Acct-Start message is never sent because it is initiated by session activation. By default, an Acct-Stop message cannot be sent because the Acct-Start is never sent. However, if the acct-stop-on-failure statement is configured, the negotiation failure causes the Acct-Stop message to be sent, which explicitly notifies the RADIUS server that the session is disconnected and that it can free the allocated IP address back to the pool.</p>
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>

address-assignment (Address-Assignment Pools)

```

Syntax address-assignment {
    abated-utilization percentage;
    abated-utilization-v6 percentage;
    high-utilization percentage;
    high-utilization-v6 percentage;
    neighbor-discovery-router-advertisement ndra-pool-name;
    pool pool-name {
        active-drain;
        family family {
            dhcp-attributes {
                protocol-specific attributes;
            }
            excluded-address ip-address;
            excluded-range name low minimum-value high maximum-value;
            host hostname {
                hardware-address mac-address;
                ip-address ip-address;
            }
            network ip-prefix /<prefix-length>;
            prefix ipv6-prefix;
            range range-name {
                high upper-limit;
                low lower-limit;
                prefix-length prefix-length;
            }
        }
        hold-down;
        link pool-name;
    }
}

```

Hierarchy Level [edit access]

Release Information Statement introduced in Junos OS Release 9.0.
Statement introduced in Junos OS Release 12.1 for EX Series switches.

Description Configure address-assignment pools that can be used by different client applications.

Options **abated-utilization**—(ACX Series, MX Series only) Starting in Junos OS Release 11.2, generate SNMP traps for DHCP address pools or linked set of address pools. No SNMP traps are generated unless a value is configured. Default: Abated utilization is not set. Delete the abated-utilization value to unset.
Values: *percentage*—Threshold below which an SNMP trap clear is generated. Range: 1 through 98.

abated-utilization-v6—(ACX Series, MX Series only) Starting in Junos OS Release 11.2, generate SNMP traps for DHCPv6 address pools or linked set of address pools. No

SNMP traps are generated unless a value is configured. Default: Abated utilization is not set. Delete the abated-utilization value to unset.

Values: *percentage*—Threshold below which an SNMP trap clear is generated. Range: 1 through 98.

high-utilization—(ACX Series, MX Series only) Starting in Junos OS Release 11.2, generate an SNMP trap when the DHCP address pool or linked set of address pools use surpasses the specified percentage. Default: High utilization is not set. Delete the high-utilization value to unset.

Values: *percentage*—Percentage used to generate a trap. Range: 2 through 99.

high-utilization-v6—(ACX Series, MX Series only) Starting in Junos OS Release 11.2, generate an SNMP trap when the DHCPv6 address pool or linked set of address pools use surpasses the specified percentage. Default: High utilization is not set. Delete the high-utilization value to unset.

Values: *percentage*—Percentage used to generate a trap. Range: 2 through 99.

neighbor-discovery-router-advertisement—(M Series, MX Series, SRX Series, T Series only) Configure the name of the address-assignment pool used to assign the router advertisement prefix.

Values: *ndra-pool-name*—Name of the address-assignment pool.

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none">• <i>Address-Assignment Pools Overview</i>• <i>Address-Assignment Pool Configuration Overview</i>• <i>Configuring an Address-Assignment Pool for L2TP LNS with Inline Services</i>• <i>Configuring Address-Assignment Pool Usage Threshold Traps</i>• <i>Configuring an Address-Assignment Pool Used for Router Advertisements</i>
------------------------------	--

address-change-immediate-update

Syntax	address-change-immediate-update;
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 13.1.
Description	<p>Configure the router to send an Interim-Accounting message to the RADIUS server immediately after on-demand IPv4 allocation and de-allocation.</p> <p>Changes to this setting take effect for new subscriber logins. Existing subscribers are not impacted by this change except when the AAA daemon restarts.</p>
Default	This functionality is disabled by default.
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Enabling Immediate Interim Accounting Messages for On-Demand IPv4 Address Changes</i> • <i>Conserving IPv4 Addresses for Dual-Stack PPP Subscribers Using On-Demand IPv4 Address Allocation</i>

address-pool (Domain Map)

Syntax	<code>address-pool <i>pool-name</i>;</code>
Hierarchy Level	<code>[edit access domain map <i>domain-map-name</i>]</code>
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Specify the address pool used to assign addresses to subscribers associated with the domain map.
Options	<i>pool-name</i> —Name of address pool.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"><i>Specifying an Address Pool in a Domain Map</i>

adjacency-timer

Syntax	<code>adjacency-timer <i>seconds</i>;</code>
Hierarchy Level	[edit protocols ancp], [edit protocols ancp neighbor <i>ip-address</i>]
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Specify a value for the interval that the ANCP agent proposes during negotiation to establish an adjacency, for all neighbors or a specific neighbor. The larger of the values proposed by the agent and the neighbor is selected for the interval between subsequent adjacency messages exchanged by the agent and the neighbor.
Options	<i>seconds</i> —Number of seconds between adjacency messages. Range: 1 through 25 seconds Default: 10 seconds
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Specifying the Interval Between ANCP Adjacency Messages</i>• <i>Configuring ANCP Neighbors</i>

advisory-options (Traffic Shaping)

Syntax	<pre>advisory-options { downstream-rate rate; upstream-rate rate; }</pre>
Hierarchy Level	<pre>[edit dynamic-profiles profile-name interfaces \$junos-interface-ifd-name unit \$junos-interface-unit], [edit dynamic-profiles profile-name interfaces interface-set \$junos-interface-set-name interface \$junos-interface-ifd-name], [edit interfaces demux0 unit logical-unit-number], [edit interfaces interface-name unit logical-unit-number]</pre>
Release Information	<p>Statement introduced in Junos OS Release 11.4.</p> <p>Support at the [edit interfaces demux0 ...] hierarchy level introduced in Junos OS Release 12.2.</p> <p>Support at the [edit dynamic-profiles ...] hierarchy level introduced in Junos OS Release 13.1.</p>
Description	<p>Specify a recommended shaping rate to be applied to downstream or upstream traffic on an interface.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</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>Setting a Recommended Shaping Rate for Traffic on ANCP Interfaces</i> • <i>Configuring the ANCP Agent</i> • <i>Configuring the Method to Derive the LAC Connection Speeds Sent to the LNS</i>

ancp

```

Syntax  ancp {
    adjacency-loss-hold-time seconds;
    adjacency-timer seconds;
    gsmp-syn-timeout seconds;
    gsmp-syn-wait;
    interfaces {
        interface-set interface-set-name {
            access-identifier identifier-string;
            underlying-interface underlying-interface-name;
        }
        interface-name {
            access-identifier identifier-string;
        }
    }
    maximum-discovery-table-entries entry-number;
    maximum-helper-restart-time;
    neighbor ip-address {
        adjacency-loss-hold-time seconds;
        adjacency-timer;
        auto-configure-trigger interface interface-name;
        ietf-mode;
        maximum-discovery-table-entries entry-number;
        pre-ietf-mode;
    }
    pre-ietf-mode;
    qos-adjust {
        adsl-bytes bytes;
        adsl2-bytes bytes;
        adsl2-plus-bytes bytes;
        other-bytes bytes;
        other-overhead-adjust percentage;
        sdsl-bytes bytes;
        sdsl-overhead-adjust percentage;
        vdsl-bytes bytes;
        vdsl-overhead-adjust percentage;
        vdsl2-bytes bytes;
        vdsl2-overhead-adjust percentage;
    }
    qos-adjust-adsl adjustment-factor;
    qos-adjust-adsl2 adjustment-factor;
    qos-adjust-adsl2-plus adjustment-factor;
    qos-adjust-other adjustment-factor;
    qos-adjust-sdsl adjustment-factor;
    qos-adjust-vdsl adjustment-factor;
    qos-adjust-vdsl2 adjustment-factor;
    traceoptions {
        file filename <files number> <match regular-expression> <size maximum-file-size>
        <world-readable | no-world-readable>;
        flag flag;
        level (all | error | info | notice | verbose | warning);
        no-remote-trace;
    }
}

```

```
}  
}
```

Hierarchy Level [edit protocols]

Release Information Statement introduced in Junos OS Release 9.4.

Description Configure Junos OS ANCP agent features.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.



NOTE: When you deactivate the ANCP protocol, the router does not perform a commit check to determine whether any ANCP or L2-BSA subscribers are present (active or inactive). Any subscribers that are active at the time of deactivation remain active.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

Related Documentation

- *Configuring the ANCP Agent*

attributes (RADIUS Attributes)

Syntax

```

attributes {
  exclude {
    attribute-name packet-type;
    standard-attribute number {
      packet-type [ access-request | accounting-off | accounting-on | accounting-start |
        accounting-stop ];
    }
    vendor-id id-number {
      vendor-attribute vsa-number {
        packet-type [ access-request | accounting-off | accounting-on | accounting-start |
          accounting-stop ];
      }
    }
  }
  ignore {
    dynamic-iflset-name;
    framed-ip-netmask;
    idle-timeout;
    input-filter;
    logical-system-routing-instance;
    output-filter;
    session-timeout;
    standard-attribute number;
    vendor-id id-number {
      vendor-attribute vsa-number;
    }
  }
}

```

Hierarchy Level [edit access profile *profile-name* **radius**]

Release Information Statement introduced in Junos OS Release 9.1.
Statement introduced in Junos OS Release 9.1 for EX Series switches.

Description Specify how the router or switch processes RADIUS attributes.

Options **ignore**—Configure the router or switch to ignore the specified attributes in RADIUS Access-Accept messages. Standard attributes and VSAs received in RADIUS messages take precedence over internally provisioned attribute values. Ignoring the attributes enables your internally provisioned values to be used instead. Contrast this behavior with that provided by the **exclude** statement.

Starting in Junos OS Release 18.1R1, you can specify RADIUS standard attributes with the attribute number. You can specify vendor-specific attributes (VSAs) with the IANA-assigned vendor ID and the VSA number. With this flexible configuration method, you can configure any standard attribute and VSA supported by your

platform to be ignored. The configuration has no effect if you can configure unsupported attributes, vendors, and VSAs.

The legacy method allows you to configure only those attributes and VSAs for which the statement syntax includes a specific option. Consequently, you can use the legacy method to ignore only a subset of all attributes that can be received in Access-Accept messages.

Values:

- `dynamic-iflset-name`—Ignore Juniper Networks VSA 26-130, Qos-Set-Name.
- `framed-ip-netmask`—Ignore RADIUS attribute 9, Framed-IP-Netmask.
- `idle-timeout`—Ignore RADIUS attribute 28, Idle-Timeout.
- `input-filter`—Ignore Juniper Networks VSA 26-10, Ingress-Policy-Name.
- `logical-system-routing-instance`—Ignore Juniper Networks VSA 26-1.
- `output-filter`—Ignore Juniper Networks VSA 26-11, Egress-Policy-Name.
- `session-timeout`—Ignore RADIUS attribute 27, Session-Timeout.
- `standard-attribute number`—RADIUS standard attribute number supported by your platform. You can enclose multiple values in square brackets to specify a list of attributes. If you configure an unsupported attribute, that configuration has no effect. Range: 1 through 255.
- `vendor-attribute vsa-number`—Number identifying a VSA belonging to the specified vendor; both must be supported by your platform. You can enclose multiple values in square brackets to specify a list of VSAs. If you configure an unsupported VSA, that configuration has no effect. Range: 1 through 255.
- `vendor-id id-number`—IANA vendor ID supported by your platform. If you configure an unsupported vendor ID, that configuration has no effect. Range: 1 through 16777215.

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege Level	<code>admin</code> —To view this statement in the configuration. <code>admin-control</code> —To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none">• <i>RADIUS Servers and Parameters for Subscriber Access</i>• <i>Standard and Vendor-Specific RADIUS Attributes</i>• <i>AAA Access Messages and Supported RADIUS Attributes and Juniper Networks VSAs for Junos OS</i>• <i>AAA Accounting Messages and Supported RADIUS Attributes and Juniper Networks VSAs for Junos OS</i>
------------------------------	--

authentication-order

Syntax	<code>authentication-order [<i>authentication-methods</i>];</code>
Hierarchy Level	<code>[edit access <i>profile</i> <i>profile-name</i>]</code>
Release Information	<p>Statement introduced before Junos OS Release 7.4.</p> <p>Statement introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>none option added in Junos OS Release 11.2.</p> <p>nasreq option added in Junos OS Release 16.1.</p>
Description	<p>Set the order in which AAA tries different authentication methods when verifying that a client can access the router or switch. For each login attempt, AAA tries the authentication methods in order, from first to last.</p> <p>A given subscriber does not undergo both authentication and authorization as separate steps. When both authentication-order and authorization-order are specified, DHCP subscribers honor the configured authorization order, all other subscribers use the configured authentication-order.</p> <p>Starting in Junos OS Release 18.2R1, the password option can also be used to specify that local authentication and local authorization is attempted for individual subscribers that are configured with the subscriber statement at the <code>[edit access profile <i>profile-name</i>]</code> hierarchy level.</p>
Options	<p><i>authentication-methods</i>—Ordered list of methods to use for authentication attempts. The list includes one or more of the following methods in any combination:</p> <ul style="list-style-type: none"> • nasreq—Verify subscribers using the Diameter-based Network Access Server Requirements (NASREQ) protocol. • none—No authentication is performed. Grants authentication without examining the client credentials. Can be used, for example, when the Diameter function Gx-Plus is employed for notification during subscriber provisioning.



NOTE: Subscriber access management does not support the **none** option; authentication fails when this option is specified.

- **password**—Verify the client using the information configured at the `[edit access profile profile-name client client-name]` hierarchy level.

Subscriber access management does not support the **password** option until Junos OS Release 18.2R1. Starting in Junos OS Release 18.2R1, this option is used to enable local authentication and optionally local authorization for individual subscribers. Local authentication is typically used when you do not have external authentication

and authorization servers. The password itself must be configured with the **subscriber** statement in the same access profile. Local authentication is performed when a subscriber logs in with a matching username; it succeeds if the subscribers login password matches the password in the profile.

If you do have external authentication and authorization servers, you can use local authentication as a backup authentication method. In this case, configure **password** anywhere other than first in the list of methods.

- **radius**—Verify the client using RADIUS authentication services.

Default: password

Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none">• <i>Example: Configuring CHAP Authentication with RADIUS</i>• <i>Specifying the Authentication and Accounting Methods for Subscriber Access</i>• <i>Configuring Access Profiles for L2TP or PPP Parameters</i>• <i>Configuring Local Authentication and Authorization for Subscribers</i>
------------------------------	---

coa-immediate-update

Syntax	coa-immediate-update;
---------------	-----------------------

Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
------------------------	--

Release Information	Statement introduced in Junos OS Release 10.0.
----------------------------	--

Description	Configure the router to send an Acct-Update message to the RADIUS accounting server immediately following a CoA operation.
--------------------	--

Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none">• <i>RADIUS Servers and Parameters for Subscriber Access</i>• <i>Configuring Per-Subscriber Session Accounting</i>
------------------------------	---

coa-no-override service-class-attribute

Syntax	coa-no-override service-class-attribute;
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 11.4.
Description	Specify that, after a CoA action that changes the RADIUS Class attribute, accounting reports for the subscriber's service sessions continue to use the original Class attribute that was assigned when the service sessions were created. The new Class attribute value is used in accounting reports for the subscriber session only.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>RADIUS Servers and Parameters for Subscriber Access</i>• <i>Configuring Per-Subscriber Session Accounting</i>

database-replication (Subscriber Session Database)

Syntax

```
database-replication {  
  traceoptions {  
    file filename <files number> <match regular-expression > <size maximum-file-size>  
    <world-readable | no-world-readable>;  
    flag flag;  
  }  
}
```

Hierarchy Level [edit system services]

Release Information Statement introduced in Junos OS Release 9.3.

Description Define operations for subscriber management session database replication processes.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level

system—To view this statement in the configuration.

system-control—To add this statement to the configuration.

Related Documentation

- *Tracing Subscriber Management Session Database Replication Events for Troubleshooting*

delimiter (Domain Map)

Syntax	<code>delimiter [<i>delimiter-character</i>];</code>
Hierarchy Level	[edit access domain]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Specify the characters that the router uses to separate usernames from domain names.
Default	The @ character.
Options	<i>delimiter-character</i> —One or more characters used as delimiters. You can specify a maximum of eight delimiters. You cannot use the semicolon (;) as a delimiter. Do not include spaces between characters.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Specifying Domain and Realm Name Delimiters</i>• <i>Configuring Domain and Realm Name Usage for Domain Maps</i>

dhcp-attributes (Address-Assignment Pools)

Syntax

```
dhcp-attributes {
  boot-file filename;
  boot-server (address | hostname);
  dns-server [ ipv6-address ];
  domain-name domain-name;
  exclude-prefix-len exclude-prefix-length;
  grace-period seconds;
  maximum-lease-time seconds;
  name-server [ server-list ];
  netbios-node-type node-type;
  option {
    [ (id-number option-type option-value)
      (id-number array option-type option-value) ];
  }
  option-match {
    option-82 {
      circuit-id value range named-range;
      remote-id value range named-range;
    }
  }
  preferred-lifetime seconds;
  router [ router-address ];
  server-identifier ip4-address;
  sip-server-address [ ipv6-address ];
  sip-server-domain-name domain-name;
  t1-percentage percentage;
  t1-renewal-time;
  t2-percentage percentage;
  t2-rebinding-time;
  tftp-server address;
  valid-lifetime seconds;
  wins-server [ servers ];
}
```

Hierarchy Level [edit access address-assignment **pool** *pool-name* **family** *family*]

Release Information Statement introduced in Junos OS Release 9.0.
Statement introduced in Junos OS Release 12.3 for EX Series switches.
exclude-prefix-len statement introduced in Junos OS Release 17.3 for MX Series.

Description Configure DHCP attributes for the protocol family in a specific address pool. The attributes determine options and behaviors for the DHCP clients.

Options **boot-file**—(EX Series, M Series, MX Series, SRX Series, T Series only) Set the boot file advertised to DHCP clients. After the client receives an IP address and the boot file location from the DHCP server, the client uses the boot image stored in the boot file to complete DHCP setup. This configuration is equivalent to DHCP option 67.

Values: *filename*—Location of the boot file on the boot server. The filename can include a pathname.

boot-server—(EX Series, M Series, MX Series, SRX Series, T Series only) Configure the name of the boot server advertised to DHCP clients. The client uses a boot file located on the boot server to complete DHCP setup. This configuration is equivalent to DHCP option 66.

Values:

- *address*—IPv4 address of a boot server.
- *hostname*—Fully qualified hostname of a boot server.

dns-server—(MX Series only) Specify a DNS server to which clients can send DNS queries. This is equivalent to DHCPv6 option 23. To specify multiple DNS servers, add multiple **dns-server** statements in order of preference.

Values: *ipv6-address*—IPv6 address of a DNS server.

domain-name—(EX Series, MX Series only) Configure the name of the domain in which clients search for a DHCP server host. This is the default domain name that is appended to hostnames that are not fully qualified. This is equivalent to DHCP option 15.

Values: *domain-name*—Name of the domain.

exclude-prefix-len *exclude-prefix-length*—Specify the length of the IPv6 prefix to be excluded from the delegated prefix. Range: 1 through 128.

grace-period—(M Series, MX Series, SRX Series, T Series only) Configure the amount of time that the client retains the address lease after the lease expires. The address cannot be reassigned to another client during the grace period.

Values: *seconds*—Number of seconds the lease is retained.

Range: 0 through 4,294,967,295 seconds.

Default: 0 (no grace period).

maximum-lease-time—(EX Series, M120, MX Series, SRX240, SRX3400, T640, T1600 only) Specify the maximum length of time, in seconds, that the lease is held for a client if the client does not renew the lease. This is equivalent to DHCP option 51. The **maximum-lease-time** is mutually exclusive with both the **preferred-lifetime** and the **valid-lifetime**, and cannot be configured with either timer.

Values: *seconds*—Maximum number of seconds the lease can be held.

Range: 30 through 4,294,967,295 seconds.

Default: 86,400 (24 hours).

name-server—(M120, MX Series, SRX Series, T640, T1600 only) Configure one or more Domain Name System (DNS) name servers available to the client to resolve hostname-to-client mappings. This is equivalent to DHCP option 6.

Values: *server-names*—IP addresses of the domain name servers, listed in order of preference.

netbios-node-type—(M Series, MX Series, SRX Series, T Series only) Specify the NetBIOS node type. This is equivalent to DHCP option 46.

Values: *node-type*—One of the following node types:

- *b-node*—Broadcast node.
- *h-node*—Hybrid node.
- *m-node*—Mixed node.
- *p-node*—Peer-to-peer node.

option—(EX Series, M Series, MX Series, SRX Series, T Series only) Specify user-defined options that are added to client packets. Starting in Junos OS Release 13.3, the **hex-string** option type was introduced.

Values:

- *array*—An option can include an array of option types.
- *id-number*—Any whole number. The ID number is used to index the option and must be unique across a DHCP server.
- *option-type*—Any of the following types: byte, byte-stream, flag, hex-string, integer, ip-address, short, string, unsigned-integer, or unsigned-short.
- *option-value*—Value associated with an option. The option value must be compatible with the option type (for example, an On or Off value for a flag type).

preferred-lifetime—(EX Series, M Series, MX Series only) Starting in Junos OS Release 13.3, specify the length of time, in seconds, that the DHCPv6 server keeps the IPv6 prefix active. When the lifetime expires, the address is deprecated. If the **valid-lifetime** is also configured, the **preferred-lifetime** must be less than the **valid-lifetime**. The **preferred-lifetime** and the **maximum-lease-time** are mutually exclusive and cannot both be configured.

Values: *seconds*—Number of seconds that the IPv6 prefix is active.

Range: 30 through 4,294,967,295 seconds.

Default: 86,400 (24 hours).

router—(EX Series, MX Series only) Specify one or more routers located on the client's subnet. This statement is the equivalent of DHCP option 3.

Values: *router-address*—IP address of one or more routers.

server-identifier—(EX Series, MX Series, SRX Series only) Specify the IP address that is used as the source address the DHCP server includes in IP packets when communicating with clients. The address is included in the DHCP packet in option 54.

Values: *ipv4-address*—IP address.

sip-server-address—(EX Series, M Series, MX Series, SRX Series, T Series only) Specify a SIP outbound proxy server that DHCPv6 local server clients can use. This is equivalent to DHCPv6 option 22. To specify multiple servers, add multiple **sip-server-address** statements in order of preference.

Values: *ipv6-address*—IPv6 address of a SIP outbound proxy server.

sip-server-domain-name—(M Series, MX Series, SRX Series, T Series only) Configure the domain name of the SIP outbound proxy server that DHCPv6 local server clients can use. This is equivalent to DHCPv6 option 21.

Values: *domain-name*—Name of the domain.

t1-percentage—(EX Series, M Series, MX Series only) Specify a percentage of the **preferred-lifetime** value. After this percentage of the **preferred-lifetime** value elapses, the DHCPv4 or DHCPv6 client requests an extension on its lease from the originating DHCP local server. The **t1-percentage** is also referred to as the renewal time. The **t1-percentage** value must be less than the **t2-percentage** value. DHCPv4 server support was added in Junos OS Release 17.2.

Values: *percentage*—Percentage of the **preferred-lifetime** value.

Range: 0 through 100.

Default: If the **t1-percentage** value is not configured, the default is based on the **preferred-lifetime** value:

- If the **preferred-lifetime** value is finite, the default is 50 percent of the **preferred-lifetime** value.
- If the **preferred-lifetime** value is infinite, the default is also infinite.

t1-renewal-time—(MX Series only) Starting in Junos OS Release 17.2, specify the time (T1) at which the DHCPv4 or DHCPv6 client requests an extension (renewal) of the existing lease. This time is expressed as the number of seconds since the beginning of the lease. Using this statement to configure a duration in seconds is an alternative to using the **t1-percentage** statement.

Values: *seconds*—Number of seconds.

Range: 30 through 4,294,967,295 seconds.

Default: 50 percent of the lease duration (**preferred-lifetime**).

t2-percentage—(EX Series, M Series, MX Series only) Starting in Junos OS Release 13.3, specify a percentage of the **preferred-lifetime** value. After this percentage of the **preferred-lifetime** value elapses, the DHCPv4 or DHCPv6 client requests an extension on its lease from any available DHCPv4 or DHCPv6 server. The **t2-percentage** is also referred to as the rebinding time. The **t2-percentage** value must be greater than the **t1-percentage** value. DHCPv4 server support was added in Junos OS Release 17.2.

Values: *percentage*—Percentage of the **preferred-lifetime** value.

Range: 0 through 100.

Default: Default: If the **t2-percentage** value is not configured, the default is based on the **preferred-lifetime** value:

- If the **preferred-lifetime** value is finite, the default is 80 percent of the **preferred-lifetime** value.
- When the **preferred-lifetime** value is infinite, the default is also infinite.

t2-rebinding-time—(MX Series only) Starting in Junos OS Release 17.2, specify the time (T2) at which the DHCPv4 or DHCPv6 client attempts to contact any DHCP server to request an extension (rebinding) of the existing lease. This time is expressed as the number of seconds since the beginning of the lease. Using this statement to configure a duration in seconds is an alternative to using the **t2-percentage** statement.

Values: *seconds*—Number of seconds.

Range: 30 through 4,294,967,295 seconds.

Default: The default value depends on the client:

- (DHCPv4 clients) 87.5 percent of the lease duration (**preferred-lifetime**).
- (DHCPv6 clients) 80 percent of the lease duration (**preferred-lifetime**).

tftp-server—(ACX Series, SRX Series only) Specify the Trivial File Transfer Protocol (TFTP) server that the client uses to obtain the client configuration file. This is equivalent to DHCP option 150.

Values: *ip-address*—IP address of the TFTP server.

valid-lifetime—(EX Series, M Series, MX Series only) Starting in Junos OS Release 13.3, specify the length of time, in seconds, that the DHCPv6 server keeps the IPv6 prefix valid. When the lifetime expires, the address becomes invalid. If the **preferred-lifetime** is also configured, the **valid-lifetime** must be greater than the **preferred-lifetime**. The **valid-lifetime** and the **maximum-lease-time** are mutually exclusive and cannot both be configured.

Values: *seconds*—Number of seconds that the IPv6 prefix is valid.

Range: 30 through 4,294,967,295 seconds.

Default: 86,400 (24 hours).

wins-server—(M Series, MX Series, SRX Series, T Series only) Specify one or more NetBIOS name servers (NBNS) that the client uses to resolve NetBIOS names. This is equivalent to DHCP option 44.

Values: *ipv4-address*—IP address of each NetBIOS name server. Add them to the configuration in order of preference.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege admin—To view this statement in the configuration.
Level admin-control—To add this statement to the configuration.

Related Documentation

- *Address-Assignment Pools Overview*
- *Attributes That Can Be Applied to DHCP Clients*
- *Address-Assignment Pool Configuration Overview*
- *Configuring DHCP Client-Specific Attributes Applied When Clients Obtain an Address*
- *DHCP Lease Timers*
- *Configuring DHCP Attributes for All Clients or a Group of Clients*

domain (Domain Map)

```
Syntax domain {
    delimiter [delimiter-character];
    map domain-map-name {
        aaa-logical-system logical-system-name {
            aaa-routing-instance routing-instance-name;
        }
        aaa-routing-instance routing-instance-name;
        access-profile profile-name;
        address-pool pool-name;
        dynamic-profile profile-name;
        padn destination-address {
            mask destination-mask;
            metric route-metric;
        }
        strip-domain;
        target-logical-system logical-system-name {
            target-routing-instance routing-instance-name;
        }
        target-routing-instance routing-instance-name;
        tunnel-profile profile-name;
    }
    parse-direction (left-to-right | right-to-left);
    parse-order (domain-first | realm-first);
    realm-delimiter [delimiter-character];
    realm-parse-direction (left-to-right | right-to-left);
}
```

Hierarchy Level [edit access]

Release Information Statement introduced in Junos OS Release 10.4.

Description Configure a domain map, which is used to map access options and session parameters for subscriber sessions.


The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.


Related Documentation

- *Configuring a Domain Map*

domain-name-server (Routing Instances and Access Profiles)

Syntax	domain-name-server <i>dns-address</i> ;
Hierarchy Level	[edit access]; [edit access <i>profile</i>]
Release Information	Statement introduced in Junos OS Release 12.3. Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Description	Configure an IPv4 address for a DNS name server. You can configure an address globally for a routing instance at the [edit access] hierarchy level or for an access profile at the [edit access profile <i>profile-name</i>] hierarchy level. You can configure more than one address by including the statement multiple times.
	<div>  <p>NOTE: A DNS name server address configured with this statement is less preferred than one configured with the domain-name-server-inet statement. That is, the server with the address configured with the domain-name-server-inet takes precedence over a server configured with this statement.</p> </div>
Options	<i>dns-address</i> —IPv4 address of the DNS name server.
Required Privilege Level	admin—To view this statement in the configuration admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> <i>Configuring DNS Name Server Addresses for Subscriber Management</i> <i>DNS Name Server Address Overview</i>

domain-name-server-inet (Routing Instances and Access Profiles)

Syntax	domain-name-server-inet <i>dns-address</i> ;
Hierarchy Level	[edit access], [edit access <i>profile</i>]
Release Information	Statement introduced in Junos OS Release 12.3. Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Description	<p>Configure an IPv4 address for a DNS name server. You can configure an address globally for a routing instance at the [edit access] hierarchy level or for an access profile at the [edit access profile <i>profile-name</i>] hierarchy level. You can configure more than one address by including the statement multiple times.</p> <div><p>NOTE: A DNS name server address configured with this statement is higher in preference than one configured with the domain-name-server statement. That is, the server with the address configured with the domain-name-server-inet takes precedence over a server configured with the domain-name-server statement.</p></div>
Options	<i>dns-address</i> —IPv4 address of the DNS name server.
Required Privilege Level	admin—To view this statement in the configuration admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">Configuring DNS Name Server Addresses for Subscriber ManagementDNS Name Server Address Overview

domain-name-server-inet6 (Routing Instances and Access Profiles)

Syntax	<code>domain-name-server-inet6 <i>dns-address</i>;</code>
Hierarchy Level	<code>[edit access],</code> <code>[edit access <i>profile</i>]</code>
Release Information	Statement introduced in Junos OS Release 12.3. Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
Description	Configure an IPv6 address for a DNS name server. You can configure an address globally for a routing instance at the [edit access] hierarchy level or for an access profile at the [edit access profile <i>profile-name</i>] hierarchy level. You can configure more than one address by including the statement multiple times.
Options	<i>dns-address</i> —IPv6 address of the DNS name server.
Required Privilege Level	admin—To view this statement in the configuration admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> <i>Configuring DNS Name Server Addresses for Subscriber Management</i> <i>DNS Name Server Address Overview</i>

downstream-rate (Traffic Shaping)

Syntax	<code>downstream-rate <i>rate</i>;</code>
Hierarchy Level	<pre>[edit dynamic-profiles <i>profile-name</i> interfaces \$junos-interface-ifd-name unit \$junos-interface-unit advisory-options], [edit dynamic-profiles <i>profile-name</i> interfaces interface-set \$junos-interface-set-name interface \$junos-interface-ifd-name advisory-options], [edit interfaces demux0 unit <i>logical-unit-number</i> advisory-options], [edit interfaces <i>interface-name</i> unit <i>logical-unit-number</i> advisory-options]</pre>
Release Information	<p>Statement introduced in Junos OS Release 11.4.</p> <p>Support at the <code>[edit interfaces demux0 ...]</code> hierarchy level introduced in Junos OS Release 12.2.</p> <p>Support at the <code>[edit dynamic-profiles ...]</code> hierarchy level introduced in Junos OS Release 13.1.</p>
Description	<p>Specify a recommended shaping rate to be applied to downstream traffic on an interface.</p> <p>For ANCP interfaces, this configured rate is used as the default value for the Juniper VSA Downstream-Calculated-Qos-Rate (26–141) when the router has not received and processed the attributes from the access node.</p> <p>For L2TP, the rate is configured on an underlying PPPoE logical interface for a subscriber on an MX Series router acting as a LAC. When the subscriber is tunneled, this rate, referred to as speed for L2TP, is sent to the LNS in the ICCN message as AVP 24.</p>
Options	<p>rate—Traffic rate in bits per second.</p> <p>Range: 1000 through 4,294,967,295 bits per second</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>Setting a Recommended Shaping Rate for Traffic on ANCP Interfaces</i> <i>Configuring the ANCP Agent</i> <i>Configuring the Method to Derive the LAC Connection Speeds Sent to the LNS</i>

duplication (Access Profile)

Syntax	duplication;
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 11.4.
Description	Configure the router to send accounting reports to both the RADIUS accounting server configured in the access profile for the wholesaler and the RADIUS accounting server configured in the access profile for the retailer.
Default	The router sends accounting reports to the accounting servers that are in the context in which the subscriber is authenticated.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>• <i>Understanding RADIUS Accounting Duplicate Reporting</i>

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 dual-stack-group <i>dual-stack-group-name</i>], [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>profile-name—Name of the dynamic profile.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</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>• <i>Configuring a Default Subscriber Service</i>

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 dual-stack-group <i>dual-stack-group-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> <p>Support at the [edit ... dual-stack-group <i>dual-stack-group-name</i>] hierarchy level introduced in Junos OS Release 15.1.</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. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</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> <i>Configuring a Default Subscriber Service</i>

dynamic-profile (Domain Map)

Syntax	<code>dynamic-profile <i>profile-name</i>;</code>
Hierarchy Level	[edit access domain map <i>domain-map-name</i>]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Dynamic profile that is used for subscriber sessions associated with the domain map.
Options	<i>profile-name</i> —Name of dynamic profile.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Specifying a Dynamic Profile in a Domain Map</i>

PART 2

E-R

- [E-R Statements on page 43](#)

CHAPTER 2

E–R Statements

- [exclude \(RADIUS Attributes\) on page 45](#)
- [family \(Address-Assignment Pools\) on page 52](#)
- [host \(Address-Assignment Pools\) on page 53](#)
- [ietf-mode on page 54](#)
- [immediate-update on page 54](#)
- [interface-description-format on page 55](#)
- [interface-set \(ANCP\) on page 56](#)
- [interfaces \(ANCP\) on page 57](#)
- [map \(Domain Map\) on page 58](#)
- [mask \(Domain Map\) on page 59](#)
- [maximum-discovery-table-entries on page 60](#)
- [maximum-helper-restart-time on page 61](#)
- [metric \(Domain Map\) on page 61](#)
- [nas-port-extended-format on page 62](#)
- [nas-port-id-format \(Subscriber Management\) on page 64](#)
- [nas-port-type \(Subscriber Management\) on page 66](#)
- [maximum-discovery-table-entries on page 68](#)
- [maximum-helper-restart-time on page 69](#)
- [network on page 69](#)
- [on-demand-ip-address on page 70](#)
- [option-82 \(Address-Assignment Pools\) on page 71](#)
- [option-match on page 72](#)
- [options \(Access Profile\) on page 73](#)
- [order on page 80](#)
- [overhead-accounting \(ANCP\) on page 81](#)
- [padn \(Domain Map\) on page 82](#)
- [parse-direction \(Domain Map\) on page 83](#)
- [pool \(Address-Assignment Pools\) on page 84](#)

- [prefix \(Address-Assignment Pools\) on page 86](#)
- [pre-ietf-mode on page 86](#)
- [profile \(Access\) on page 87](#)
- [qos-adjust on page 93](#)
- [qos-adjust-adsl on page 94](#)
- [qos-adjust-adsl2 on page 95](#)
- [qos-adjust-adsl2-plus on page 96](#)
- [qos-adjust-sdsl on page 97](#)
- [qos-adjust-vdsl on page 98](#)
- [qos-adjust-vdsl2 on page 99](#)
- [radius \(Access Profile\) on page 100](#)
- [radius-options \(Access\) on page 103](#)
- [radius-server on page 104](#)
- [range \(Address-Assignment Pools\) on page 109](#)
- [request network-access aaa subscriber add session-id](#)
- [request network-access aaa subscriber delete session-id](#)
- [request network-access aaa subscriber modify session-id](#)
- [request-rate \(Access\) on page 115](#)
- [revert-interval \(Access\) on page 116](#)

exclude (RADIUS Attributes)

```
Syntax  exclude {
    acc-aggr-cir-id-asc [ access-request | accounting-start | accounting-stop ];
    acc-aggr-cir-id-bin [ access-request | accounting-start | accounting-stop ];
    acc-loop-cir-id [ access-request | accounting-start | accounting-stop ];
    acc-loop-encap [ access-request | accounting-start | accounting-stop ];
    acc-loop-remote-id [ access-request | accounting-start | accounting-stop ];
    accounting-authentic [ accounting-off | accounting-on | accounting-start | accounting-stop
    ]
    accounting-delay-time [ accounting-off | accounting-on | accounting-start |
    accounting-stop ];
    accounting-session-id access-request;
    accounting-terminate-cause accounting-off;
    acct-request-reason [ accounting-start | accounting-stop ];
    acct-tunnel-connection [ access-request | accounting-start | accounting-stop ];
    act-data-rate-dn [ access-request | accounting-start | accounting-stop ];
    act-data-rate-up [ access-request | accounting-start | accounting-stop ];
    act-interlv-delay-dn [ access-request | accounting-start | accounting-stop ];
    act-interlv-delay-up [ access-request | accounting-start | accounting-stop ];
    att-data-rate-dn [ access-request | accounting-start | accounting-stop ];
    att-data-rate-up [ access-request | accounting-start | accounting-stop ];
    called-station-id [ access-request | accounting-start | accounting-stop ];
    calling-station-id [ access-request | accounting-start | accounting-stop ];
    chargeable-user-identity access-request;
    class [ accounting-start | accounting-stop ];
    cos-shaping-rate [ accounting-start | accounting-stop ];
    delegated-ipv6-prefix [ accounting-start | accounting-stop ];
    dhcp-gi-address [ access-request | accounting-start | accounting-stop ];
    dhcp-header access-request;
    dhcp-mac-address [ access-request | accounting-start | accounting-stop ];
    dhcp-options [ access-request | accounting-start | accounting-stop ];
    dhcpv6-header access-request;
    dhcpv6-options [ access-request | accounting-start | accounting-stop ];
    downstream-calculated-qos-rate [ access-request | accounting-start | accounting-stop
    ];
    dsl-forum-attributes [ access-request | accounting-start | accounting-stop ];
    dsl-line-state [ access-request | accounting-start | accounting-stop ];
    dsl-type [ access-request | accounting-start | accounting-stop ];
    dynamic-iflset-name [ accounting-start | accounting-stop ];
    event-timestamp [ accounting-off | accounting-on | accounting-start | accounting-stop
    ];
    filter-id [ accounting-start | accounting-stop ];
    first-relay-ipv4-address [ access-request | accounting-start | accounting-stop ];
    first-relay-ipv6-address [ access-request | accounting-start | accounting-stop ];
    framed-interface-id [ access-request | accounting-start | accounting-stop ];
    framed-ip-address [ access-request | accounting-start | accounting-stop ];
    framed-ip-netmask [ access-request | accounting-start | accounting-stop ];
    framed-ip-route [ accounting-start | accounting-stop ];
    framed-ipv6-address [ access-request | accounting-start | accounting-stop ];
    framed-ipv6-pool [ accounting-start | accounting-stop ];
    framed-ipv6-prefix [ accounting-start | accounting-stop ];
    framed-ipv6-route [ accounting-start | accounting-stop ];
```

```

framed-pool [ accounting-start | accounting-stop ]; input-ipv6-gigawords accounting-stop;
input-filter [ accounting-start | accounting-stop ];
input-gigapackets accounting-stop;
input-gigawords accounting-stop;
input-ipv6-octets accounting-stop;
input-ipv6-packets accounting-stop;
interface-description [ access-request | accounting-start | accounting-stop ];
l2c-downstream-data [ access-request | accounting-start | accounting-stop ];
l2c-upstream-data [ access-request | accounting-start | accounting-stop ];
l2tp-rx-connect-speed [ access-request | accounting-start | accounting-stop ];
l2tp-tx-connect-speed [ access-request | accounting-start | accounting-stop ];
max-data-rate-dn [ access-request | accounting-start | accounting-stop ];
max-data-rate-up [ access-request | accounting-start | accounting-stop ];
max-interlv-delay-dn [ access-request | accounting-start | accounting-stop ];
max-interlv-delay-up [ access-request | accounting-start | accounting-stop ];
min-data-rate-dn [ access-request | accounting-start | accounting-stop ];
min-data-rate-up [ access-request | accounting-start | accounting-stop ];
min-lp-data-rate-dn [ access-request | accounting-start | accounting-stop ];
min-lp-data-rate-up [ access-request | accounting-start | accounting-stop ];
nas-identifier [ access-request | accounting-off | accounting-on | accounting-start |
    accounting-stop ];
nas-port [ access-request | accounting-start | accounting-stop ];
nas-port-id [ access-request | accounting-start | accounting-stop ];
nas-port-type [ access-request | accounting-start | accounting-stop ];
output-filter [ accounting-start | accounting-stop ];
output-gigapackets accounting-stop;
output-gigawords accounting-stop;
output-ipv6-gigawords accounting-stop;
output-ipv6-octets accounting-stop;
output-ipv6-packets accounting-stop;
pppoe-description [ access-request | accounting-start | accounting-stop ];
standard-attribute number {
    packet-type [ access-request | accounting-off | accounting-on | accounting-start |
        accounting-stop ];
}
tunnel-assignment-id [ access-request | accounting-start | accounting-stop ];
tunnel-client-auth-id [ access-request | accounting-start | accounting-stop ];
tunnel-client-endpoint [ access-request | accounting-start | accounting-stop ];
tunnel-medium-type [ access-request | accounting-start | accounting-stop ];
tunnel-server-auth-id [ access-request | accounting-start | accounting-stop ];
tunnel-server-endpoint [ access-request | accounting-start | accounting-stop ];
tunnel-type [ access-request | accounting-start | accounting-stop ];
upstream-calculated-qos-rate [ access-request | accounting-start | accounting-stop ];
vendor-id id-number {
    vendor-attribute vsa-number {
        packet-type [ access-request | accounting-off | accounting-on | accounting-start |
            accounting-stop ];
    }
}
virtual-router [ access-request | accounting-start | accounting-stop ];
}

```

Hierarchy Level [edit access profile *profile-name* radius [attributes](#)]

Release Information Statement introduced in Junos OS Release 9.1.
 Statement introduced in Junos OS Release 9.1 for EX Series switches.
downstream-calculated-qos-rate, **dsl-forum-attributes**, and **upstream-calculated-qos-rate** options added in Junos OS Release 11.4.
cos-shaping-rate and **filter-id** options added in Junos OS Release 13.2.
pppoe-description option added in Junos OS Release 14.2.
virtual-router option added in Junos OS Release 15.1.
first-relay-ipv4-address and **first-relay-ipv6-address** options added in Junos OS Release 16.1.
acc-loop-encap and **acc-loop-remote-id** options added in Junos OS Release 16.1R4.
access-request option support for all tunnel attributes added in Junos OS Release 15.1R7, 16.1R5, 16.2R2, 17.1R2, 17.2R2, and 17.3R1 for MX Series.
packet-type, **standard-attribute**, **vendor-attribute**, and **vendor-id** options added in Junos OS Release 18.1R1.

Description Configure the router or switch to exclude the specified attributes from being sent in the specified type of RADIUS message. Exclusion can be useful, for example, for attributes that do not change values over the lifetime of a subscriber. By not sending these attributes, you reduce the packet size without losing information. Contrast this behavior with that provided by the **ignore** statement.

You can specify attribute exclusion for multiple RADIUS message types by enclosing the message types, separated by spaces, within brackets ([]). You do not need brackets when specifying a single message type.

Starting in Junos OS Release 18.1R1, you can specify standard RADIUS attributes with the attribute number. You can specify VSAs with the IANA-assigned vendor ID and the VSA number. With this flexible configuration method, you can configure any standard attribute and VSA supported by your platform to be excluded. The configuration has no effect if you configure unsupported attributes, vendors, and VSAs.

The legacy method allows you to configure only those attributes and VSAs for which the statement syntax includes a specific option. Consequently, you can use the legacy method to exclude only a subset of all attributes that can be received in Access-Accept messages.

Not all attributes are available in all types of RADIUS messages.



NOTE: If you exclude an attribute from Acct-Off messages, the attributes are then excluded from Interim-Acct messages.



NOTE: VSAs with dedicated option names include Juniper Networks (IANA vendor ID 4874) and DSL Forum (vendor ID 3561) VSAs.

Options RADIUS attribute—RADIUS standard attribute or VSA:

- **acc-aggr-cir-id-asc**—Exclude Juniper Networks VSA 26-112, Acc-Aggr-Cir-Id-Asc.
- **acc-aggr-cir-id-bin**—Exclude Juniper Networks VSA 26-111, Acc-Aggr-Cir-Id-Bin.
- **acc-loop-cir-id**—Exclude Juniper Networks VSA 26-110, Acc-Loop-Cir-Id.
- **acc-loop-encap**—Exclude Juniper Networks VSA 26-183, Acc-Loop-Encap.
- **acc-loop-remote-id**—Exclude Juniper Networks VSA 26-182, Acc-Loop-Remote-Id.
- **accounting-authentic**—Exclude RADIUS attribute 45, Acct-Authentic.
- **accounting-delay-time**—Exclude RADIUS attribute 41, Acct-Delay-Time.
- **accounting-session-id**—Exclude RADIUS attribute 44, Acct-Session-Id.
- **accounting-terminate-cause**—Exclude RADIUS attribute 49, Acct-Terminate-Cause.
- **acct-request-reason**—Exclude Juniper Networks VSA 26-210, Acct-Request-Reason.
- **acct-tunnel-connection**—Exclude RADIUS attribute 68, Acct-Tunnel-Connection.
- **act-data-rate-dn**—Exclude Juniper Networks VSA 26-114, Act-Data-Rate-Dn.
- **act-data-rate-up**—Exclude Juniper Networks VSA 26-113, Act-Data-Rate-Up.
- **act-interlv-delay-dn**—Exclude Juniper Networks VSA 26-126, Act-Interlv-Delay-Dn.
- **act-interlv-delay-up**—Exclude Juniper Networks VSA 26-124, Act-Interlv-Delay-Up.
- **att-data-rate-dn**—Exclude Juniper Networks VSA 26-118, Att-Data-Rate-Dn.
- **att-data-rate-up**—Exclude Juniper Networks VSA 26-117, Att-Data-Rate-Up.
- **called-station-id**—Exclude RADIUS attribute 30, Called-Station-Id.
- **calling-station-id**—Exclude RADIUS attribute 31, Calling-Station-Id.
- **chargeable-user-identity**—Exclude RADIUS attribute 89, Chargeable-User-Identity.
- **class**—Exclude RADIUS attribute 25, Class.
- **cos-shaping-rate**—Exclude Juniper Networks VSA 26-177, Cos-Shaping-Rate.
- **delegated-ipv6-prefix**—Exclude RADIUS attribute 123, Delegated-IPv6-Prefix.
- **dhcp-gi-address**—Exclude Juniper Networks VSA 26-57, DHCP-GI-Address.
- **dhcp-header**—Exclude Juniper Networks VSA 26-208, DHCP-Header.
- **dhcp-mac-address**—Exclude Juniper Networks VSA 26-56, DHCP-MAC-Address.
- **dhcp-options**—Exclude Juniper Networks VSA 26-55, DHCP-Options.
- **dhcpv6-header**—Exclude Juniper Networks VSA 26-209, DHCPv6-Header.
- **dhcpv6-options**—Exclude Juniper Networks VSA 26-207, DHCPv6-Options.
- **dynamic-iflset-name**—Exclude Juniper Networks VSA 26-130, Qos-Set-Name.
- **downstream-calculated-qos-rate**—Exclude Juniper Networks VSA 26-141.

- **dsl-forum-attributes**—Exclude DSL Forum VSA (vendor ID 3561) as described in RFC 4679, *DSL Forum Vendor-Specific RADIUS Attributes*.
- **dsl-line-state**—Exclude Juniper Networks VSA 26-127, DSL-Line-State.
- **dsl-type**—Exclude Juniper Networks VSA 26-128, DSL-Type.
- **event-timestamp**—Exclude RADIUS attribute 55, Event-Timestamp.
- **filter-id**—Exclude RADIUS attribute 11, Filter-Id.
- **first-relay-ipv4-address** —Exclude Juniper Networks VSA 26-189, DHCP-First-Relay-IPv4-Address.
- **first-relay-ipv6-address** —Exclude Juniper Networks VSA 26-190, DHCP-First-Relay-IPv6-Address.
- **framed-interface-id**—Exclude RADIUS attribute 96, Framed-Interface-ID.
- **framed-ip-address**—Exclude RADIUS attribute 8, Framed-IP-Address.
- **framed-ip-netmask**—Exclude RADIUS attribute 9, Framed-IP-Netmask.
- **framed-ip-route**—Exclude RADIUS attribute 22, Framed-Route.
- **framed-ipv6-address**—Exclude RADIUS attribute 168, Framed-IPv6-Address.
- **framed-ipv6-pool**—Exclude RADIUS attribute 100, Framed-IPv6-Pool.
- **framed-ipv6-prefix**—Exclude RADIUS attribute 97, Framed-IPv6-Prefix.
- **framed-ipv6-route**—Exclude RADIUS attribute 99, Framed-IPv6-Route.
- **framed-pool**—Exclude RADIUS attribute 88, Framed-Pool.
- **input-filter**—Exclude Juniper Networks VSA 26-10, Ingress-Policy-Name.
- **input-gigapackets**—Exclude Juniper Networks VSA 26-42, Acct-Input-Gigapackets.
- **input-gigawords**—Exclude RADIUS attribute 52, Acct-Input-Gigawords.
- **input-ipv6-gigawords**—Exclude Juniper Networks VSA 26-155, Acct-Input-IPv6-Gigawords.
- **input-ipv6-octets**—Exclude Juniper Networks VSA 26-151, Acct-Input-IPv6-Octets.
- **input-ipv6-packets**—Exclude Juniper Networks VSA 26-153, Acct-Input-IPv6-Packets.
- **interface-description**—Exclude Juniper Networks VSA 26-53, Interface-Desc.
- **l2c-downstream-data**—Exclude Juniper Networks VSA 26-93, L2C-Down-Stream-Data.
- **l2c-upstream-data**—Exclude Juniper Networks VSA 26-92, L2C-Up-Stream-Data.
- **l2tp-rx-connect-speed**—Exclude Juniper Networks VSA 26-163, Rx-Connect-Speed.
- **l2tp-tx-connect-speed**—Exclude Juniper Networks VSA 26-162, Tx-Connect-Speed.
- **max-data-rate-dn**—Exclude Juniper Networks VSA 26-120, Max-Data-Rate-Dn.
- **max-data-rate-up**—Exclude Juniper Networks VSA 26-119, Max-Data-Rate-Up.
- **max-interlv-delay-dn**—Exclude Juniper Networks VSA 26-125, Max-Interlv-Delay-Dn.

- **max-interlv-delay-up**—Exclude Juniper Networks VSA 26-123, Max-Interlv-Delay-Up.
- **min-data-rate-dn**—Exclude Juniper Networks VSA 26-116, Min-Data-Rate-Dn.
- **min-data-rate-up**—Exclude Juniper Networks VSA 26-115, Min-Data-Rate-Up.
- **min-lp-data-rate-dn**—Exclude Juniper Networks VSA 26-122, Min-Lp-Data-Rate-Dn.
- **min-lp-data-rate-up**—Exclude Juniper Networks VSA 26-121, Min-Lp-Data-Rate-Up.
- **nas-identifier**—Exclude RADIUS attribute 32, NAS-Identifier.
- **nas-port**—Exclude RADIUS attribute 5, NAS-Port.
- **nas-port-id**—Exclude RADIUS attribute 87, NAS-Port-Id.
- **nas-port-type**—Exclude RADIUS attribute 61, NAS-Port-Type.
- **output-filter**—Exclude Juniper Networks VSA 26-11, Egress-Policy-Name.
- **output-gigapackets**—Exclude Juniper Networks VSA 26-43, Acct-Output-Gigapackets.
- **output-gigawords**—Exclude RADIUS attribute 53, Acct-Output-Gigawords.
- **output-ipv6-gigawords**—Exclude Juniper Networks VSA 26-156, Acct-Output-IPv6-Gigawords.
- **output-ipv6-octets**—Exclude Juniper Networks VSA 26-152, Acct-Output-IPv6-Octets.
- **output-ipv6-packets**—Exclude Juniper Networks VSA 26-154, Acct-Output-IPv6-Packets.
- **packet-type**—Specify the RADIUS message type to exclude; term required when excluding a standard attribute or VSA by number rather than name. You can enclose multiple values in square brackets to specify a list of message types. Message types include Access-Request, Accounting-Off, Accounting-Off, Accounting-Start, and Accounting-Stop.
- **pppoe-description**—Exclude Juniper Networks VSA 26-24, PPPoE-Description.
- **standard-attribute *number***—RADIUS standard attribute number supported by your platform. If you configure an unsupported attribute, that configuration has no effect. When you use this option, you must use the **packet-type** term to specify the message from which the attribute is excluded.
- **tunnel-assignment-id**—Exclude RADIUS attribute 82, Tunnel-Assignment-ID.
- **tunnel-client-auth-id**—Exclude RADIUS attribute 90, Tunnel-Client-Auth-ID.
- **tunnel-client-endpoint**—Exclude RADIUS attribute 66, Tunnel-Client-Endpoint.
- **tunnel-medium-type**—Exclude RADIUS attribute 65, Tunnel-Medium-Type.
- **tunnel-server-auth-id**—Exclude RADIUS attribute 91, Tunnel-Server-Auth-ID.
- **tunnel-server-endpoint**—Exclude RADIUS attribute 67, Tunnel-Server-Endpoint.
- **tunnel-type**—Exclude RADIUS attribute 64, Tunnel-Type.
- **upstream-calculated-qos-rate**—Exclude Juniper Networks VSA 26-142

- **vendor-attribute** *vsa-number*—Number identifying a VSA belonging to the specified vendor; both must be supported by your platform. If you configure an unsupported VSA, that configuration has no effect. When you use this option, you must use the **packet-type** term to specify the message from which the attribute is excluded.
- **vendor-id** *id-number*—IANA vendor ID supported by your platform. If you configure an unsupported vendor ID, that configuration has no effect.
- **virtual-router**—Exclude Juniper Networks VSA 26-1.

RADIUS message type:

- **access-request**—RADIUS Access-Request messages.
- **accounting-off**—RADIUS Accounting-Off messages.
- **accounting-on**—RADIUS Accounting-On messages.
- **accounting-start**—RADIUS Accounting-Start messages.
- **accounting-stop**—RADIUS Accounting-Stop messages.

Required Privilege	admin—To view this statement in the configuration.
Level	admin-control—To add this statement to the configuration.

Related Documentation	<ul style="list-style-type: none">• <i>Filtering RADIUS Attributes and VSAs from RADIUS Messages</i>• <i>RADIUS Servers and Parameters for Subscriber Access</i>• <i>Standard and Vendor-Specific RADIUS Attributes</i>
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family (Address-Assignment Pools)

Syntax

```
family family {
  dhcp-attributes {
    [protocol-specific attributes]
  }
  excluded-address ip-address;
  excluded-range name low minimum-value high maximum-value;
  host hostname {
    hardware-address mac-address;
    ip-address ip-address;
  }
  network ip-prefix / <prefix-length>;
  prefix ipv6-prefix;
  range range-name {
    high upper-limit;
    low lower-limit;
    prefix-length prefix-length;
  }
}
```

Hierarchy Level [edit access address-assignment [pool](#) *pool-name*]

Release Information Statement introduced in Junos OS Release 9.0.
Statement introduced in Junos OS Release 12.3 for EX Series switches.

Description Configure the protocol family for the address-assignment pool.



NOTE: Subordinate statement support depends on the platform. See individual statement topics for more detailed support information.

Options *family*—Protocol family:

- **inet**—Internet Protocol version 4 suite
- **inet6**—Internet Protocol version 6 suite

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- [Address-Assignment Pools Overview](#)
- [Address-Assignment Pool Configuration Overview](#)

host (Address-Assignment Pools)

Syntax	<pre>host <i>hostname</i> { hardware-address <i>mac-address</i>; ip-address <i>ip-address</i>; }</pre>
Hierarchy Level	[edit access address-assignment pool <i>pool-name</i> family (inet inet6)]
Release Information	Statement introduced in Junos OS Release 9.0.
Description	Configure a static binding for the specified client.
Options	<p><i>hostname</i>—Name of the client.</p> <p>hardware-address <i>mac-address</i>—(M Series, MX Series, SRX Series, T Series only) Specify the MAC address of the client. This is the hardware address that identifies the client on the network.</p> <ul style="list-style-type: none"> • <i>mac-address</i>—MAC address of the client. <p>ip-address <i>ip-address</i>—(SRX Series, T Series only) Specify the reserved IP address assigned to the client.</p> <ul style="list-style-type: none"> • <i>ip-address</i>—IP version 4 (IPv4) address.
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Address-Assignment Pools Overview</i> • <i>Address-Assignment Pool Configuration Overview</i> • <i>Configuring Static Address Assignment</i>

ietf-mode

Syntax	ietf-mode
Hierarchy Level	[edit protocols ancp neighbor <i>ip-address</i>]
Release Information	Statement introduced in Junos OS Release 9.5.
Description	Configure the ANCP agent to run in a mode that is not backward compatible with Internet draft-wadhwa-gsmp-l2control-configuration-00.txt, <i>GSMP extensions for layer2 control (L2C)</i> . Include this statement when pre-ietf mode has been configured globally for the ANCP agent, but you want one or more neighbors to run in the default mode.
Default	ANCP does not run in a backward-compatible mode.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Configuring ANCP Neighbors</i>

immediate-update

Syntax	immediate-update;
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
Description	Configure the router or switch to send an Acct-Update message to the RADIUS accounting server on receipt of a response (for example, an ACK or timeout) to the Acct-Start message.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Per-Subscriber Session Accounting</i>• <i>RADIUS Servers and Parameters for Subscriber Access</i>

interface-description-format

Syntax	<pre>interface-description-format { exclude-adapter; exclude-channel; exclude-sub-interface; }</pre>
Hierarchy Level	[edit access profile <i>profile-name</i> radius options]
Release Information	<p>Statement introduced in Junos OS Release 9.1.</p> <p>Statement introduced in Junos OS Release 9.1 for EX Series switches.</p> <p>exclude-adapter and exclude-sub-interface options added in Junos OS Release 10.4.</p> <p>exclude-channel option added in Junos OS Release 17.3R1.</p>
Description	<p>Specify the information that is excluded from the interface description that the device passes to RADIUS for inclusion in the RADIUS attributes such as NAS-Port-ID (87) or Calling-Station-ID (31).</p> <p>The default format for nonchannelized interfaces is as follows:</p> <p><i>interface-type-slot/adapter/port.subinterface[:svlan-vlan]</i></p> <p>For example, consider physical interface ge-1/2/0, with a subinterface of 100 and SVLAN identifier of 100. The interface description used in the NAS-Port-ID is ge-1/2/0.100:100. If you exclude the subinterface, the description becomes ge-1/2/0:100.</p> <p>The default format for channelized interfaces is as follows:</p> <p><i>interface-type-slot/adapter/channel.subinterface[:svlan-vlan]</i></p> <p>The channel information (logical port number) is determined by this formula:</p> <p>Logical port number = $100 + (actual-port-number \times 20) + channel-number$.</p> <p>For example, consider a channelized interface 3 on port 2 where the:</p> <ul style="list-style-type: none"> Physical interface is xe-0/1/2:3. Subinterface is 4. SVLAN is 5. VLAN is 6. <p>Using the formula, the logical port number = $100 + (2 \times 20) + 3 = 143$. Consequently, the default interface description is xe-0/1/143.4-5.6. If you exclude the channel information, the description becomes xe-0/1/2.4-5.6.</p>
Options	exclude-adapter —(Optional) Exclude the adapter from the interface description.

exclude-channel—(Optional) Exclude the channel information from the interface description.

exclude-sub-interface—(Optional) Exclude the subinterface from the interface description.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Interface Text Descriptions for Inclusion in RADIUS Attributes*
- *RADIUS Servers and Parameters for Subscriber Access*

interface-set (ANCP)

Syntax

```
interface-set interface-set-name {  
    access-identifier identifier-string;  
    underlying-interface underlying-interface-name;  
}
```

Hierarchy Level [edit protocols ancp [interfaces](#)]

Release Information Statement introduced in Junos OS Release 9.4.

Description Identify a group of VLANs on which traffic is sent to a subscriber identified by the access-loop circuit identifier.

Options *interface-set-name*—Name of a group of VLANs that carry traffic to the subscriber identified by the access loop circuit identifier.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

Related Documentation

- *Configuring the ANCP Agent*
- *Associating an Access Node with Subscribers for ANCP Agent Operations*

interfaces (ANCP)

Syntax	<pre> interfaces { interface-set interface-set-name { access-identifier identifier-string; underlying-interface underlying-interface-name; } interface-name { access-identifier identifier-string } } </pre>
Hierarchy Level	[edit protocols ancp]
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Identify the subscribers whose traffic is reported and shaped by the ANCP agent.
Options	<p>interface-name—Name of a logical interface supporting a single VLAN that carries traffic to the subscriber identified by the access-loop circuit identifier.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</p>
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> <i>Configuring the ANCP Agent</i> <i>Associating an Access Node with Subscribers for ANCP Agent Operations</i>

map (Domain Map)

```
Syntax map domain-map-name {
    aaa-logical-system logical-system-name {
        aaa-routing-instance routing-instance-name;
    }
    aaa-routing-instance routing-instance-name;
    access-profile profile-name;
    address-pool pool-name;
    dynamic-profile profile-name;
    padn destination-address {
        mask destination-mask;
        metric route-metric;
    }
    strip-domain;
    strip-username (left-to-right | right-to-left);
    override-password password;
    target-logical-system logical-system-name {
        target-routing-instance routing-instance-name;
    }
    target-routing-instance routing-instance-name;
    tunnel-profile profile-name;
    tunnel-switch-profile profile-name;
}
```

Hierarchy Level [edit access **domain**]

Release Information Statement introduced in Junos OS Release 10.4.
override-password and **strip-username** options introduced in Junos OS Release 15.1.
 wildcard character introduced in Junos OS Release 16.1.

Description Specify the domain map to use to map options and parameters to subscriber sessions based on the subscriber domain.

Options **domain-map-name**—Name of the domain map. The name is the same as the subscriber domain to which it will apply. For example, for the username **user1@example.com**, the domain map name is **example.com**.

- ***** —Use the asterisk wildcard character in the **domain-map-name** to specify a wildcard domain map, which enables mapping based on a partial match (for example, **xyz*northern.example.com**). The router performs the wildcard lookup when there is no exact match for the subscriber domain name. The wildcard can appear anywhere within the domain name string, and can match zero or more characters. The asterisk is the only wildcard character, and only one wildcard is supported in a domain map name. If you include multiple asterisks, the first asterisk is treated as the wildcard character and the others are treated as non-wildcard characters.

- **default**—Use a domain map name of **default** to specify the domain map that the router uses when there is no exact or wildcard match for the domain or realm name in the subscriber username.
- **none**—Use a domain map name of **none** to specify the domain map the router uses when a subscriber username does not have a domain or realm name.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Configuring a Domain Map*

mask (Domain Map)

Syntax `mask destination-mask;`

Hierarchy Level [edit access domain [map](#) domain-map-name [padn](#) destination-address]

Release Information Statement introduced in Junos OS Release 10.4.

Description Configure the IP mask of the destination used in the PADN parameters for a domain map.

Options *destination-mask*—Subnet mask of the destination.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Configuring PADN Parameters for a Domain Map*

maximum-discovery-table-entries

Syntax	<code>maximum-discovery-table-entries <i>entry-number</i>;</code>
Hierarchy Level	<code>[edit protocols ancp],</code> <code>[edit protocols ancp neighbor <i>ip-address</i>]</code>
Release Information	Statement introduced in Junos OS Release 9.5.
Description	Specify the maximum number of discovery table entries accepted from all ANCP neighbors or from a particular ANCP neighbor. The number of entries configured for an individual neighbor supersedes the global value. The neighbor can continue to update previously created entries when the maximum has been exceeded, but no new entries are accepted.
Default	No limit on the number of table entries
Options	<i>entry-number</i> —Maximum number of discovery table entries. Range: 1 through 100,000 Default: 100,000
Required Privilege Level	routing —To view this statement in the configuration. routing-control —To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Configuring ANCP Neighbors</i>

maximum-helper-restart-time

Syntax	<code>maximum-helper-restart-time <i>seconds</i>;</code>
Hierarchy Level	<code>[edit protocols ancp]</code>
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Specify how long other router processes wait for the ANCP agent to restart before considering it to be down.
Options	<p><i>seconds</i>—Number of seconds other processes wait for ANCP to restart.</p> <p>Range: 45 through 600 seconds</p> <p>Default: 45 seconds</p>
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring the ANCP Agent</i> • <i>Specifying How Long Processes Wait for the ANCP Agent Restart to Complete</i>

metric (Domain Map)

Syntax	<code>metric <i>route-metric</i>;</code>
Hierarchy Level	<code>[edit access domain map <i>domain-map-name</i> padn <i>destination-address</i>]</code>
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Configure the route metric PADN parameter for a domain map.
Options	<p><i>route-metric</i>—Value assigned to the route.</p> <p>Range: 0 through 255</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring PADN Parameters for a Domain Map</i>

nas-port-extended-format

Syntax

```
nas-port-extended-format {
  adapter-width bits;
  ae-width bits;
  atm {
    adapter-width bits;
    port-width bits;
    slot-width bits;
    vci-width bits;
    vpi-width bits;
  }
  port-width bits;
  pw-width bits;
  slot-width bits;
  stacked-vlan-width bits;
  vlan-width bits;
}
```

Hierarchy Level [edit access profile *profile-name* radius [options](#)]

Release Information

Statement introduced in Junos OS Release 9.1.
 Statement introduced in Junos OS Release 9.1 for EX Series switches.
ae-width option added in Junos OS Release 12.1.
atm option added in Junos OS Release 12.3R3 and supported in later 12.3Rx releases.
atm option supported in Junos OS Release 13.2 and later releases. (Not supported in Junos OS Release 13.1.)
pw-width option added in Junos OS Release 15.1.

Description Configure the RADIUS client to use the extended format for RADIUS attribute 5 (NAS-Port) and specify the width in bits of the fields in the NAS-Port attribute.

The NAS-Port attribute specifies the physical port number of the NAS that is authenticating the user, and is formed by a combination of the physical port's slot number, port number, adapter number, VLAN ID, and S-VLAN ID. The NAS-Port extended format specifies the number of bits (bit width) for each field in the NAS-Port attribute: slot, adapter, port, aggregated, Ethernet, VLAN, and S-VLAN.



NOTE: The combined total of the widths of all fields for a subscriber must not exceed 32 bits, or the configuration fails. The router may truncate the values of individual fields depending on the bit width you specify.

Options **adapter-width *width***—Number of bits in the adapter field.

ae-width *width*—(Ethernet subscribers only) Number of bits in the aggregated Ethernet identifier field.

atm—Specify width for fields for ATM subscribers.

port-width *width*—Number of bits in the port field.

pw-width *width*—(Ethernet subscribers only) Number of bits in the pseudowire field. Appears in the Cisco NAS-Port-Info AVP (100).

slot-width *width*—Number of bits in the slot field.

stacked-vlan-width *width*—Number of bits in the SVLAN ID field.

vci-width *width*—(ATM subscribers only) Number of bits in the ATM virtual circuit identifier (VCI) field.

vlan-width *width*—Number of bits in the VLAN ID field.

vpi-width *width*—(ATM subscribers only) Number of bits in the ATM virtual path identifier (VPI) field.



NOTE: The total of the widths must not exceed 32 bits, or the configuration will fail.

Required Privilege Level

admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Configuring Access Profile Options for Interactions with RADIUS Servers*
- *RADIUS Servers and Parameters for Subscriber Access*

nas-port-id-format (Subscriber Management)

Syntax	<pre>nas-port-id-format { agent-circuit-id; agent-remote-id; interface-description; interface-text-description; nas-identifier; order (agent-circuit-id agent-remote-id interface-description interface-text-description nas-identifier postpend-vlan-tags); postpend-vlan-tags; }</pre>
Hierarchy Level	[edit access profile <i>profile-name</i> radius options]
Release Information	<p>Statement introduced in Junos OS Release 11.4.</p> <p>Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.</p> <p>Options interface-text-description, order, and postpend-vlan-tags introduced in Junos OS Release 15.1.</p>
Description	<p>Specify the optional information that the router includes in the NAS-Port-ID (RADIUS attribute 87) that is passed to the RADIUS server during authentication and accounting. You can include any combination of the optional values.</p> <p>When you specify the values for the NAS-Port-ID, you can configure the values to appear in either the default order or a custom order of your choice.</p>



NOTE: The default and custom order methods are mutually exclusive. The configuration fails if you attempt to configure a NAS-Port-ID that includes values in both types of orders.

To specify that the optional values appear in the default order in the NAS-Port-ID, configure the values directly under the **nas-port-id-format** statement. The default order is as follows, in which the **#** character is the delimiter:

```
nas-identifier # interface-description # interface-text-description # agent-circuit-id #
agent-remote-id # postpend-vlan-tags
```

To specify a custom order for the NAS-Port-ID string, you use the **order** option. Include the **order** option before each optional value you want to include in the string, in the order in which you want the options to appear. For example, the configuration, **order interface-text-description order nas-identifier order agent-remote-id** produces the following NAS-Port-ID, in which the **#** character is the delimiter:

```
interface-text-description # nas-identifier # agent-remote-id
```

Default	The router includes the interface description in the NAS-Port-ID when no optional values are specified.
Options	<p>agent-circuit-id—Include the agent circuit ID from either DHCP option 82 or the DSL forum VSAs.</p> <p>agent-remote-id—Include the agent remote ID from either DHCP option 82 or the DSL forum VSAs.</p> <p>interface-description—Include the interface description (interface identifier).</p> <p>interface-text-description—Include the textual interface description (the text description that is statically configured in the CLI).</p> <p>nas-identifier—Include the NAS identifier value (RADIUS attribute 32).</p> <p>order—Specify the optional values you want to include in the NAS-Port-ID and the customized order in which you want the values to appear. You must include the order option before each optional value (for example, order agent-circuit-id order interface-description).</p> <p>postpend-vlan-tags—Include the VLAN tags. The router includes the tags in the format :<outer-tag>-<inner-tag> for a double-tagged VLAN, or :<outer-tag> for a single-tagged VLAN.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Access Profile Options for Interactions with RADIUS Servers</i>• <i>Configuring a NAS-Port-ID with Additional Options</i>• <i>RADIUS Servers and Parameters for Subscriber Access</i>

nas-port-type (Subscriber Management)

Syntax

```
nas-port-type {  
  ethernet {  
    port-type;  
  }  
}
```

Hierarchy Level [edit access profile *profile-name* radius [options](#)]

Release Information Statement introduced in Junos OS Release 11.4.
Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.

Description Specify the port type used to authenticate subscribers. The router includes the port type in RADIUS attribute 61 (NAS-Port-Type attribute).



NOTE: This statement is ignored if the `ethernet-port-type-virtual` statement is included in the same access profile.

Default The router uses a port type of **ethernet**.

Options *port-type*—One of the following port types:

- *value*—A value from 0-65535
- **adsl-cap**—Asymmetric DSL, carrierless amplitude phase (CAP) modulation
- **adsl-dmt**—Asymmetric DSL, discrete multitone (DMT)
- **async**—Asynchronous
- **cable**—Cable
- **ethernet**—Ethernet
- **fddi**—Fiber Distributed Data Interface
- **g3-fax**—G.3 Fax
- **hdlc-clear-channel**—HDLC Clear Channel
- **iapp**—Inter-Access Point Protocol (IAPP)
- **isdsl**—ISDN DSL
- **isdsl-sync**—ISDN Synchronous
- **isdsl-async-v110**—ISDN Async V.110
- **isdsl-async-v120**—ISDN Async V.120

- **piafs**—Personal Handyphone System (PHS) Internet Access Forum Standard
- **sdsl**—Symmetric DSL
- **sync**—Synchronous
- **token-ring**—Token Ring
- **virtual**—Virtual
- **wireless**—Other wireless
- **wireless-1x-ev**—Wireless 1xEV
- **wireless-cdma2000**—Wireless code division multiple access (CDMA) 2000
- **wireless-ieee80211**—Wireless 802.11
- **wireless-umts**—Wireless universal mobile telecommunications system (UMTS)
- **x25**—X.25
- **x75**—X.75
- **xdsl**—DSL of unknown type

Required Privilege	admin—To view this statement in the configuration.
Level	admin-control—To add this statement to the configuration.

Related Documentation	<ul style="list-style-type: none">• <i>Configuring Access Profile Options for Interactions with RADIUS Servers</i>• <i>RADIUS Servers and Parameters for Subscriber Access</i>
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maximum-discovery-table-entries

Syntax	<code>maximum-discovery-table-entries <i>entry-number</i>;</code>
Hierarchy Level	<code>[edit protocols ancp],</code> <code>[edit protocols ancp neighbor <i>ip-address</i>]</code>
Release Information	Statement introduced in Junos OS Release 9.5.
Description	Specify the maximum number of discovery table entries accepted from all ANCP neighbors or from a particular ANCP neighbor. The number of entries configured for an individual neighbor supersedes the global value. The neighbor can continue to update previously created entries when the maximum has been exceeded, but no new entries are accepted.
Default	No limit on the number of table entries
Options	<i>entry-number</i> —Maximum number of discovery table entries. Range: 1 through 100,000 Default: 100,000
Required Privilege Level	<code>routing</code> —To view this statement in the configuration. <code>routing-control</code> —To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Configuring ANCP Neighbors</i>

maximum-helper-restart-time

Syntax	<code>maximum-helper-restart-time seconds;</code>
Hierarchy Level	[edit protocols ancp]
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Specify how long other router processes wait for the ANCP agent to restart before considering it to be down.
Options	<p>seconds—Number of seconds other processes wait for ANCP to restart.</p> <p>Range: 45 through 600 seconds</p> <p>Default: 45 seconds</p>
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring the ANCP Agent</i> • <i>Specifying How Long Processes Wait for the ANCP Agent Restart to Complete</i>

network

Syntax	<code>network ip-prefix</prefix-length>;</code>
Hierarchy Level	[edit access address-assignment pool <i>pool-name</i> family inet]
Release Information	Statement introduced in Junos OS Release 9.0.
Description	Configure subnet information for an IPv4 address-assignment pool.
Options	<p>ip-prefix—IP version 4 address or prefix value.</p> <p>prefix-length—(Optional) Subnet mask.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Address-Assignment Pool Configuration Overview</i>

on-demand-ip-address

Syntax	on-demand-ip-address;
Hierarchy Level	[edit dynamic-profiles <i>profile-name</i> interfaces "\$junos-interface-ifd-name" unit "\$junos-interface-unit"]. [edit dynamic-profiles <i>profile-name</i> interfaces pp0 unit "\$junos-interface-unit" ppp-options], [edit interfaces pp0 unit <i>unit-number</i> ppp-options], [edit protocols ppp-service]
Release Information	Statement introduced in Junos OS Release 13.1.
Description	<p>For IPv4 and IPv6 dual-stack PPP subscribers, enables on-demand allocation and de-allocation of an IPv4 address after initial PPP authentication for a subscriber who does not have an existing IPv4 address.</p> <p>Configuration changes take effect as follows:</p> <ul style="list-style-type: none">• When you change this setting for a dynamic PPP interface (at the [edit dynamic-profiles] hierarchy level), the change takes effect only for new subscriber logins.• When you change this setting for a static PPP interface (at the [edit interfaces pp0] hierarchy level), the subscribers on the interface are logged out.• When you change this setting globally (at the [edit protocols ppp-service] hierarchy level), the change takes effect only for new subscriber logins. <p>If you enable on-demand allocation at both the interface and global levels, the global configuration takes precedence and changes take effect for new subscriber logins.</p>
Default	This functionality is disabled by default.
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>Conserving IPv4 Addresses for Dual-Stack PPP Subscribers Using On-Demand IPv4 Address Allocation</i>• <i>Configuring Static On-Demand IPv4 Address Allocation for Dual-Stack PPP Subscribers</i>• <i>Configuring Dynamic On-Demand IPv4 Address Allocation for Dual-Stack PPP Subscribers</i>• <i>Configuring Global On-Demand IPv4 Address Allocation for Dual-Stack PPP Subscribers</i>

option-82 (Address-Assignment Pools)

Syntax	<pre>option-82 { circuit-id <i>value</i> range <i>named-range</i>; remote-id <i>value</i> range <i>named-range</i>; }</pre>
Hierarchy Level	[edit access address-assignment pool <i>pool-name</i> family inet dhcp-attributes option-match], [edit access protocol-attributes <i>attribute-set-name</i> option-match]
Release Information	Statement introduced in Junos OS Release 9.0.
Description	Specify the list of option 82 suboption match criteria used to select the named address range used for the client. The server matches the option 82 value in the user PDU to the specified option 82 match criteria and uses the named address range associated with the string.
Options	<p>circuit-id—(EX Series, MX Series only) Configure the address-assignment pool <i>named-range</i> to use for a particular option 82 Agent Circuit ID value.</p> <p>Values:</p> <ul style="list-style-type: none"> <i>value</i>—String for the Agent Circuit ID suboption (suboption 1) of the DHCP relay agent information option (option 82) in DHCP packets. range <i>named-range</i>—Name of the address-assignment pool range to use. <p>remote-id—(SRX Series only) Specify the address-assignment pool <i>named-range</i> to use based on the particular option 82 Agent Remote ID value.</p> <p>Values:</p> <ul style="list-style-type: none"> range <i>named-range</i>—Name of the address-assignment pool range to use. <i>value</i>—String for Agent Remote ID suboption (suboption 2) of the DHCP relay agent information option (option 82) in DHCP packets.
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> <i>Address-Assignment Pool Configuration Overview</i>

option-match

Syntax

```
option-match {  
  option-82 {  
    circuit-id value range named-range;  
    remote-id value range named-range;  
  }  
}
```

Hierarchy Level [edit access address-assignment pool *pool-name* family inet [dhcp-attributes](#)],
[edit access protocol-attributes *attribute-set-name*]

Release Information Statement introduced in Junos OS Release 9.0.

Description Specify a list of match criteria used to determine which named address range in the address-assignment pool to use. The extended DHCP local server matches this information to the match criteria specified in the client PDUs. For example, for option 82 match criteria, the server matches the option 82 value in the user PDU to the specified option 82 string and uses the named range associated with the string.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Address-Assignment Pool Configuration Overview*

options (Access Profile)

```
Syntax  options {
    accounting-session-id-format (decimal | description);
    calling-station-id-delimiter delimiter-character;
    calling-station-id-format {
        agent-circuit-id;
        agent-remote-id;
        interface-description;
        nas-identifier;
    }
    chap-challenge-in-request-authenticator;
    client-accounting-algorithm (direct | round-robin);
    client-authentication-algorithm (direct | round-robin);
    coa-dynamic-variable-validation;
    ethernet-port-type-virtual;
    access-loop-id-local;
    interface-description-format {
        exclude-adapter;
        exclude-channel;
        exclude-sub-interface;
    }
    ip-address-change-notify message;
    juniper-dsl-attributes;
    nas-identifier identifier-value;
    nas-port-extended-format {
        adapter-width width;
        ae-width width;
        port-width width;
        slot-width width;
        stacked-vlan-width width;
        vlan-width width;
        atm {
            adapter-width width;
            port-width width;
            pw-width width;
            slot-width width;
            vci-width width;
            vpi-width width;
        }
    }
    nas-port-id-delimiter delimiter-character;
    nas-port-id-format {
        agent-circuit-id;
        agent-remote-id;
        interface-description;
        interface-text-description;
        nas-identifier;
        order {
            agent-circuit-id;
            agent-remote-id;
            interface-description;
            interface-text-description;
        }
    }
}
```

```

        nas-identifier;
        postpend-vlan-tags;
    }
    postpend-vlan-tags;
}
nas-port-type {
    ethernet {
        port-type;
    }
}
override {
    calling-station-id remote-circuit-id;
    nas-ip-address tunnel-client-gateway-address;
    nas-port tunnel-client-nas-port;
    nas-port-type tunnel-client-nas-port-type;
}
remote-circuit-id-delimiter;
remote-circuit-id-fallback;
remote-circuit-id-format {
    agent-circuit-id;
    agent-remote-id;
}
revert-interval interval;
service-activation {
    dynamic-profile (optional-at-login | required-at-login);
    extensible-service (optional-at-login | required-at-login);
}
vlan-nas-port-stacked-format;
}

```

Hierarchy Level [edit access profile *profile-name* **radius**]

Release Information Statement introduced in Junos OS Release 9.1.
Statement introduced in Junos OS Release 9.1 for EX Series switches.
juniper-dsl-attributes introduced in Junos OS Release 11.4.
nas-port-id-delimiter introduced in Junos OS Release 11.4. Statement introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
calling-station-id-delimiter introduced in Junos OS Release 13.1.
ip-address-change-notify introduced in Junos OS Release 13.1.
coa-dynamic-variable-validation, **client-authentication-algorithm**, and **client-accounting-algorithm** introduced in Junos OS Release 13.2X50-D10 for EX Series switches.
remote-circuit-id-delimiter, **remote-circuit-id-fallback**, and **remote-circuit-id-format** introduced in Junos OS Release 13.3R1 on MX Series.
chap-challenge-in-request-authenticator introduced in Junos OS Release 15.1.
nas-identifier introduced in Junos OS Release 15.1X49-D110 for SRX300, SRX320, SRX340, SRX345, and SRX550M Series devices.
service-activation introduced in Junos OS Release 16.2.

Description Configure the options used by RADIUS authentication and accounting servers.

Options **accounting-session-id-format**—(EX Series, MX Series only) Configure the format the router or switch uses to identify the accounting session. The default is **decimal**.

Values:

- **decimal**—Use the decimal format.
- **description**—Use the generic format, in the form: **jnpr interface-specifier:subscriber-session-id**.

calling-station-id-delimiter—(MX Series, T Series only) Starting in Junos OS Release 13.1, specify the character that the router uses as a separator between the concatenated values in the Calling-Station-ID (RADIUS IETF attribute 31) string. The router uses the delimiter when you configure more than one value in the **calling-station-id-format** statement. The default is the hash (#) character.

Values:

- **delimiter-character**—Character to use for the delimiter. You must enclose the delimiter character in quotation marks (" ").

chap-challenge-in-request-authenticator—(MX Series only) Starting in Junos OS Release 15.1, configure the **authd** process to insert the random challenge generated by the NAS into the Request Authenticator field of Access-Request packets, if the challenge value is 16 bytes long. If you enable the **chap-challenge-in-request-authenticator** statement and the random challenge is not 16 bytes long, **authd** ignores the statement and uses the default behavior, which inserts the random challenge as the CHAP-Challenge attribute (RADIUS attribute 60) in Access-Request packets.

client-accounting-algorithm—(EX Series, MX Series only) Starting in Junos OS Release 13.2X50-D10 for EX Series switches, configure the access method the router uses to access RADIUS accounting servers. The default is the **direct** option.

Values:

- **direct**—Use the direct method.
- **round-robin**—Use the round-robin method.

client-authentication-algorithm—(EX Series, M Series, MX Series only) Starting in Junos OS Release 13.2X50-D10 for EX Series switches, configure the method that the authenticator uses to access RADIUS authentication servers when there are multiple servers configured. Initially, a RADIUS client sends a request to a RADIUS authentication or accounting server. The router or switch, acting as the authenticator, waits for a response from the server before sending another request.

When there are multiple RADIUS server connections configured for a client, the authenticator attempts to reach the different servers in the order that they are configured. If there is no response from the first RADIUS server, the authenticator attempts to reach the next RADIUS server. This process repeats until the client is either granted access or there are no more configured servers.

If the **direct** method is configured, the authenticator always treats the first server in the list as the primary server. The authenticator moves on to the second server only

if the attempt to reach the first server fails. If the **round-robin** method is configured, the server chosen first will be rotated based on which server was used last. The first server in the list is treated as a primary for the first authentication request, but for the second request, the second server configured is treated as primary, and so on. With this method, all of the configured servers receive roughly the same number of requests on average so that no single server has to handle all of the requests.



NOTE: The **round-robin** access method is not recommended for use with EX Series switches.

Default: The default is the **direct** option.

Values:

- **direct**—Use the direct access method. The authenticator contacts the first RADIUS server on the list for each request, the second server if the first one fails, and so on.
- **round-robin**—Use the round-robin method. The authenticator contacts the first RADIUS server for the first request, the second server for the second request, and so on.

coa-dynamic-variable-validation—(EX Series, M Series, MX Series only) Starting in Junos OS Release 13.2X50-D10 for EX Series switches, specify that when a CoA operation includes a change to a client profile dynamic variable that cannot be applied (such as an update to a non-existent filter), the router does not apply any changes to client profile dynamic variables in the request, and responds with a NACK message.

Default: If you do not configure this statement, the router does not apply any incorrect variable updates, but does make any other changes to the client profile dynamic variables, and responds with an ACK message.

ethernet-port-type-virtual—(EX Series, M Series, MX Series only) Specify the physical port type the router or switch uses to authenticate clients. The router or switch passes a port type of **ethernet** in RADIUS attribute 61 (NAS-Port-Type) by default. This statement specifies a port type of **virtual**.



NOTE: This statement takes precedence over the **nas-port-type** statement if you include both statements in the same access profile.

access-loop-id-local—Specify that the Agent-Remote-Id and Agent-Circuit-Id are generated locally when these values are not present in the client database.

ip-address-change-notify—(MX Series only) Starting in Junos OS Release 13.1, for on-demand address allocation for dual-stack PPP subscribers, specify that the BNG includes the IPv4-Release-Control VSA (26–164) in the Access-Request that is sent during on-demand IP address allocation and in the Interim-Accounting messages that are sent to report an address change. The configuration of this statement has no effect when on-demand IP address allocation or deallocation is not configured.

Optionally, configure a message that is included in the VSA when it is sent to the RADIUS server.

Default: This functionality is disabled by default.

Values: *message*—VSA message.

Range: Up to 32 characters.

juniper-dsl-attributes—(MX Series only) Starting in Junos OS Release 11.4, configure AAA to add Juniper Networks DSL VSAs to the RADIUS authentication and accounting request messages for subscribers. If the router has not received and processed the corresponding ANCP attributes from the access node, then AAA provides only the following in these RADIUS messages:

- Downstream-Calculated-QoS-Rate (IANA 4874, 26-141)—Default configured advisory transmit speed.
- Upstream-Calculated-QoS-Rate (IANA 4874, 26-142)—Default configured advisory receive speed.

Default: The Juniper Networks DSL VSAs are not added to the RADIUS authentication and accounting request messages. However, the DSL Forum VSA—if available—is added to RADIUS messages by default.

nas-identifier—(EX Series, MX Series, SRX Series only) Configure the value for the client RADIUS attribute 32 (NAS-Identifier). This attribute is used for authentication and accounting requests. This statement was introduced in Junos OS Release 15.1X49-D110 for SRX300, SRX320, SRX340, SRX345, and SRX550M Series devices.

Values: *identifier-value*—String to use for authentication and accounting requests.

Range: 1 through 64 characters.

nas-port-id-delimiter—(MX Series only) Starting in Junos OS Release 11.4, specify the character that the router uses as a separator between the concatenated values in the NAS-Port-ID string. The router uses the delimiter when you configure more than one value in the **nas-port-id-format** statement. The default is the hash (#) character. This statement was introduced in Junos OS Release 13.2X50-D10 for EX Series switches.

Values: *delimiter-character*—Character used for the delimiter.

remote-circuit-id-delimiter—(MX Series only) Starting in Junos OS Release 13.3R1 on MX Series, configure a delimiter character for the remote circuit ID string when you use the **remote-circuit-id-format** statement to configure the string to use instead of the Calling-Station ID in L2TP Calling Number AVP 22. If more than one value is configured for the remote circuit ID format, the delimiter character is used as a separator between the concatenated values in the resulting remote circuit ID string. The default is the hash (#) character.

Values: *delimiter*—Delimiter character to be used between components of the remote circuit ID string.

remote-circuit-id-fallback—(MX Series only) Starting in Junos OS Release 13.3R1 on MX Series, configure the fallback value for the LAC to send in L2TP Calling Number AVP 22, either the configured Calling-Station-ID or the default underlying interface. Use of the fallback value is triggered when the components of the override string you configured with the **remote-circuit-id-format** statement—the ACI, the ARI, or both ACI and ARI—are not received by the LAC in the PPPoE Active Discovery Request (PADR) packet.

Values:

- *configured-calling-station-id*—Send the configured Calling-Station-ID in the Calling Number AVP.
- *default*—Send the underlying interface value in the Calling Number AVP.

remote-circuit-id-format—(MX Series only) Starting in Junos OS Release 13.3R1 on MX Series, configure the format of the string that overrides the Calling-Station-ID format in the Calling Number AVP 22 sent by the LAC to the LNS in the ICRQ packet when an L2TP session is being established. You can specify the ACI, the ARI, or both the ACI and ARI. This statement enables you to decouple the AVP 22 value from the RADIUS Calling-Station-ID attribute (31); the values for AVP 22 and the Calling-Station-ID attribute are the same when you use the **calling-station-id-format** statement to configure AVP 22.



NOTE: You must configure the **override calling-circuit-id remote-circuit-id** statement for the remote circuit ID format to be used in the calling number AVP.

Values:

- *agent-circuit-id*—Specifies use of the ACI string that uniquely identifies the subscriber's access node and the digital subscriber line (DSL) on the access node. For PPPoE traffic, the ACI string is in the DSL Forum Agent-Circuit-ID VSA [26-1] of PPPoE Active Discovery Initiation (PADI) and PPPoE Active Discovery Request (PADR) control packets.
- *agent-remote-id*—Specifies use of the ARI string that identifies the subscriber on the digital subscriber line access multiplexer (DSLAM) interface that initiated the service request. The agent remote identifier (ARI) string is stored in the DSL Forum Agent-Remote-ID VSA [26-2] for PPPoE traffic.

service-activation—(MX Series only) Starting in Junos OS Release 16.2, specify whether subscribers are allowed to log in even when service activation failures related to configuration errors occur during family activation request processing by authd for a newly authenticated subscriber. Configuration errors include missing or incorrect syntax, missing or incomplete references to dynamic profiles, and missing or incomplete variables.



NOTE: This configuration does not apply to services activated by means of RADIUS CoA requests, JSRC Push-Profile-Request (PPR) messages, or subscriber secure policies.

You can enable separate configurations for subscriber login services for two **service-activation** types: **dynamic-profile** and **extensible-service**. You configure the **dynamic-profile** type services in the dynamic profile at the **[edit dynamic-profiles]** hierarchy level; the profile is used to provide dynamic subscriber access and services for broadband applications. The **extensible-service** type is for business services configured in an operation script and provisioned by the Extensible Subscriber Services Manager daemon (essmd).

Default:

Default behavior depends on the service type:

- For **extensible-service** services: **optional-at-login**.
- For **dynamic-profile** services: **required-at-login**.

Values:

- **optional-at-login**—Service activation is optional. Failure due to configuration errors does not prevent activation of the address family; it allows subscriber access. Failure for any other reason causes network family activation to fail. If no other network family is already active for the subscriber, then the client application logs out the subscriber.
- **required-at-login**—Service activation is required. Failure for any reason causes the Network-Family-Activate-Request for that network family to fail. If no other network family is already active for the subscriber, then the client application logs out the subscriber.

vlan-nas-port-stacked-format—(MX Series only) Configure RADIUS attribute 5 (NAS-Port) to include the S-VLAN ID, in addition to the VLAN ID, for subscribers on Ethernet interfaces.

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege	admin—To view this statement in the configuration.
Level	admin-control—To add this statement to the configuration.

Related Documentation • *Configuring Authentication and Accounting Parameters for Subscriber Access*

order

Syntax `order [accounting-method];`

Hierarchy Level `[edit access profile profile-name accounting]`

Release Information Statement introduced in Junos OS Release 9.1.
Statement introduced in Junos OS Release 9.1 for EX Series switches.


Description Set the order in which the Junos OS tries different accounting methods for client activity. When a client logs in, the software tries the accounting methods in the specified order.

Options ***accounting-method***—One or more accounting methods. When a client logs in, the software tries the accounting methods in the following order, from first to last. The only valid value is **radius** for RADIUS accounting.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation • *Configuring Authentication and Accounting Parameters for Subscriber Access*

overhead-accounting (ANCP)

Syntax	overhead-accounting;
Hierarchy Level	[edit protocols ancp interfaces <i>interface-name</i>]
Release Information	Statement introduced in Junos OS Release 11.4.
Description	<p>Prevent ANCP from performing an adjustment on the actual downstream data rate that ANCP receives from the DSLAM for the difference between the customer premise equipment (CPE) protocol overhead and the B-RAS protocol overhead. You include this statement when you want CoS to perform the adjustment on the data rate from the DSLAM according to the overhead accounting configuration in a CoS traffic control profile.</p> <p>When this statement is not configured (the default condition), ANCP makes the traffic rate adjustment according to the configuration of the qos-adjust-line-type statements and reports that rate to CoS. CoS then applies (if configured) the adjustment set by the overhead-accounting statement in the CoS traffic profile.</p> <p>.....</p> <div>  <p>NOTE: ANCP reports a traffic rate to CoS only if the qos-adjust statement at the [edit protocols ancp] hierarchy level has been configured.</p> <p>.....</p> </div>
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> <i>Configuring the ANCP Agent</i>

padn (Domain Map)

Syntax	<pre>padn destination-address { mask destination-mask; metric route-metric; }</pre>
Hierarchy Level	[edit access domain map domain-map-name]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Configure PADN parameters for a domain map.
Options	<p>destination-address—IP address of the destination.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none">• <i>Configuring PADN Parameters for a Domain Map</i>

parse-direction (Domain Map)

Syntax	parse-direction (left-to-right right-to-left);
Hierarchy Level	[edit access domain]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Specify the direction in which the router searches for the domain name in a username.
Default	left-to-right
Options	<p>left-to-right—The router searches starting at the left-most character. When the router reaches a domain delimiter, it uses anything to the right of the delimiter as the domain name.</p> <p>right-to-left—The router searches starting at the right-most character. When the router reaches a domain delimiter, it uses anything to the right of the delimiter as the domain name.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Specifying the Parsing Direction for Domain and Realm Names</i> • <i>Configuring Domain and Realm Name Usage for Domain Maps</i>

pool (Address-Assignment Pools)

```
Syntax pool pool-name {
    active-drain;
    family family {
        dhcp-attributes {
            [ protocol-specific attributes ]
        }
        excluded-address ip-address;
        excluded-range name low minimum-value high maximum-value;
        host hostname {
            hardware-address mac-address;
            ip-address ip-address;
        }
        network ip-prefixprefix-length>;
        prefix ipv6-prefix;
        range range-name {
            high upper-limit;
            low lower-limit;
            prefix-length prefix-length;
        }
    }
    hold-down;
    link pool-name;
}
```

Hierarchy Level [edit access [address-assignment](#)]

Release Information Statement introduced in Junos OS Release 9.0.
Statement introduced in Junos OS Release 12.1 for EX Series switches.

Description Configure the name of an address-assignment pool.



NOTE: Subordinate statement support depends on the platform. See individual statement topics for more detailed support information.

Options *pool-name*—Name assigned to the address-assignment pool.

active-drain—(MX Series only) Starting in Junos OS Release 17.2, configure the DHCP local server to stop allocating addresses from this pool. When this is configured, the DHCP local server gracefully shifts clients from this address pool to an alternative pool for which active drain is not configured. When existing clients with an address from this pool submit a DHCPv4 request or DHCPv6 renew, they receive a NAK, forcing them to renegotiate. The server responds with a DHCPv4 offer or DHCPv6 advertise message with an address from a different pool.

hold-down—(MX Series only) Starting in Junos OS Release 16.1, configure an address-assignment pool that is currently in use to be unavailable for further address allocation. When a pool is in the hold-down state, the pool is no longer used to allocate IP addresses for subscribers. Current subscribers who previously obtained an address from the pool are not affected; they can continue to renew their leases. As each of these users disconnects, their address is not reallocated. The pool becomes inactive when all subscribers have disconnected and their addresses are returned to the pool.

link—(M Series, MX Series, SRX Series, T Series only) Designate a secondary address-assignment pool that is linked to the pool being configured. When the pool being configured has no addresses available for allocation, the secondary pool can be searched for a free address. You can configure a chain of linked pools, but you cannot directly link more than one pool to or from any other pool. Each linked pool in the chain serves as a backup pool for the pool immediately before it in the chain.

Values: *pool-name*—Name assigned to the secondary address-assignment pool.

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none">• <i>Address-Assignment Pools Overview</i>• <i>Address-Assignment Pool Configuration Overview</i>• <i>Configuring Address-Assignment Pool Linking</i>• <i>Address Allocation from Linked Address Pools</i>• <i>Configuring DHCP Local Address Pool Rapid Drain</i>• <i>Attributes That Can Be Applied to DHCP Clients</i>
------------------------------	--

prefix (Address-Assignment Pools)

Syntax	<code>prefix <i>ipv6-prefix</i>;</code>
Hierarchy Level	<code>[edit access address-assignment pool <i>pool-name</i> family inet6]</code>
Release Information	Statement introduced in Junos OS Release 10.0. Statement introduced in Junos OS Release 12.3 for EX Series switches.
Description	Specify the IPv6 prefix for the IPv6 address-assignment pool. This statement is mandatory for IPv6 address-assignment pools.
Options	<i>ipv6-prefix</i> —The IPv6 prefix.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Address-Assignment Pools Overview</i>• <i>Address-Assignment Pool Configuration Overview</i>

pre-ietf-mode

Syntax	<code>pre-ietf-mode</code>
Hierarchy Level	<code>[edit protocols ancp],</code> <code>[edit protocols ancp neighbor <i>ip-address</i>]</code>
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Configure the ANCP agent to run in a mode that is backward compatible with Internet draft draft-wadhwa-gsmp-l2control-configuration-00.txt, <i>GSMP extensions for layer2 control (L2C)</i> for all neighbors or for a specific neighbor.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Configuring the ANCP Agent for Backward Compatibility</i>• <i>Configuring ANCP Neighbors</i>

profile (Access)

```
Syntax  profile profile-name {
    accounting {
        address-change-immediate-update
        accounting-stop-on-access-deny;
        accounting-stop-on-failure;
        ancp-speed-change-immediate-update;
        coa-immediate-update;
        coa-no-override service-class-attribute;
        duplication;
        duplication-filter;
        duplication-vrf {
            access-profile-name profile-name;
            vrf-name vrf-name;
        }
        immediate-update;
        order [ accounting-method ];
        send-acct-status-on-config-change;
        statistics (time | volume-time);
        update-interval minutes;
        wait-for-acct-on-ack;
    }
    accounting-order (radius | [accounting-order-data-list]);
    authentication-order [ authentication-methods ];
    client client-name {
        chap-secret chap-secret;
        group-profile profile-name;
        ike {
            allowed-proxy-pair {
                remote remote-proxy-address local local-proxy-address;
            }
            pre-shared-key (ascii-text character-string | hexadecimal hexadecimal-digits);
            ike-policy policy-name;
            interface-id string-value;
        }
        l2tp {
            aaa-access-profile profile-name;
            interface-id interface-id;
            lcp-renegotiation;
            local-chap;
            maximum-sessions number;
            maximum-sessions-per-tunnel number;
            multilink {
                drop-timeout milliseconds;
                fragment-threshold bytes;
            }
            override-result-code session-out-of-resource;
            ppp-authentication (chap | pap);
            ppp-profile profile-name;
            service-profile profile-name(parameter)&profile-name;
            sessions-limit-group limit-group-name;
            shared-secret shared-secret;
        }
    }
}
```

```

}
pap-password pap-password;
ppp {
    cell-overhead;
    encapsulation-overhead bytes;
    framed-ip-address ip-address;
    framed-pool framed-pool;
    idle-timeout seconds;
    interface-id interface-id;
    keepalive seconds;
    primary-dns primary-dns;
    primary-wins primary-wins;
    secondary-dns secondary-dns;
    secondary-wins secondary-wins;
}
user-group-profile profile-name;
}
domain-name-server;
domain-name-server-inet;
domain-name-server-inet6;
local {
    flat-file-profile profile-name;
}
preauthentication-order preauthentication-method;
provisioning-order (gx-plus | jsr | pcrf);
radius {
    accounting-server [ ip-address ];
    attributes {
        exclude {
            attribute-name packet-type;
            standard-attribute number {
                packet-type [ access-request | accounting-off | accounting-on | accounting-start
                    | accounting-stop ];
            }
            vendor-id id-number {
                vendor-attribute vsa-number {
                    packet-type [ access-request | accounting-off | accounting-on | accounting-start
                        | accounting-stop ];
                }
            }
        }
    }
    ignore {
        dynamic-iflset-name;
        framed-ip-netmask;
        idle-timeout;
        input-filter;
        logical-system:routing-instance;
        output-filter;
        session-timeout;
        standard-attribute number;
        vendor-id id-number {
            vendor-attribute vsa-number;
        }
    }
}
}

```

```

authentication-server [ ip-address ];
options {
    accounting-session-id-format (decimal | description);
    calling-station-id-delimiter delimiter-character;
    calling-station-id-format {
        agent-circuit-id;
        agent-remote-id;
        interface-description;
        interface-text-description;
        mac-address;
        nas-identifier;
        stacked-vlan;
        vlan;
    }
    chap-challenge-in-request-authenticator;
    client-accounting-algorithm (direct | round-robin);
    client-authentication-algorithm (direct | round-robin);
    coa-dynamic-variable-validation;
    ethernet-port-type-virtual;
    interface-description-format {
        exclude-adapter;
        exclude-channel;
        exclude-sub-interface;
    }
    juniper-dsl-attributes;
    nas-identifier identifier-value;
    nas-port-extended-format {
        adapter-width width;
        ae-width width;
        port-width width;
        pw-width width;
        slot-width width;
        stacked-vlan-width width;
        vlan-width width;
        atm {
            adapter-width width;
            port-width width;
            slot-width width;
            vci-width width;
            vpi-width width;
        }
    }
    nas-port-id-delimiter delimiter-character;
    nas-port-id-format {
        agent-circuit-id;
        agent-remote-id;
        interface-description;
        interface-text-description;
        nas-identifier;
        order {
            agent-circuit-id;
            agent-remote-id;
            interface-description;
            interface-text-description;
            nas-identifier;
        }
    }
}

```

```

        postpend-vlan-tags;
    }
    postpend-vlan-tags;
}
nas-port-type {
    ethernet {
        port-type;
    }
}
override {
    calling-station-id remote-circuit-id;
    nas-ip-address tunnel-client-gateway-address;
    nas-port tunnel-client-nas-port;
    nas-port-type tunnel-client-nas-port-type;
}
remote-circuit-id-delimiter;
remote-circuit-id-fallback {
    remote-circuit-id-format;
    agent-circuit-id;
    agent-remote-id;
}
revert-interval interval;
service-activation {
    dynamic-profile (optional-at-login | required-at-login);
    extensible-service (optional-at-login | required-at-login);
}
vlan-nas-port-stacked-format;
}
preauthentication-server ip-address;
}
radius-server server-address {
    accounting-port port-number;
    accounting-retry number;
    accounting-timeout seconds;
    dynamic-request-port
    port port-number;
    preauthentication-port port-number;
    preauthentication-secret password;
    retry attempts;
    routing-instance routing-instance-name;
    secret password;
    max-outstanding-requests value;
    source-address source-address;
    timeout seconds;
}
service {
    accounting {
        statistics (time | volume-time);
        update-interval minutes;
    }
    accounting-order (activation-protocol | local | radius);
}
session-limit-per-username number;
session-options {
    client-idle-timeout minutes;

```



```

client-idle-timeout-ingress-only;
client-session-timeout minutes;
pcc-context {
    input-service-filter-name filter-name;
    input-service-set-name service-set-name;
    ipv6-input-service-filter-name filter-name;
    ipv6-input-service-set-name service-set-name;
    ipv6-output-service-filter-name filter-name;
    ipv6-output-service-set-name service-set-name;
    output-service-filter-name filter-name;
    output-service-set-name service-set-name;
    profile-name pcef-profile-name;
}
strip-user-name {
    delimiter [ delimiter ];
    parse-direction (left-to-right | right-to-left);
}
}
subscriber username {
    delegated-pool delegated-pool-name;
    framed-ip-address ipv4-address;
    framed-ipv6-pool ipv6-pool-name;
    framed-pool ipv4-pool-name;
    password password;
    target-logical-system logical-system-name <target-routing-instance (default |
        routing-instance-name)>;
    target-routing-instance (default | routing-instance-name);
}
}

```

Hierarchy Level [\[edit access\]](#)

Release Information Statement introduced before Junos OS Release 7.4.

Description Configure a subscriber access profile that includes subscriber access, L2TP, or PPP properties.

Options *profile-name*—Name of the profile.

For CHAP, the name serves as the mapping between peer identifiers and CHAP secret keys. This entity is queried for the secret key whenever a CHAP challenge or response is received.

The remaining statements are explained separately. Search for a statement in [CLI Explorer](#) or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

**Related
Documentation**

- *Configuring the PPP Authentication Protocol*
- *Configuring Access Profiles for L2TP or PPP Parameters*
- *Configuring L2TP Properties for a Client-Specific Profile*
- *Configuring an L2TP Access Profile on the LNS*
- *Configuring an L2TP LNS with Inline Service Interfaces*
- *Configuring PPP Properties for a Client-Specific Profile*
- *Configuring Service Accounting with JSRC*
- *Configuring Service Accounting in Local Flat Files*
- *AAA Service Framework Overview*
- *Enabling Direct PCC Rule Activation by a PCRF for Subscriber Management*

qos-adjust

List of Syntax	For Junos OS Release 17.3 and Earlier Releases on page 93 For Junos OS Release 17.4 and Later Releases on page 93
For Junos OS Release 17.3 and Earlier Releases	<pre>qos-adjust { adsl-bytes <i>bytes</i>; adsl2-bytes <i>bytes</i>; adsl2-plus-bytes <i>bytes</i>; other-bytes; other-overhead-adjust; sdsl-bytes <i>bytes</i>; sdsl-overhead-adjust <i>percentage</i>; vdsl-bytes <i>bytes</i>; vdsl-overhead-adjust <i>percentage</i>; vdsl2-bytes <i>bytes</i>; vdsl2-overhead-adjust <i>percentage</i>; }</pre>
For Junos OS Release 17.4 and Later Releases	qos-adjust;
Hierarchy Level	[edit protocols ancp]
Release Information	Statement introduced in Junos OS Release 9.4. Subordinate statements deprecated in Junos OS Release 17.4.
Description	<p>Specify that the ANCP agent reports data rates for downstream traffic to CoS. When this statement is not configured, the ANCP agent does not report traffic rates to CoS.</p> <p>For Junos OS Release 17.3 and earlier releases, configure the values by which the actual downstream data rates are adjusted. The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</p> <p>Starting in Junos OS Release 17.4, all of the previously supported subordinate statements are deprecated. The ANCP agent ignores them if they are present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustments with the access-line statement at the [edit system] hierarchy level.</p>
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none"> <i>Configuring the ANCP Agent to Report Traffic Rates to CoS</i> <i>Traffic Rate Reporting and Adjustment by the ANCP Agent</i>

- *Configuring the ANCP Agent*

qos-adjust-adsl

Syntax `qos-adjust-adsl adjustment-factor;`

Hierarchy Level `[edit protocols ancp]`

Release Information Statement introduced in Junos OS Release 11.4.
Statement deprecated in Junos OS Release 17.4R1.

Description Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on an ADSL line. The ANCP agent reports the adjusted rate only to AAA.



NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the `adsl-total-adjust` option of the `access-line` statement at the `[edit system]` hierarchy level. The ANCP agent ignores the `qos-adjust-adsl` statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the `access-line` statement.

Options *adjustment-factor*—Adjustment factor applied to upstream and downstream data rates for the DSL type.
Range: 0 through 100 percent
Default: 100 percent

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.


Release History Table

Release	Description
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the adsl-total-adjust option of the access-line statement at the [edit system] hierarchy level.


Related Documentation

- *Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic Rates*
- *Configuring the ANCP Agent*


qos-adjust-adsl2

Syntax	<code>qos-adjust-adsl2 <i>adjustment-factor</i>;</code>				
Hierarchy Level	<code>[edit protocols ancp]</code>				
Release Information	Statement introduced in Junos OS Release 11.4. Statement deprecated in Junos OS Release 17.4R1.				
Description	Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on an ADSL2 line. The ANCP agent reports the adjusted rate only to AAA.				
	<div>  <p>NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>adsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level. The ANCP agent ignores the <code>qos-adjust-adsl2</code> statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the <code>access-line</code> statement.</p> </div>				
Options	<p><i>adjustment-factor</i>—Adjustment factor applied to upstream and downstream data rates for the DSL type.</p> <p>Range: 0 through 100 percent</p> <p>Default: 100 percent</p>				
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>				
Release History Table	<table> <tr> <th>Release</th><th>Description</th></tr> <tr> <td>17.4R1</td><td>Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>adsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.</td></tr> </table>	Release	Description	17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>adsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.
Release	Description				
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>adsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.				
Related Documentation	<ul style="list-style-type: none"> <i>Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic Rates</i> <i>Configuring the ANCP Agent</i> 				


qos-adjust-adsl2-plus

Syntax	qos-adjust-adsl2-plus <i>adjustment-factor</i> ;				
Hierarchy Level	[edit protocols ancp]				
Release Information	Statement introduced in Junos OS Release 11.4. Statement deprecated in Junos OS Release 17.4R1.				
Description	Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on an ADSL2+ line. The ANCP agent reports the adjusted rate only to AAA. <div><div></div><div><p>NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the adsl2-plus-total-adjust option of the access-line statement at the [edit system] hierarchy level. The ANCP agent ignores the qos-adjust-adsl2-plus statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the access-line statement.</p></div></div>				
Options	<p>adjustment-factor—Adjustment factor applied to upstream and downstream data rates for the DSL type.</p> <p>Range: 0 through 100 percent</p> <p>Default: 100 percent</p>				
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.				
Release History Table	<table><tr><th>Release</th><th>Description</th></tr><tr><td>17.4R1</td><td>Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the adsl2-plus-total-adjust option of the access-line statement at the [edit system] hierarchy level.</td></tr></table>	Release	Description	17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the adsl2-plus-total-adjust option of the access-line statement at the [edit system] hierarchy level.
Release	Description				
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the adsl2-plus-total-adjust option of the access-line statement at the [edit system] hierarchy level.				
Related Documentation	<ul style="list-style-type: none">Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic RatesConfiguring the ANCP Agent				


qos-adjust-sdsl

Syntax	<code>qos-adjust-sdsl <i>adjustment-factor</i>;</code>				
Hierarchy Level	<code>[edit protocols ancp]</code>				
Release Information	Statement introduced in Junos OS Release 11.4. Statement deprecated in Junos OS Release 17.4R1.				
Description	Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on an SDSL line. The ANCP agent reports the adjusted rate only to AAA.				
	<div>  <p>NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>sdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level. The ANCP agent ignores the <code>qos-adjust-sdsl</code> statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the <code>access-line</code> statement.</p> </div>				
Options	<p><i>adjustment-factor</i>—Adjustment factor applied to upstream and downstream data rates for the DSL type.</p> <p>Range: 0 through 100 percent</p> <p>Default: 100 percent</p>				
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>				
Release History Table	<table> <tr> <th>Release</th><th>Description</th></tr> <tr> <td>17.4R1</td><td>Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>sdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.</td></tr> </table>	Release	Description	17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>sdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.
Release	Description				
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>sdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.				
Related Documentation	<ul style="list-style-type: none"> <i>Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic Rates</i> <i>Configuring the ANCP Agent</i> 				

qos-adjust-vdsl

Syntax	<code>qos-adjust-vdsl <i>adjustment-factor</i>;</code>				
Hierarchy Level	<code>[edit protocols ancp]</code>				
Release Information	Statement introduced in Junos OS Release 11.4. Statement deprecated in Junos OS Release 17.4R1.				
Description	Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on a VDSL line. The ANCP agent reports the adjusted rate only to AAA.				
	<div>  <p>NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level. The ANCP agent ignores the <code>qos-adjust-vdsl</code> statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the <code>access-line</code> statement.</p> </div>				
Options	<p><i>adjustment-factor</i>—Adjustment factor applied to upstream and downstream data rates for the DSL type.</p> <p>Range: 0 through 100 percent</p> <p>Default: 100 percent</p>				
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>				
Release History Table	<table> <tr> <th>Release</th><th>Description</th></tr> <tr> <td>17.4R1</td><td>Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.</td></tr> </table>	Release	Description	17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.
Release	Description				
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.				
Related Documentation	<ul style="list-style-type: none"> <i>Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic Rates</i> <i>Configuring the ANCP Agent</i> 				

qos-adjust-vdsl2

Syntax	<code>qos-adjust-vdsl2 <i>adjustment-factor</i>;</code>				
Hierarchy Level	<code>[edit protocols ancp]</code>				
Release Information	Statement introduced in Junos OS Release 11.4. Statement deprecated in Junos OS Release 17.4R1.				
Description	Configure an adjustment factor that is applied globally to the downstream and upstream data rates reported by the ANCP agent for all subscribers on a VDSL2 line. The ANCP agent reports the adjusted rate only to AAA.				
	<div>  <p>NOTE: Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level. The ANCP agent ignores the <code>qos-adjust-vdsl2</code> statement if it is present. This means that when you upgrade from Junos OS Release 17.3 or earlier with an existing configuration, you must reconfigure your adjustment with the <code>access-line</code> statement.</p> </div>				
Options	<p><i>adjustment-factor</i>—Adjustment factor applied to upstream and downstream data rates for the DSL type.</p> <p>Range: 0 through 100 percent</p> <p>Default: 100 percent</p>				
Required Privilege Level	<p>routing—To view this statement in the configuration.</p> <p>routing-control—To add this statement to the configuration.</p>				
Release History Table	<table> <tr> <th>Release</th><th>Description</th></tr> <tr> <td>17.4R1</td><td>Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.</td></tr> </table>	Release	Description	17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.
Release	Description				
17.4R1	Starting in Junos OS Release 17.4R1, this statement is deprecated and replaced by the <code>vdsl2-total-adjust</code> option of the <code>access-line</code> statement at the <code>[edit system]</code> hierarchy level.				
Related Documentation	<ul style="list-style-type: none"> <i>Setting a Global Adjustment Factor per DSL Subscriber Line for ANCP Agent-Reported Traffic Rates</i> <i>Configuring the ANCP Agent</i> 				

radius (Access Profile)

```

Syntax  radius {
        accounting-server [ ip-address ];
        attributes {
            exclude
                attribute-name packet-type;
            standard-attribute number {
                packet-type [ access-request | accounting-off | accounting-on | accounting-start |
                    accounting-stop ];
            }
            vendor-id id-number {
                vendor-attribute vsa-number {
                    packet-type [ access-request | accounting-off | accounting-on | accounting-start
                        | accounting-stop ];
                }
            }
        }
        ignore {
            dynamic-iflset-name;
            framed-ip-netmask;
            idle-timeout;
            input-filter;
            logical-system-routing-instance;
            output-filter;
            session-timeout;
            standard-attribute number;
            vendor-id id-number {
                vendor-attribute vsa-number;
            }
        }
    }
    authentication-server [ ip-address ];
    options {
        accounting-session-id-format (decimal | description);
        calling-station-id-delimiter delimiter-character;
        calling-station-id-format {
            agent-circuit-id;
            agent-remote-id;
            interface-description;
            nas-identifier;
        }
        chap-challenge-in-request-authenticator;
        client-accounting-algorithm (direct | round-robin);
        client-authentication-algorithm (direct | round-robin);
        coa-dynamic-variable-validation;
        ethernet-port-type-virtual;
        interface-description-format {
            exclude-adapter;
            exclude-channel;
            exclude-sub-interface;
        }
        ip-address-change-notify message;
    }

```

```

juniper-dsl-attributes;
nas-identifier identifier-value;
nas-port-extended-format {
    adapter-width width;
    ae-width width;
    port-width width;
    slot-width width;
    stacked-vlan-width width;
    vlan-width width;
    atm {
        adapter-width width;
        port-width width;
        slot-width width;
        vci-width width;
        vpi-width width;
    }
}
nas-port-id-delimiter delimiter-character;
nas-port-id-format {
    agent-circuit-id;
    agent-remote-id;
    interface-description;
    interface-text-description;
    nas-identifier;
    order {
        agent-circuit-id;
        agent-remote-id;
        interface-description;
        interface-text-description;
        nas-identifier;
        postpend-vlan-tags;
    }
    postpend-vlan-tags;
}
nas-port-type {
    ethernet {
        port-type;
    }
}
override {
    calling-station-id remote-circuit-id;
    nas-ip-address tunnel-client-gateway-address;
    nas-port tunnel-client-nas-port;
    nas-port-type tunnel-client-nas-port-type;
}
remote-circuit-id-delimiter;
remote-circuit-id-fallback;
remote-circuit-id-format {
    agent-circuit-id;
    agent-remote-id;
}
revert-interval interval;
service-activation {
    dynamic-profile (optional-at-login | required-at-login);
    extensible-service (optional-at-login | required-at-login);
}

```

```

    }
    vlan-nas-port-stacked-format;
  }
  preauthentication-server ip-address;
}

```

Hierarchy Level [edit access [profile](#) *profile-name*]

Release Information Statement introduced in Junos OS Release 9.1.
Statement introduced in Junos OS Release 9.1 for EX Series switches.

Description Configure the RADIUS parameters that the router uses for AAA authentication and accounting for subscribers.

Options **accounting-server**—(MX Series only) Specify a list of the RADIUS accounting servers used for accounting for DHCP, L2TP, and PPP clients.

Values: *ip-address*—IP version 4 (IPv4) address.

authentication-server—(SRX Series only) Specify a list of the RADIUS authentication servers used to authenticate DHCP, L2TP, and PPP clients. The servers in the list are also used as RADIUS dynamic-request servers, from which the router accepts and processes RADIUS disconnect requests, CoA requests, and dynamic service activations and deactivations.

Values: *ip-address*—IPv4 address.

preauthentication-server—(MX Series only) Starting in Junos OS Release 13.3, specify the RADIUS preauthentication server, which is used for the LLID service.



NOTE: You cannot configure this statement if the Calling-Station-ID attribute is excluded from RADIUS Access-Request messages by the [exclude](#) statement.

Values: *ip-address*—IPv4 address.

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege Level admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- *Configuring Authentication and Accounting Parameters for Subscriber Access*
- *RADIUS Logical Line Identifier (LLID) Overview*
- *Configuring Logical Line Identification (LLID) Preauthentication*

radius-options (Access)

Syntax	<pre>radius-options { interim-rate <i>interim-rate</i>; interim-update-tolerance <i>seconds</i>; request-rate <i>rate</i>; revert-interval <i>seconds</i>; timeout-grace <i>seconds</i>; unique-nas-port { chassis-id <i>chassis-id</i>; chassis-id-width <i>chassis-id-width</i>; } }</pre>
Hierarchy Level	[edit access]
Release Information	Statement introduced in Junos OS Release 8.3.
Description	<p>Configure RADIUS options that apply to all RADIUS servers globally.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</p>
Required Privilege Level	<p>access—To view this statement in the configuration.</p> <p>access-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>RADIUS Servers and Parameters for Subscriber Access</i> • <i>Configuring a Timeout Grace Period to Specify When RADIUS Servers Are Considered Down or Unreachable</i> • <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>

radius-server

Syntax	<pre>radius-server server-address { accounting-port port-number; accounting-retry number; accounting-timeout seconds; dynamic-request-port port-number; max-outstanding-requests value; port port-number; preauthentication-port port-number; preauthentication-secret password; retry attempts; routing-instance routing-instance-name; secret password; source-address source-address; timeout seconds; }</pre>
Hierarchy Level	<pre>[edit access], [edit access profile profile-name]</pre>
Release Information	<p>Statement introduced before Junos OS Release 7.4.</p> <p>Statement introduced in Junos OS Release 9.0 for EX Series switches.</p> <p>max-outstanding-requests introduced in Junos OS Release 11.4.</p> <p>accounting-retry and accounting-timeout introduced in Junos OS Release 14.1.</p> <p>dynamic-request-port option added in Junos OS Release 14.2R1 for MX Series routers.</p> <p>preauthentication-port and preauthentication-secret options added in Junos OS Release 15.1 for MX Series routers.</p> <p>accounting-port introduced in Junos OS Release 13.2X50-D10 for EX Series switches with support for Enhanced Layer 2 software (ELS). It was introduced in Junos OS without ELS in the following releases: Junos OS Releases 12.3R10, 14.1X53-D25, and 15.1R4 for EX Series switches.</p> <p>Support for IPv6 server-address introduced in Junos OS Release 16.1.</p>
Description	<p>Configure RADIUS for subscriber access management, L2TP, or PPP.</p> <p>To configure multiple RADIUS servers, include multiple radius-server statements. The servers are tried in order and in a round-robin fashion until a valid response is received from one of the servers or until all the configured retry limits are reached.</p>
Options	<p>server-address—IPv4 or IPv6 address of the RADIUS server.</p> <p>accounting-port—(EX Series, M Series, MX Series, PTX Series, T Series only) Configure the port number on which to contact the RADIUS accounting server. This statement was introduced in Junos OS Release 13.2X50-D10 for EX Series switches with support for Enhanced Layer 2 software (ELS). It was introduced in Junos OS without ELS in the following releases: Junos OS Releases 12.3R10, 14.1X53-D25, and 15.1R4 for EX Series switches.</p>



NOTE: Specifying the accounting port is optional, and port 1813 is the default. However, we recommend that you configure it in order to avoid confusion, as some RADIUS servers might refer to an older default.

Values: *port-number*—Port number on which to contact the RADIUS accounting server. Most RADIUS servers use port 1813, as specified in RFC 2866.

Default: 1813

accounting-retry—(MX Series, T Series only) Starting in Junos OS Release 14.1, configure the number of times the device retransmits RADIUS accounting messages when no response is received from the server. When you do not configure this statement, the number of retry attempts is determined by the **retry** statement.



NOTE: To successfully set a retry limit for the accounting servers different from the authentication servers, you must configure both the **accounting-retry** and **accounting-timeout** statements. If you configure only one of these statements, then the value you configure is ignored in favor of the values configured with the **retry** and **timeout** statements.



NOTE: The maximum retry duration (the number of retries times the length of the timeout) cannot exceed 2700 seconds. An error message is displayed if you configure a longer duration.

Values: *number*—Number of retry attempts.

Range: 0 through 100

Default: 0 (disabled)

accounting-timeout—(MX Series, T Series only) Starting in Junos OS Release 14.1, configure how long the local device waits to receive a response from a RADIUS accounting server before retransmitting the message. When you do not configure this statement, the length of the timeout is determined by the **timeout** statement.



NOTE: To successfully set a timeout value for the accounting servers different from the authentication servers, you must configure both the **accounting-retry** and **accounting-timeout** statements. If you configure only one of these statements, then the value you configure is ignored in favor of the values configured with the **retry** and **timeout** statements.



NOTE: The maximum retry duration (the number of retries times the length of the timeout) cannot exceed 2700 seconds. An error message is displayed if you configure a longer duration.

Values: *seconds*—Duration of timeout period.

Range: 0 through 1000 seconds

Default: 0 (disabled)

dynamic-request-port—(MX Series only) Starting in Junos OS Release 14.2R1, specify the port that the router monitors for dynamic (CoA) requests from the specified RADIUS servers. You can configure a port globally or for a specific access profile.

You must either use the default port for all RADIUS servers or configure the same nondefault port for all RADIUS servers. This rule applies at both the global access and access profile levels.



NOTE: Any other configuration results in a commit check failure. Multiple port numbers—that is, different port numbers for different servers—are not supported.

Values: *port-number*—Number of the monitored port.

Default: 3799 (as specified in RFC 5176)

max-outstanding-requests—(MX Series only) Starting in Junos OS Release 11.4, configure the maximum number of outstanding requests for this RADIUS server. An increase in this value is immediate while a decrease is more gradual if the current number of outstanding requests exceeds the new value.

Values: *requests*—Maximum number of outstanding requests for this RADIUS server.

Range: 0 through 2000 outstanding requests per server

Default: 1000 outstanding requests per server

port—(EX Series, M Series, MX Series, SRX Series, T Series only) Configure the port number on which to contact the RADIUS server.

Values: *port-number*—Port number on which to contact the RADIUS server.

Default: 1812 (as specified in RFC 2865)

preauthentication-port—(MX Series only) Starting in Junos OS Release 15.1 for MX Series routers, configure the port number on which to contact the RADIUS server for logical line identification (LLID) preauthentication requests. If you do not configure a separate UDP port for preauthentication purposes, the same UDP port that you configure for authentication messages by including the **port *port-number*** statement is used.

Values: *port-number*—Port number used for preauthentication requests to contact the RADIUS server.

preauthentication-secret—(MX Series only) Starting in Junos OS Release 15.1 for MX Series routers, configure the password to use with the RADIUS server for LLID preauthentication requests. If you do not configure a separate UDP password for preauthentication purposes, the same password that you configure for authentication messages by including the **secret *password*** statement is used. The secret password used by the local router must match that used by the server.

Values: *password*—Password to use. To include spaces enclose the character string in quotation marks.

retry—(EX Series, M Series, MX Series, PTX Series, T Series only) Specify the number of times that the device is allowed to attempt to contact a RADIUS authentication or accounting server. You can override the retry limit for accounting servers with the **accounting-retry** statement.



NOTE: To successfully set a retry limit for the accounting servers different from the authentication servers, you must configure both the **accounting-retry** and **accounting-timeout** statements. If you configure only one of these statements, then the value you configure is ignored in favor of the values configured with the **retry** and **timeout** statements.



NOTE: The maximum retry duration (the number of retries times the length of the timeout) cannot exceed 2700 seconds. An error message is displayed if you configure a longer duration.

Values: *attempts*—Number of times that the router is allowed to attempt to contact a RADIUS server.

Range: 1 through 100

Default: 3

routing-instance—(SRX Series, vSRX only) Configure the routing instance used to send RADIUS packets to the RADIUS server.

Values: *routing-instance-name*—Routing instance name.

source-address—(SRX Series, vSRX only) Configure a source address for each configured RADIUS server. Each RADIUS request sent to a RADIUS server uses the specified source address. Support for IPv6 **source-address** was introduced in Junos OS Release 16.1.

Values: *source-address*—Valid IPv4 or IPv6 address configured on one of the router or switch interfaces. On M Series routers only, the source address can be an IPv6 address and the UDP source port is 514.

timeout—(SRX Series, vSRX only) Configure the amount of time that the local device waits to receive a response from RADIUS authentication and accounting servers. You can override the timeout value for accounting servers with the **accounting-timeout** statement.



NOTE: To successfully set a timeout value for the accounting servers different from the authentication servers, you must configure both the **accounting-retry** and **accounting-timeout** statements. If you configure only one of these statements, then the value you configure is ignored in favor of the values configured with the retry and timeout statements.



NOTE: The maximum retry duration (the number of retries times the length of the timeout) cannot exceed 2700 seconds. An error message is displayed if you configure a longer duration.

Values: *seconds*—Amount of time to wait.

Range: 1 through 1000 seconds

Default: 3 seconds

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege Level	system —To view this statement in the configuration. system-control —To add this statement to the configuration.
---------------------------------	---

Related Documentation	<ul style="list-style-type: none"> • <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i> • <i>Configuring the PPP Authentication Protocol</i> • <i>Configuring RADIUS Authentication for L2TP</i> • <i>Configuring RADIUS System Accounting</i> • <i>Configuring RADIUS-Initiated Dynamic Request Support</i> • <i>RADIUS Logical Line Identifier (LLID) Overview</i> • <i>RADIUS Attributes for LLID Preauthentication Requests</i> • <i>show network-access aaa statistics</i> • <i>clear network-access aaa statistics</i>
------------------------------	--

range (Address-Assignment Pools)

Syntax	<pre>range range-name { high upper-limit; low lower-limit; prefix-length prefix-length; }</pre>
Hierarchy Level	[edit access address-assignment pool <i>pool-name</i> family (inet inet6)]
Release Information	<p>Statement introduced in Junos OS Release 9.0.</p> <p>IPv6 support introduced in Junos OS Release 10.0.</p> <p>Statement introduced in Junos OS Release 12.3 for EX Series switches.</p>
Description	Configure a named range of IPv4 addresses or IPv6 prefixes, used within an address-assignment pool.
Options	<p>high <i>upper-limit</i>—Upper limit of an address range or IPv6 prefix range.</p> <p>low <i>lower-limit</i>—Lower limit of an address range or IPv6 prefix range.</p> <p>prefix-length <i>prefix-length</i>—Assigned length of the IPv6 prefix.</p> <p>range-name—Name assigned to the range of IPv4 addresses or IPv6 prefixes.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> • <i>Configuring a Named Address Range for Dynamic Address Assignment</i> • <i>Address-Assignment Pools Overview</i> • <i>Address-Assignment Pool Configuration Overview</i>

request network-access aaa subscriber add session-id

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

Release Information Command introduced in Junos OS Release 11.2.

Description Locally activate (provision) a dynamic subscriber service for a subscriber who is currently logged in to the network. Starting in Junos OS Release 18.3R1, when the dynamic service profile is configured with the **profile-type remote-device-service** statement, the service is provisioned on a remote device by the remote device services manager daemon (rdmd).

Options *profile-name*—Name of service-profile to activate.
subscriber-session-id—ID of the subscriber session for which the service will be added.

Required Privilege Level view

Related Documentation

- *CLI-Activated Subscriber Services*
- *Local and Remote Service Activation and Deactivation Using the CLI*
- [request network-access aaa subscriber delete session-id on page 112](#)

List of Sample Output [request network-access aaa subscriber add session-id service-profile on page 111](#)
[request network-access aaa subscriber add session-id service-profile \(Parameters for Profile on Remote Device\) on page 111](#)

Output Fields When you enter this command, you are provided feedback on the status of your request. [Table 3 on page 110](#) lists possible error messages that might be returned if the service activation fails.

Table 3: 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.	—

Table 3: Service Activation/Deactivation Error Messages (continued)

Message	Description	Corrective Action
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
```

Sample Output

request network-access aaa subscriber add session-id service-profile (Parameters for Profile on Remote Device)

```
user@host> request network-access aaa subscriber add session-id 131 service-profile
"upstreamBandwidth(100,100,100)"
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 (deprovision) a dynamic subscriber service for a subscriber who is currently logged in to the network. Starting in Junos OS Release 18.3R1, when the dynamic service profile is configured with the profile-type remote-device-service statement, the service is deprovisioned on a remote device by the remote device services manager daemon (rdmd).
Options	<p>profile-name—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>subscriber-session-id—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">• <i>CLI-Activated Subscriber Services</i>• <i>Local and Remote Service Activation and Deactivation Using the CLI</i>• <i>Deactivating a Single Instance of a Subscriber Service</i>• <i>Deactivating All Instances of a Subscriber Service</i>• request network-access aaa subscriber add session-id on page 110
List of Sample Output	<p>request network-access aaa subscriber delete session-id service-profile on page 113</p> <p>request network-access aaa subscriber delete session-id service-profile (Deactivating a Single Server Instance) on page 113</p> <p>request network-access aaa subscriber delete session-id service-profile (Deactivating All Server Instances) on page 113</p> <p>request network-access aaa subscriber add session-id service-profile (Parameters for Profile on Remote Device) on page 113</p>
Output Fields	When you enter this command, you are provided feedback on the status of your request. Table 4 on page 113 lists possible error messages that might be returned if the service deactivation fails.

Table 4: 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.
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 add session-id service-profile (Parameters for Profile on Remote Device)

```
user@host> request network-access aaa subscriber delete session-id 131 service-profile
"upstreamBandwidth(100,100,100)"
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"> • <i>Using the CLI to Modify Traffic-Control Profiles That Are Currently Applied to Subscribers</i> • <i>CLI-Activated Subscriber Services</i>
List of Sample Output	request network-access aaa subscriber modify session-id on page 114
Output Fields	When you enter this command, you are provided feedback on the status of your request. Table 5 on page 114 lists possible messages that might be returned.

Table 5: 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

```


request-rate (Access)

Syntax	<code>request-rate rate;</code>
Hierarchy Level	<code>[edit access radius-options]</code>
Release Information	Statement introduced in Junos OS Release 11.4.
Description	Configure the number of requests the router can send per second to all configured RADIUS servers collectively. By limiting the flow of requests from the router to the RADIUS servers, you can prevent the RADIUS servers from being flooded with requests.
Options	rate —Number of requests per second. Range: 100 through 4000 requests per second Default: 500 requests per second
Required Privilege Level	admin —To view this statement in the configuration. admin-control —To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>RADIUS Servers and Parameters for Subscriber Access</i>

revert-interval (Access)

Syntax	<code>revert-interval <i>interval</i>;</code>
Hierarchy Level	[edit access profile <i>profile-name</i> radius options], [edit access radius-options]
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
Description	Configure the amount of time the router or switch waits after a server has become unreachable. The router or switch rechecks the connection to the server when the specified interval expires. If the server is then reachable, it is used in accordance with the order of the server list.
Options	interval —Amount of time to wait. Range: 0 through 604,800 seconds Default: 60 seconds
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>RADIUS Servers and Parameters for Subscriber Access</i>• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>

PART 3

S–Z

- [S–Z Statements on page 119](#)

CHAPTER 3

S–Z Statements

- [secret](#) on page 120
- [service-profile \(DHCP Local Server\)](#) on page 121
- [service-profile \(DHCP Relay Agent\)](#) on page 122
- [session-options](#) on page 124
- [statistics \(Access Profile\)](#) on page 127
- [strip-domain \(Domain Map\)](#) on page 128
- [target-logical-system \(Domain Map\)](#) on page 129
- [target-routing-instance \(Domain Map\)](#) on page 130
- [traceoptions \(ANCP\)](#) on page 131
- [traceoptions \(Subscriber Session Database Replication\)](#) on page 133
- [traceoptions \(Subscriber Management\)](#) on page 135
- [tunnel-profile \(Domain Map\)](#) on page 136
- [update-interval](#) on page 137
- [underlying-interface \(ANCP\)](#) on page 138
- [upstream-rate \(Traffic Shaping\)](#) on page 139

secret

Syntax	<code>secret <i>password</i>;</code>
Hierarchy Level	<code>[edit access profile <i>profile-name</i> radius-server <i>server-address</i>],</code> <code>[edit access radius-disconnect <i>client-address</i>],</code> <code>[edit access radius-server <i>server-address</i>]</code>
Release Information	Statement introduced before Junos OS Release 7.4. Statement introduced in Junos OS Release 9.0 for EX Series switches.
Description	Configure the password to use with the RADIUS server. The secret password used by the local router or switch must match that used by the server.
Options	<i>password</i> —Password to use; it can include spaces if the character string is enclosed in quotation marks.
Required Privilege Level	system—To view this statement in the configuration. system-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>• <i>RADIUS Authentication and Accounting Server Definition</i>• <i>Example: Configuring CHAP Authentication with RADIUS</i>• <i>Configuring RADIUS Authentication for L2TP</i>• <i>Configuring the RADIUS Disconnect Server for L2TP</i>

service-profile (DHCP Local Server)

Syntax	<code>service-profile <i>dynamic-profile-name</i>;</code>
Hierarchy Level	<pre> [edit system services dhcp-local-server], [edit system services dhcp-local-server dual-stack-group <i>dual-stack-group-name</i>], [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 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"> <i>Extended DHCP Local Server Overview</i> <i>Default Subscriber Service Overview</i> <i>Configuring a Default Subscriber Service</i>

service-profile (DHCP Relay Agent)

Syntax	<code>service-profile <i>dynamic-profile-name</i>;</code>
Hierarchy Level	<pre>[edit forwarding-options dhcp-relay], [edit forwarding-options dhcp-relay dhcpv6], [edit forwarding-options dhcp-relay dual-stack-group <i>dual-stack-group-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 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 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 11.2.</p> <p>Statement introduced in Junos OS Release 12.3R2 for EX Series switches.</p> <p>Support at the <code>[edit ... dhcpv6 ...]</code> hierarchy levels introduced in Junos OS Release 11.4.</p> <p>Support at the <code>[edit ... dual-stack-group <i>dual-stack-group-name</i>]</code> hierarchy level introduced in Junos OS Release 15.1.</p>
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 service profile.
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> <i>Default Subscriber Service Overview</i>

- *Configuring a Default Subscriber Service*

session-options

Syntax

```
session-options {  
  client-group [ group-names ];  
  client-idle-timeout minutes;  
  client-idle-timeout-ingress-only;  
  client-session-timeout minutes;  
  pcc-context {  
    input-service-filter-name filter-name;  
    input-service-set-name service-set-name;  
    ipv6-input-service-filter-name filter-name;  
    ipv6-input-service-set-name service-set-name;  
    ipv6-output-service-filter-name filter-name;  
    ipv6-output-service-set-name service-set-name;  
    output-service-filter-name filter-name;  
    output-service-set-name service-set-name;  
    profile-name pcef-profile-name;  
  }  
  strip-user-name {  
    delimiter [ delimiter ];  
    parse-direction (left-to-right | right-to-left);  
  }  
}
```

Hierarchy Level [edit access [profile](#) *profile-name*]

Release Information Statement introduced in Junos OS Release 8.5.

Description (MX Series and SRX Series devices) Define options to place limits on subscriber access based on how long the session has been up, how long the user has been inactive, or both.

(MX Series) Define options to modify a subscriber username at login based on the subscriber's access profile.

(MX Series) Specify characteristics related to policy and charging control (PCC) rules, such as the PCEF profile that contains the rules, service sets to process the rules, and service filters for the service sets.

Options **client-idle-timeout**—(MX Series only) Specify the grace period that begins after an authenticated user terminates all sessions and connections. Authentication is not required if a new connection is initiated during the grace period by the same user.

During this period, the router determines whether the subscriber is inactive by monitoring data traffic, both upstream from the user (ingress) and downstream to the user (egress). Control traffic is ignored. The subscriber is not considered idle as long as data traffic is detected in either direction. When no traffic is detected for the duration of the idle time out, non-DHCP subscribers (such as L2TP or PPP) are gracefully logged out, similarly to a RADIUS-initiated disconnect or a CLI-initiated logout; DHCP subscribers are disconnected.

When you additionally configure the related **client-idle-timeout-ingress-only** statement (MX Series only), the router monitors only ingress traffic to determine whether the subscriber is inactive; it does not monitor any egress traffic. The related **client-session-timeout** statement terminates the subscriber session when the session timeout expires regardless of user activity.

Client idle timeouts are most often used for residential services rather than business services. The most practical use case for this timeout is in a PPP access model. It is not practical for DHCP or DHCPv6 subscribers.

Although you can use the **client-idle-timeout** statement for dynamically configured subscriber VLANs, this configuration is useful only in limited circumstances (such as IP over Ethernet without DHCP and with fixed addresses) and is not typically used. If you do use the idle timeout for VLANs, the timeout period starts when the VLAN is instantiated. It resets when a client session is created or an existing session is reactivated. When no traffic is detected on an authenticated VLAN for the duration of the timeout, the VLAN is considered inactive and is deleted. If no client sessions are ever created on the VLAN, then the VLAN is removed when the timeout expires.

Default: The timeout is not configured.

Values: *minutes*—Number of minutes of idle time that elapse before the session is terminated. The value that you specify must be determined locally with consideration of the services and policies that you offer.

Range: 10 through 1440 minutes

client-idle-timeout-ingress-only—(MX Series only) Starting in Junos OS Release 16.2, specify that only ingress traffic is monitored for subscriber idle timeout processing for the duration of the idle timeout period that you specify with the **client-idle-timeout** statement. If no ingress traffic is received for the duration of the timeout, then the subscriber is gracefully logged out (non-DHCP subscribers) or disconnected (DHCP subscribers).

If you configure **client-idle-timeout** alone, then both ingress and egress traffic are monitored during the idle timeout. Monitoring only ingress traffic is useful in cases where the LNS sends traffic to the remote peer even when the peer is not up, such as when the LNS does not have PPP keepalives enabled and therefore does not detect that the peer is not up. Because the LAC monitors both ingress and egress traffic by default, in this situation it receives the egress traffic from the LNS and either does not log out the subscriber or delays detection of inactivity until the egress traffic ceases. When you specify that only ingress traffic is monitored in this case, the LAC can detect that the peer is inactive and then initiate logout.

client-session-timeout—(SRX Series, vSRX only) Specify the amount of time after which user sessions are terminated, regardless of user activity (also known as a forced or hard authentication timeout).

Alternatively, when you want subscribers to be identified as inactive before they are terminated, use the related statements, **client-idle-timeout** and **client-idle-timeout-ingress-only**. Use **client-idle-timeout** alone to specify a period of time during which both ingress and egress subscriber data traffic is monitored; if no traffic is detected for the duration of the period, the subscriber is considered inactive and is terminated. Add the **client-idle-timeout-ingress-only** statement to monitor only ingress traffic for the duration of the timeout set with the **client-idle-timeout** statement.



BEST PRACTICE: We recommend that you do not configure a session timeout for subscribers receiving voice services. Because the session timeout is a simple time-based timeout, it is likely to interrupt subscribers actively using a voice service and terminate their calls unexpectedly (from the subscriber viewpoint). This result is a particular concern for emergency services calls.

Client session timeouts are most often used for residential services rather than business services. The most practical use case for this timeout is in a PPP access model when no voice services are offered. For DHCP or DHCPv6 subscribers, the session timeout is used as the DHCP lease timer if no other lease time configuration is present.

Although you can use the **client-session-timeout** statement for dynamically configured subscriber VLANs, this configuration is useful only in limited circumstances (such as IP over Ethernet without DHCP and with fixed addresses) and is not typically used. If you do use the session timeout for VLANs, the timeout period starts when the VLAN is instantiated.

Default: The timeout is not configured.

Values: *minutes*—Number of minutes after which user sessions are terminated. The value that you specify must be determined locally with consideration of the services and policies that you offer.

Range: 1 through 527040 minutes

The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.

Required Privilege	access—To view this statement in the configuration.
Level	access-control—To add this statement to the configuration.

- Related Documentation**
- *Understanding Session Options for Subscriber Access*
 - *Configuring Subscriber Session Timeout Options*
 - *Configuring Username Modification for Subscriber Sessions*
 - *Removing Inactive Dynamic Subscriber VLANs*
 - *Enabling Direct PCC Rule Activation by a PCRF for Subscriber Management*


statistics (Access Profile)

Syntax	statistics (time volume-time);
Hierarchy Level	[edit access profile <i>profile-name</i> accounting]
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches. volume-time option added in Junos OS Release 9.4.
Description	Configure the router or switch to collect time statistics, or both volume and time statistics, for the sessions being managed by AAA.
Options	time —Collect uptime statistics only. volume-time —Collect both volume and uptime statistics.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	• <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i>


strip-domain (Domain Map)

Syntax	strip-domain;
Hierarchy Level	[edit access domain map domain-map-name]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	Remove the domain name from the username before continuing with any AAA services specified in a domain map.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Enabling Domain Name Stripping</i>• <i>Configuring Domain and Realm Name Usage for Domain Maps</i>

target-logical-system (Domain Map)

Syntax	<pre>target-logical-system <i>logical-system-name</i> { target-routing-instance <i>routing-instance-name</i>; }</pre>
Hierarchy Level	[edit access domain map <i>domain-map-name</i>]
Release Information	Statement introduced in Junos OS Release 10.4.
Description	<p>Configure a non-default logical system and optionally a non-default routing instance for the subscriber's interface in a domain map.</p> <p>You use the target-routing-instance statement at the [edit access domain map domain-map-name] hierarchy level to configure a non-default routing instance for the default logical system.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> NOTE: Subscriber management is supported in the default logical system only.</p> </div>
Default	Default logical system for the subscriber..
Options	<p>logical-system-name—Name of the logical system.</p> <p>The remaining statements are explained separately. Search for a statement in CLI Explorer or click a linked statement in the Syntax section for details.</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> <i>Specifying a Target Logical System/Routing Instance in a Domain Map</i>

target-routing-instance (Domain Map)

Syntax	target-routing-instance (<i>routing-instance-name</i> default);
Hierarchy Level	[edit access domain map <i>domain-map-name</i>], [edit access domain map <i>domain-map-name</i> target-logical-system <i>logical-system-name</i>]
Release Information	Statement introduced in Junos OS Release 10.4. default option added in Junos OS Release 13.3.
Description	Configure the routing instance of the subscriber context. <div> NOTE: Subscriber management is supported in the default logical system only. The target-logical-system statement, which appears in the CLI, is not supported in current Junos OS releases.</div>
Default	For dynamic LNS sessions, the routing instance of the peer (LAC facing) interface. For all other sessions, the default logical system/routing instance context.
Options	routing-instance-name —Name of the routing instance. default —The default (master) routing instance.
Required Privilege Level	admin—To view this statement in the configuration. admin-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Specifying a Target Logical System/Routing Instance in a Domain Map</i>• <i>Domain Mapping Overview</i>

traceoptions (ANCP)

Syntax	<pre> traceoptions { file <i>filename</i> <files <i>number</i>> <match <i>regular-expression</i>> <size <i>maximum-file-size</i>> <world-readable no-world-readable>; flag <i>flag</i> <disable>; level (all error info notice verbose warning); no-remote-trace; } </pre>
Hierarchy Level	[edit protocols ancp]
Release Information	Statement introduced in Junos OS Release 9.4.
Description	Define tracing operations for ANCP agent processes.
Options	<p>file <i>filename</i>— Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory /var/log.</p> <p>files <i>number</i>— (Optional) Maximum number of trace files to create before overwriting the oldest one. If you specify a maximum number of files, you also must specify a maximum file size with the size option.</p> <p>Range: 2 through 1000</p> <p>Default: 3 files</p> <p>flag <i>flag</i>—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. Include the disable option after a flag to disable tracing for that flag. You can include the following flags:</p> <ul style="list-style-type: none"> • all—Trace all operations. • config—Trace configuration events. • cos—Trace class-of-service events. • general—Trace general flow. • packet—Trace ANCP packet transmit and receive operations. • process—Trace process internals. • protocol—Trace protocol events. • restart—Trace process restart flow • routing-socket—Trace routing socket events. • session—Trace connection events and flow. • startup—Trace ANCP startup events and flow. • subscriber—Trace subscriber events.

- **timer**—Trace timer processing.

level—Level of tracing to perform. You can specify any of the following levels:

- **all**—Match all levels.
- **error**—Match error conditions.
- **info**—Match informational messages.
- **notice**—Match notice messages about conditions requiring special handling.
- **verbose**—Match verbose messages.
- **warning**—Match warning messages.

Default: error

match *regular-expression*—(Optional) Refine the output to include lines that contain the regular expression.

no-remote-trace—Disable remote tracing.

no-world-readable—(Optional) Disable unrestricted file access.

size *maximum-file-size*—(Optional) Maximum size of each trace file. By default, the number entered is treated as bytes. Alternatively, you can include a suffix to the number to indicate kilobytes (KB), megabytes (MB), or gigabytes (GB). If you specify a maximum file size, you also must specify a maximum number of trace files with the **files** option.

Syntax: *sizek* to specify KB, *sizem* to specify MB, or *sizeg* to specify GB

Range: 10240 through 1073741824

Default: 128 KB

world-readable—(Optional) Enable unrestricted file access.

Required Privilege Level	trace—To view this statement in the configuration. trace-control—To add this statement to the configuration.
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Related Documentation	<ul style="list-style-type: none">• <i>Tracing ANCP Events for Troubleshooting</i>
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tracoptions (Subscriber Session Database Replication)

Syntax	<pre>tracoptions { file <i>filename</i> <files <i>number</i>> <match <i>regular-expression</i> > <size <i>maximum-file-size</i>> <world-readable no-world-readable>; flag <i>flag</i>; no-remote-trace; }</pre>
Hierarchy Level	[edit system services database-replication]
Release Information	Statement introduced in Junos OS Release 9.3.
Description	Define tracing operations for subscriber management session database replication processes.
Options	<p>file <i>filename</i>—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory /var/log.</p> <p>files <i>number</i>—(Optional) Maximum number of trace files to create before overwriting the oldest one. If you specify a maximum number of files, you also must specify a maximum file size with the size option.</p> <p>Range: 2 through 1000</p> <p>Default: 3 files</p> <p>flag <i>flag</i>—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. You can include the following flags:</p> <ul style="list-style-type: none"> • all—Trace all operations. • database—Trace database events. • general—Trace general flow. • mirror—Trace mirroring events. • replication—Trace database replication events. • server—Trace server events. • session-db—Trace session database interactions. • ui—Trace user interface events. <p>match <i>regular-expression</i>—(Optional) Refine the output to include lines that contain the regular expression.</p> <p>no-remote-trace—Disable remote tracing.</p> <p>no-world-readable—(Optional) Disable unrestricted file access.</p>

size *maximum-file-size*—(Optional) Maximum size of each trace file. By default, the number entered is treated as bytes. Alternatively, you can include a suffix to the number to indicate kilobytes (KB), megabytes (MB), or gigabytes (GB). If you specify a maximum file size, you also must specify a maximum number of trace files with the **files** option.

Syntax: *sizek* to specify KB, *sizem* to specify MB, or *sizeg* to specify GB

Range: 10240 through 1073741824

Default: 128 KB

world-readable—(Optional) Enable unrestricted file access.

Required Privilege	trace—To view this statement in the configuration.
Level	trace-control—To add this statement to the configuration.

Related Documentation	<ul style="list-style-type: none">• <i>Tracing Subscriber Management Session Database Replication Events for Troubleshooting</i>
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traceoptions (Subscriber Management)

Syntax	<pre> traceoptions { file <i>filename</i> <files <i>number</i>> <match <i>regular-expression</i>> <size <i>maximum-file-size</i>> <world-readable no-world-readable>; flag <i>flag</i>; } </pre>
Hierarchy Level	[edit system services subscriber-management]
Release Information	Statement introduced in Junos OS Release 11.1.
Description	Define tracing operations for subscriber management interface processes.
Options	<p>file <i>filename</i>—Name of the file to receive the output of the tracing operation. Enclose the filename within quotation marks. All files are placed in the directory <code>/var/log</code>.</p> <p>files <i>number</i>—(Optional) Maximum number of trace files to create before overwriting the oldest one. If you specify a maximum number of files, you also must specify a maximum file size with the size option.</p> <p>Range: 2 through 1000</p> <p>Default: 3 files</p> <p>flag <i>flag</i>—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements. You can include the following flags:</p> <ul style="list-style-type: none"> • all—Trace all operations. • database—Trace database events. • general—Trace general events. • issu—Trace unified ISSU events. • server—Trace server events. • session-db—Trace session database interactions. • ui—Trace user interface events. <p>match <i>regular-expression</i>—(Optional) Refine the output to include lines that contain the regular expression.</p> <p>no-world-readable—(Optional) Disable unrestricted file access.</p> <p>size <i>maximum-file-size</i>—(Optional) Maximum size of each trace file. By default, the number entered is treated as bytes. Alternatively, you can include a suffix to the number to indicate kilobytes (KB), megabytes (MB), or gigabytes (GB). If you specify a maximum file size, you also must specify a maximum number of trace files with the files option.</p> <p>Syntax: sizek to specify KB, sizem to specify MB, or sizeg to specify GB</p>

Range: 10240 through 1073741824

Default: 128 KB

world-readable—(Optional) Enable unrestricted file access.

Required Privilege trace—To view this statement in the configuration.
Level trace-control—To add this statement to the configuration.

Related Documentation

- *Tracing Subscriber Management Database Events for Troubleshooting*

tunnel-profile (Domain Map)

Syntax tunnel-profile *profile-name*;

Hierarchy Level [edit access domain **map** *domain-map-name*]

Release Information Statement introduced in Junos OS Release 10.4.

Description Tunnel profile that provides definitions for tunnels associated with the domain map.


Options *profile-name*—Name of tunnel profile.

Required Privilege admin—To view this statement in the configuration.
Level admin-control—To add this statement to the configuration.

Related Documentation

- *Specifying a Tunnel Profile in a Domain Map*
- *Configuring a Tunnel Profile for Subscriber Access*

update-interval

Syntax	<code>update-interval <i>minutes</i>;</code>
Hierarchy Level	<code>[edit access profile <i>profile-name</i> accounting]</code>
Release Information	Statement introduced in Junos OS Release 9.1. Statement introduced in Junos OS Release 9.1 for EX Series switches.
Description	<p>Enable interim accounting updates and configure the amount of time that the router or switch waits before sending a new accounting update.</p> <p>Interim accounting updates are included in the exchange of messages between the client and the accounting server. In RADIUS accounting, the client is the network access server (NAS), which can be the router or switch. The NAS sends Accounting-Request messages to the server, which acknowledges receipt of the requests with Accounting-Response messages. Interim accounting updates are sent in Accounting-Request packets with the Acct-Status-Type attribute set to Interim-Update.</p> <p>When a user is authenticated, the authentication server issues an Access-Accept message in response to a successful Access-Request message. The interval between interim updates can be configured directly on the server using the Acct-Interim-Interval attribute of the Access-Accept message. However, if the update interval is configured on the NAS using update-interval, then the locally configured value overrides the value found in an Access-Accept message from the server.</p>
	<p> NOTE: All information in an interim update message is cumulative from the beginning of the session, not from the last interim update message.</p>
Default	No interim updates are sent from the client to the accounting server.
Options	<p>minutes—Amount of time between updates, in minutes. All values are rounded to the next higher multiple of 10. For example, the values 811 through 819 are all accepted by the CLI, but are all rounded up to 820.</p> <p>Range: 10 through 1440 minutes</p>
Required Privilege Level	<p>admin—To view this statement in the configuration.</p> <p>admin-control—To add this statement to the configuration.</p>
Related Documentation	<ul style="list-style-type: none"> <i>Configuring Authentication and Accounting Parameters for Subscriber Access</i> <i>Configuring Immediate Interim Accounting Updates to RADIUS in Response to ANCP Notifications</i>

underlying-interface (ANCP)

Syntax	<code>underlying-interface <i>underlying-interface-name</i>;</code>
Hierarchy Level	[edit protocols ancp interfaces <code>interface-set</code> <i>interface-set-name</i>]
Release Information	Statement introduced in Junos OS Release 12.2.
Description	Configure the underlying interface on which the VLAN demux interface is running. The VLAN demux interface is the underlying interface for the PPPoE sessions controlled by ANCP.
Options	<i>underlying-interface-name</i> —Name of the underlying interface.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
Related Documentation	<ul style="list-style-type: none">• <i>Configuring the ANCP Agent</i>• <i>Associating an Access Node with Subscribers for ANCP Agent Operations</i>

upstream-rate (Traffic Shaping)

Syntax	<code>upstream-rate <i>rate</i>;</code>
Hierarchy Level	<p>[edit dynamic-profiles <i>profile-name</i> interfaces \$junos-interface-ifd-name unit \$junos-interface-unit advisory-options],</p> <p>[edit dynamic-profiles <i>profile-name</i> interfaces interface-set \$junos-interface-set-name interface \$junos-interface-ifd-name advisory-options],</p> <p>[edit interfaces demux0 unit <i>logical-unit-number</i> advisory-options],</p> <p>[edit interfaces <i>interface-name</i> <i>logical-unit-number</i> advisory-options]</p>
Release Information	<p>Statement introduced in Junos OS Release 11.4.</p> <p>Support at the [edit interfaces demux0 ...] hierarchy level introduced in Junos OS Release 12.2.</p> <p>Support at the [edit dynamic-profiles ...] hierarchy level introduced in Junos OS Release 13.1.</p>
Description	<p>Specify a recommended shaping rate to be applied to upstream traffic on an interface.</p> <p>For ANCP interfaces, this configured rate is used as the default value for the Juniper VSA Upstream-Calculated-Qos-Rate (26-142) when the router has not received and processed the attributes from the access node.</p> <p>For L2TP, the rate is configured on an underlying PPPoE logical interface for a subscriber on an MX Series router acting as a LAC. When the subscriber is tunneled, this rate, referred to as speed for L2TP, is sent to the LNS in the ICCN message as AVP 38.</p>
Options	<p>rate—Traffic rate in bits per second.</p> <p>Range: 1000 through 4,294,967,295 bits per second</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>Setting a Recommended Shaping Rate for Traffic on ANCP Interfaces</i> • <i>Configuring the ANCP Agent</i> • <i>Configuring the Method to Derive the LAC Connection Speeds Sent to the LNS</i>

