CLI Command Description

Generic Commands

description

Syntax **description** *description-string*
no description

Context config>aaa>acct-on-off-grp
config>aaa>radius-server-policy
config>isa>wlan-gw-group
config>router>radius-server>server
config>router>radius-proxy>server
config>service>vprn>radius-proxy>server
config>service>vprn>radius-server>server
config>subscr-mgmt>wlan-gw>mgw-profile
config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command creates a text description stored in the configuration file for a configuration context.

The **description** command associates a text string with a configuration context to help identify the context in the configuration file.

The **no** form of this command removes any description string from the context.

Default No description is associated with the configuration context.

Parameters *description-string* — A text string describing the entity. Allowed values are any string up to 80 characters long composed of printable, 7-bit ASCII characters excluding double quotes. If the string contains special characters (#, $, spaces, etc.), the entire string must be enclosed within double quotes.

shutdown

Syntax [**no**] **shutdown**

Context config>router>radius-proxy>cache
config>router>radius-proxy>server>cache
config>router>radius-proxy>server
config>service>vprn>radius-proxy>server>cache
config>service>vprn>radius-proxy>server
config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface>group-interface>soft-gre

Description The **shutdown** command administratively disables the entity. When disabled, an entity does not change, reset, or remove any configuration settings or statistics. Many entities must be explicitly enabled using the **no shutdown** command.

The **shutdown** command administratively disables an entity. The operational state of the entity is disabled as well as the operational state of any entities contained within. Many objects must be shut down before they can be deleted.

Unlike other commands and parameters where the default state is not indicated in the configuration file, **shutdown** and **no shutdown** are always indicated in system generated configuration files.

The **no** form of the command puts an entity into the administratively enabled state.

Default no shutdown

subscriber-mgmt

Syntax **subscriber-mgmt**

Context config

Description This command enables the context to configure subscriber management entities. A subscriber is uniquely identified by a subscriber identification string. Each subscriber can have several DHCP sessions active at any time. Each session is referred to as a subscriber host and is identified by its IP address and MAC address.

All subscriber hosts belonging to the same subscriber are subject to the same hierarchical QoS (HQoS) processing. The HQoS processing is defined in the sub-profile (the subscriber profile). A sub-profile refers to an existing scheduler policy (configured in **the configure>qos>scheduler-policy** context) and offers the possibility to overrule the rate of individual schedulers within this policy.

Because all subscriber hosts use the same scheduler policy instance, they must all reside on the same complex.

WLAN-GW Commands

wlan-gw

Syntax [**no**] **wlan-gw**

Context config>subscriber-mgmt
config>router
config>service>vprn

Description This command enables the context to configure WLAN Gateway parameters.

mgw-profile

Syntax **mgw-profile** *profile-name* [**create**]
no mgw-profile *profile-name*

Context config>subscr-mgmt>wlan-gw

Description This command creates a new mobile gateway profile or configures an existing mobile gateway profile.

Mobile gateway profile is used to configure signaling interface between WLAN-GW and mobile gateway (PGW or GGSN) and GTP related signaling parameters per mobile gateway.

.The **no** form of the command removes the profile name from the configuration.

Default none

Parameters *profile-name* — Specifies theMobile Gateway profile up to 32 characters in length.

create — Keyword used to create a profile name. The **create** keyword requirement can be enabled/disabled in the **environment>create** context.

interface-type

Syntax **interface-type** {**gn**|**s2a**|**s2b**}
no interface-type

Context config>subscriber-mgmt>wlan-gw >mgw-profile

Description This command specifies the signaling interface between WLAN-GW and mobile gateway (PGW or GGSN).

Default s2a

Parameters **gn —** Signaling interface between WLAN-GW and mobile gateway is Gn as specified in 3GPP TS 29.060.

S2a — Signaling interface between WLAN-GW and mobile gateway is S2a as specified in SAMOG.

S2b — Signaling interface between WLAN-GW and mobile gateway is S2b as specified in 3GPP TS 29.274.

ip-ttl

Syntax **ip-ttl** *hops*
no ip-ttl

Context config>subscr-mgmt>wlan-gw>mgw-profile

Description This command configures the value to put in the IP header's TTL field for GTP control messages.

The **no** form of the command reverts to the default value.

Default 255

Parameters *hops* — Specifies the the IP TTL.

Values 1 — 255

keep-alive

Syntax **keep-alive** [**interval** *seconds*] [**retry-count** *value*] [**timeout** *retry-seconds*]
no keep-alive

Context config>subscr-mgmt>wlan-gw>mgw-profile

Description This command configures the context in radius-server-policy.

The **no** form of the command reverts to the default values.

Default keep-alive interval 60 seconds, retry-count 5, timeout 5 seconds

Parameters **interval** *seconds* — Specifies, in seconds, the interval between keep-alive Echo-Request messages towards the same peer.

Values 0, 60 — 180

Default 60

retry-count *value* — Specifies, in seconds, the interval between keep-alive Echo-Request messages towards the same peer.

Values 1 — 15

Default 4

timeout *retry-seconds* — Specifies the retry timeout, in seconds.

Values 1 — 20

Default 5

message-retransmit

Syntax **message-retransmit** [**timeout** *timeout*] [**retry-count** *value*]
no message-retransmit

Context config>subscr-mgmt>wlan-gw>mgw-profile

Description This command configures the retry-count and response-timeout for GTP messages.

The **no** form of the command reverts to the default values.

Default timeout 5 seconds, value 3

Parameters **timeout** *timeout* — specifies, in seconds, the interval between retransmission of signalling request messages towards the same peer Mobile Gateway.

Values 1 — 30

Default 5

retry-count *value* — specifies the number of times a signalling request message is transmitted towards the same peer.

Values 1 — 8

Default 3

signalling-protocol

signalling-protocol *protocol*
no signalling-protocol

Context config>subscr-mgmt>wlan-gw>mgw-profile

Description This command specifies the GTP (GPRS Tunneling Protocol) control protocol.

The **no** form of the command reverts to the default value.

Default gtpv1C

Parameters *protocol* — Specifies the the GTP control protocol variant.

Values gtpv1-c, gtpv2-c, gtp-auto

serving-network

Syntax **serving-network mcc** *mcc-value* **mnc** *mnc-value*
no serving-network

Context config>subscr-mgmt>wlan-gw>mgw-profile

Description This command configures the Operator Identifier part (MCC and MNC) of the APN.

The **no** form of the command removes the values from the profile.

Default no serving-network

Parameters **mcc** mcc-value — specifies the Mobile Country Code (MCC) portion of the Serving Network.

Values 2 digits

mnc *mnc-value* — specifies the Mobile Network Code (MNC) portion of the Serving Network.

Values 2 or 3 digits

apn

Syntax **apn** *apn*
no apn

Context config>router>wlan-gw
configure>service>vprn>wlan-gw

Description This command configures the Network Identifier part of the APN.

The **no** form of the command removes the string from the configuration.

Default no apn

Parameters *apn* — Specifies the APN (Access Point Name) used for this IMSI to connect to this Mobile Gateway up to 80 characters in length.

mgw-map

Syntax **mgw-map** *ip-prefix* **[***/prefix-length***] mgw-profile** *profile-name*
no mgw-map

Context config>router>wlan-gw
configure>service>vprn>wlan-gw

Description This command configures the mappings of MGW IP address and GTP profile.

Parameters *ip-prefix*[*/prefix-length*] — Specifies the IP prefix and prefix length.

Values ip-prefix a.b.c.d (host bits must be 0)
length [0..32]

profile-name — specifies the profile associated with this address prefix.

Values 32 characters max

address

Syntax **address** *ip-prefix*[/*prefix-length*] [**mgw-profile** *profile-name*]
no address *ip-prefix*[/*prefix-length*]

Context config>router>wlan-gw>mgw-map
configure>service>vprn>wlan-gw>mgw-map

Description This command specifies the address .

The **no** form of the command removes the parameters form the configuration.

ip-prefix[/prefix-length — Specifies the IP prefix and prefix length of the subnet.

Values ip-prefix[/prefix-length ip-prefix a.b.c.d (host bits must be 0)
length [0..32]

mgw-profile *profile-name* **—** specifies the Mobile Gateway profile associated with this address prefix up to 32 characters in length.

RADIUS Server Policy Commands

acct-on-off-group

Syntax **acct-on-off-group** *group-name* **[create]**
no acct-on-off-group *group-name*

Context config>aaa

Description This command creates an acct-on-off-group.

An acct-on-off-group can be referenced by:

- a single radius-server-policy as controller: the acct-on-off oper-state of the acct-on-off-group is set to the acct-on-off oper-state of the radius-server-policy (acts as master)

- multiple radius-server-policies as monitor: the acct-on-off oper-state of the radius-server-policy is inherited from the acct-on-off oper-state of the acct-on-off group. (acts as a slave)

The **no** form of the command deletes the acct-on-off-group.

Default none

Parameters *group-name* — Specifies the name of an acct-on-off group up to 32 characters in length.

radius-server-policy

Syntax **radius-server-policy** *policy-name* [**create**]
no radius-server-policy *policy-name*

Context config>aaa

Description This command creates a radius-server-policy.

A radius-server-policy can be used in

- radius-proxy, for application like EAP authentication for WIFI access
- authentication policy, for Enhanced Subscriber Management authentication
- radius accounting policy, for Enhanced Subscriber Management accounting
- dynamic data service RADIUS accounting
- AAA route downloader

The **no** form of the command removes the policy name from the configuration.

Default none

Parameters *policy-name* — Specifies the name of the radius-server-policy up to 32 characters in length.

create — Keyword used to create a radius-server-policy name. The **create** keyword requirement can be enabled/disabled in the **environment>create** context.

accept-script-policy

Syntax **accept-script-policy** *policy-name*
no accept-script-policy

Context config>aaa>radius-server-policy

Description This command specifies name of the radius-script-policy to be applied for access-accept.

Default none

Parameters *policy-name* — Specifies the name of the accept-script-policy up to 32 characters in length.

acct-on-off

Syntax **acct-on-off**
acct-on-off monitor-group *group-name*
acct-on-off oper-state-change [group *group-name***]**

Context config>aaa>radius-server-policy

Description This command controls the sending of Accounting-On and Accounting-Off messages and the acct-on-off oper-state of the radius-server-policy:

acct-on-off: enables the sending of Accounting-On and Accounting-Off messages for this radius-server-policy. The acct-on-off oper-state is always not blocked.

acct-on-off oper-state-change [group *group-name*]: enables the sending of Accounting-On and Accounting-Off messages for this radius-server-policy. The acct-on-off oper-state is function of the Accounting-response received for the Accounting-On and Accounting-Off. Optionally, sets the acct-on-off oper-state of the acct-on-off-group.

acct-on-off monitor-group *group-name*: no Accounting-On and Accounting-Off messages are sent for this radius-server-policy. The acct-on-off oper-state is inherited from the acct-on-off-group.

The **no** form of the command disables the sending of Accounting-On and Accounting-Off messages.

Default no acct-on-off

Parameters *group-name* — Specifies the name of an acct-on-off group up to 32 characters in length.

acct-on-off-group

Syntax **acct-on-off-group <group-name> [create]**
no acct-on-off-group <group-name>]

Context config>aaa

Description This command creates an acct-on-off-group.

An acct-on-off-group can be referenced by:

-a single **radius-server-policy** as controller: the **acct-on-off oper-state** of the **acct-on-off-group** is set to the **acct-on-off oper-state** of the **radius-server-policy** (acts as master)

-multiple **radius-server-policies** as monitor: the **acct-on-off oper-state** of the **radius-server-policy** is inherited from the **acct-on-off oper-state** of the **acct-on-off group**. (acts as a slave)

The **no** form of the command deletes the acct-on-off-group.

Default none

Parameters *group-name* — Specifies the name of an acct-on-off group up to 32 characters in length.

acct-request-script-policy

Syntax **acct-request-script-policy** *policy-name*
no acct-request-script-policy

Context config>aaa>radius-server-policy

Description This command specifies the name of the acct-request-script-policy pointing to the Python script to be applied for RADIUS accounting request messages.

Default no acct-request-script-policy

Parameters *policy-name* — Specifies the name of the acct-request-script-policy up to 32 characters in length.

auth-request-script-policy

Syntax **uth-request-script-policy** *policy-name*
no auth-request-script-policy

Context config>aaa>radius-server-policy

Description This command specifies the name of the auth-request-script-policy pointing to the Python script to be applied for RADIUS access request messages.

Default no auth-request-script-policy

Parameters *policy-name* — Specifies the name of the auth-request-script-policy up to 32 characters in length.

buffering

Syntax **[no] buffering**

Context config>aaa>radius-server-policy

Description This command enables the context to configure RADIUS message buffering.

The **no** form of the command disables RADIUS message buffering.

Default none

acct-interim

Syntax **acct-interim min** *min-val* **max** *max-val* **lifetime** *lifetime*
no acct-interim

Context config>aaa>radius-srv-plcy>servers>buffering

Description This command enables RADIUS accounting interim update message buffering.

1- The message is stored in the buffer, a lifetime timer is started and the message is sent to the RADIUS server

2- If after retry*timeout seconds no RADIUS accounting response is received for the interim update then a new attempt to send the message is started after minimum[(min-val*2n), max-val] seconds.

3- Repeat step 2 until for one of the following:

a. a RADIUS accounting response is received.

b. the lifetime of the buffered message expires.

c. a new RADIUS accounting interim-update or a RADIUS accounting stop for the same accounting session-id and radius-server-policy is stored in the buffer.

d. the message is manually purged from the message buffer via a clear command.

4- The message is purged from the buffer.

The **no** form of the command disables RADIUS accounting interim update message buffering.

Default no acct-interim

Parameters *min-val* — Specifies the minimum interval in seconds between attempts to resend the RADIUS accounting interim update

Values 1 – 3600

max-val — Specifies the maximum interval in seconds between attempts to resend the RADIUS accounting interim update

Values 1 – 3600

lifetime — Specifies the lifetime in hours

Values 1 – 25

acct-stop

Syntax **acct-stop min** *min-val* **max** *max-val* **lifetime** *lifetime*
no acct-stop

Context config>aaa>radius-srv-plcy>servers>buffering

Description This command enables RADIUS accounting stop message buffering.

1- The message is stored in the buffer, a lifetime timer is started and the message is sent to the RADIUS server

2 - If after retry*timeout seconds no RADIUS accounting response is received for the accounting stop, then a new attempt to send the message is started after minimum[(min-val*2n), max-val] seconds.

3 - Repeat step 2 until

a. a RADIUS accounting response is received, or

b. the lifetime of the buffered message expires, or

c. the message is manually purged from the message buffer via a clear command

4 - The message is purged from the buffer.

The no form of the command disables RADIUS accounting stop message buffering..

Default no acct-interim

Parameters *min-val* — Secifies the minimum interval in seconds between attempts to resend the RADIUS accounting stop

Values 1 – 3600

max-val — Specifies the maximum interval in seconds between attempts to resend the RADIUS accounting stop.

Values 1 – 3600

max-val — Specifies the lifetime in hours.

Values 1 – 25

servers

Syntax **servers**

Context config>aaa>radius-server-policy

Description This command enables the context to configure radius-server-policy parameters.

access-algorithm

Syntax **access-algorithm** {**direct**|**round-robin**|**hash-based**}
no access-algorithm

Context config>aaa>radius-server-policy>servers

Description This command configures the algorithm used to select a RADIUS server from the pool of configured RADIUS servers.

Default direct

Parameters **direct —** Specifies that the first server will be used as primary server for all requests, the second as secondary and so on.

round-robin — Specifies that the first server will be used as primary server for the first request, the second server as primary for the second request, and so on. If the router gets to the end of the list, it starts again with the first server.

hash-based — Select the server based on the calculated hash result of configured load-balanced-key in the radius-server-policy. Hashing only applies to server selection for radius proxy.

retry

Syntax **retry** *count*
no retry

Context config>aaa>radius-srv-plcy>servers

Description This command configures the number of times the router attempts to contact the RADIUS server, if not successful the first time.

Default 3

Parameters *count* — Specifies the number of times a signalling request message is transmitted towards the same peer.

Values 1 — 256

router

Syntax **router** *router-instance*
router service-name *service-name*
no router

Context config>aaa>radius-server-policy>servers

Description This command specifies the virtual router instance applicable for the set of configured RADIUS servers. This value cannot be changed once a RADIUS server is configured for this policy.

Default no router

Parameters *router-instance* — Specifies the router instance.

Values

service-name	Service name up to 64 characters.	
	router-instance:	router-name, service-id
	router-name:	Base, management
	service-id:	1 — 2147483647

service-name — Specifies the router name service-id up to 64 characters.

server

Syntax **server** *server-index* **name** *server-name*
no server *server-index*

Context config>aaa>radius-server-policy>servers

Description This command adds a RADIUS server.

The **no** form of the command removes a RADIUS server.

Default none

Parameters *index* — The index for the RADIUS server. The index determines the sequence in which the servers are queried for authentication requests. Servers are queried in order from lowest to highest index.

Values 1 — 5

server-name — Specifies the server name up to 32 characters in length.

source-address

Syntax **source-address** *ip-address*
no source-address

Context config>aaa>radius-server-policy>servers

Description This command configures the source address of the RADIUS packet. The system IP address must be configured in order for the RADIUS client to work. See Configuring a System Interface in the 7750 SR OS Router Configuration Guide. Note that the system IP address must only be configured if the source-address is not specified. When the no source-address command is executed, the source address is determined at the moment the request is sent. This address is also used in the nas-ip-address attribute: over there it is set to the system IP address if no source-address was given.

The no form of the command reverts to the default value.

Default no source-address

Parameters *ip-address* — Specifies the source address of radius packet.

timeout

Syntax **timeout** [**sec** *seconds*] [**min** *minutes*]
no timeout

Context config>aaa>radius-srv-plcy>servers

Description This command configures the time the router waits for a response from a RADIUS server.

The no form of the command reverts to the default value.

Default 5 seconds

Parameters *seconds* — Specifies the number of seconds for the timeout.

Values 1 — 59

minutes — Specifies the number of minutes for the timeout.

Values 1 — 1

Values Max. value = 5 min 40 sec

hold-down-time

Syntax **hold-down-time** [**sec** *seconds*] [**min** *minutes*]
no hold-down-time

Context config>aaa>radius-server-policy>servers

Description This command configures the hold time before re-using a RADIUS server.

The **no** form of the command reverts to the default value.

Default 30 seconds

Parameters *seconds* — Specifies the number of seconds for the hold down time.

Values 1 — 59

minutes — Specifies the number of minutes for the hold down time.

Values 1 — 15

CLI Command Description for RADIUS Server

radius-server

Syntax **radius-server**

Context config>router
config>service>vprn

Description This command enters the radius-server configuration context under router or VPRN service.

Default none

server

Syntax **server** *server-name* [**address** *ip-address*] [**secret** *key*][**hash**|**hash2**][**create**]
no server *server-name*

Context config>router>radius-server
config>service>vprn>radius-server

Description This command either specifies an external RADIUS server in the corresponding routing instance or enters configuration context of an existing server. The configured server could be referenced in the radius-server-policy.

The **no** form of the command removes the parameters from the server configuration.

Default no

Parameters *server-name* — Specifies the name of the external RADIUS server

address *ip-address* **—** Specifies the IP address of the external RADIUS server.

secret *key* **—** Specifies the shared secret key of the external RADIUS server

hash — Specifies the hash scheme.

accept-coa

Syntax [**no**] **accept-coa**

Context config>router>radius-server>server
config>service>vprn>radius-server>server

Description This command configures this server for Change of Authorization messages. The system will process the CoA request from the external server if configured with this command; otherwise the CoA request will be dropped.

The **no** form of the command disables the command.

acct-port

Syntax **acct-port** *port*
no acct-port

Context config>router>radius-server>server
config>service>vprn>radius-server>server

Description This command specifies the UDP listening port for RADIUS accounting requests.

The **no** form of the commands resets the UDP port to its default value (1813)

Default acct-port 1813

Parameters *port* — Specifies the UDP listening port for accounting requests of the external RADIUS server.

Values 1 — 65535

auth-port

Syntax **auth-port** *port*
no auth-port

Context config>router>radius-server>server
config>service>vprn>radius-server>server

Description This command specifies the UDP listening port for RADIUS authentication requests.

The **no** form of the commands resets the UDP port to its default value (1812)

Default auth-port 1812

Parameters *port* — Specifies the UDP listening port for accounting requests of the external RADIUS server.

Values 1 — 65535

coa-script-policy

Syntax **coa-script-policy** *policy-name*
no coa-script-policy

Context config>router>radius-server>server
config>service>vprn>radius-server>server

Description This command specifies radius-script-policy for CoA-Request sent from this RADIUS server.

The **no** form of the command removes the policy name from the configuration.

Default none

Parameters *policy-name* — Specifies the name of radius-script-policy up to 80 characters in length.

pending-requests-limit

Syntax **pending-request-limit** *limit*
no pending-request-limit

Context config>router>radius-server>server
config>service>vprn>radius-server>server

Description This command specifies the per-server maximum number of outstanding requests sent to the RADIUS server. If the maximum number is exceeded, the next RADIUS server in the pool is selected.

The **no** form of the command removes the limit value from the configuration.

Default none

Parameters *limit* — Specifies the maximum number of outstanding requests sent to the RADIUS server

Values 1 — 4096

CLI Command Description for RADIUS Proxy Server

radius-proxy

Syntax **radius-proxy**

Context config>router
config>service>vprn

Description This command context to configure RADIUS proxy parameters.

server

Syntax **server** *server-name* [**create**] [**purpose** {[**accounting** | **authentication | both**]}]
no server *server-name*

Context config>router>radius-proxy
config>service>vprn>radius-proxy

Description This command creates a RADIUS-proxy server in the corresponding routing instance. The proxy server can be configured for the purpose of proxying authentication or accounting or both.

If create parameter is not specified, then this command enters configuration context of the specified RADIUS-proxy server.

The no form of the command removes the server-name and parameters from the radius-proxy configuration.

Default purpose authentication

Parameters *server-name* — Specifies the name of the RADIUS-proxy server.

create — The creation parameter. The system will create the specified RADUIS-proxy server.

purpose — Specifies the purpose the RADIUS-proxy server,

Values accounting — proxy accounting packets.
authentication — proxy authentication packets .
both — Specifies both accounting and authentication proxy accounting packets.

interface

Syntax [**no**] **interface** *ip-int-name*

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command configures the IP interface the RADIUS-proxy server will bind to. One RADIUS-proxy server could bind to multiple interfaces.

Default none

Parameters *ip-int-name* — Specifies the name of IP interface.

load-balance-key

Syntax **load-balance-key** [**vendor** *vendor-id* [*vendor-id*...(up to 5 max)]] **attribute-type** *attribute-type* [*attribute-type*...(up to 5 max)]
load-balance-key source-ip-udp
no load-balance-key

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command specifies the key(s) used in calculating a hash to select an external RADIUS server from the pool of configured servers.

The key(s) can be the source ip and source udp port tuple, or the specified radius attribute(s) in radius packets.

The **no** form of the command removes the parameters from the configuration.

Default no load-balance-key

Parameters **vendor** *vendor-id* — Specifies the vendor-id of vendor-specific attribute.

Values 0 — 16777215

attribute-type attribute-type — Specifies that the key is constructed with the attributes in the RADIUS message.

Values 1 — 255

source-ip-udp — Specifies that the key consists of the source IP address and source UDP port of the RADIUS message.

secret

Syntax **secret** *secret* [**hash**|**hash2**]
no secret

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command configures the shared secret key. The RADIUS client must have the same key to communicate with the RADIUS-proxy server.

The **no** form of the command removes the parameters from the configuration.

Default none

Parameters **secret** *key* **—** The secret key to access the RADIUS server. This secret key must match the password on the RADIUS server.

Values secret-key: Up to 20 characters in length.
hash-key: Up to 33 characters in length.
hash2-ke: Up to 55 characters in length.

hash — Specifies the key is entered in an encrypted form. If the **hash** parameter is not used, the key is assumed to be in a non-encrypted, clear text form. For security, all keys are stored in encrypted form in the configuration file with the **hash** parameter specified.

hash2 — Specifies the key is entered in a more complex encrypted form. If the **hash2** parameter is not used, the less encrypted **hash** form is assumed.

default-accounting-server-policy

Syntax **default-accounting-server-policy** *policy-name*
no default-accounting-server-policy

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command specifies the default radius-server-policy for RADIUS accounting. This policy will be used when there is no specific match based on username.

The **no** form of the command removes the policy name from the configuration.

Default none

Parameters *policy-name* — Specifies the name of the default RADIUS server policy associated with this RADIUS Proxy server for accounting purposes.

default-authentication-server-policy

Syntax **default-authentication--server-policy** *policy-name*
no default-authentication--server-policy

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command specifies the default radius-server-policy for RADIUS authentication. This policy will be used when there is no specific match based on username.

The **no** form of the command removes the policy name from the configuration.

Default none

Parameters *policy-name* — Specifies the name of the default RADIUS server policy associated with this RADIUS proxy server for authentication purposes.

username

Syntax **username** [1..32] [**prefix-string** *prefix-string*] [**accounting-server-policy** *policy-name*] [**suffix-string** *suffix-string*]
no username [1..32]

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command configures a mapping of username prefix to a radius-server-policy for authentication or accounting. The username from incoming authentication or accounting messages is matched against the configured mappings to obtain the radius-server-policy to be used. Up to 32 entries could be configured for a RADIUS-proxy server.

Default none

Parameters 1..32 — Assigns an integer to specify this username.

prefix-string — Specifies a prefix string used to match username attribute up to 128 characters.

policy-name — Specifies a radius-server-policy name up to 32 characters in length.

send-accounting-response

Syntax [**no**] **send-accounting-response**

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command results in the system to always generate RADIUS accounting-response to acknowledge RADIUS accounting-request received from the RADIUS client.

The **no** form of the command disables the command.

Default no send-accounting-response

cache

Syntax **cache**

Context config>router>radius-proxy>server
config>service>vprn>radius-proxy>server

Description This command enters the cache configuration context under radius-proxy server. The cache contains per-subscriber authentication information learnt from RADIUS authentication messages, and is used to authorize subsequent DHCP requests.

Default none

key

Syntax **key packet-type** {**accept**|**request**} **attribute-type** *attribute-type* [**vendor** *vendor-id*]
no key
config>router>radius-proxy>server>cache
config>service>vprn>radius-proxy>server>cache

Description This command specifies the RADIUS cache key that is used to match the information in subsequent DHCP requests for authorization.

Default no key

Parameters **packet-type —** Specifies the packet type of the RADIUS messages to use to generate the key for the cache of this RADIUS proxy server.

Values accept, request

attribute-type *attribute-type* **—** Specifies the RADIUS attribute type to cache for this RADIUS proxy server.

Values 1 — 255

the type value of RADIUS attribute

vendor *vendor-id* **—** Specifies the RADIUS vendor ID.

Values 1 — 16777215, alu

timeout

Syntax **timeout** [**hrs** *hours*] [**min** *minutes*] [**sec** *seconds*]
no timeout

Context config>router>radius-proxy>server>cache
config>service>vprn>radius-proxy>server>cache

Description This command configures the time for which the cache entry is kept if there is no corresponding DHCP DISCOVER. At the expiry of this time, the cache entry is deleted.

The **no** form of the command reverts to the default value.

Default timeout min 5

Parameters **hrs** *hours* **—** Specifies, in seconds, the timeout after which an entry in the cache will expire.

min *minutes* **—** Specifies, in seconds, the timeout after which an entry in the cache will expire.

sec *seconds* **—** Specifies, in seconds, the timeout after which an entry in the cache will expire.

track-accounting

Syntax **track-accounting** [**stop**][**interim-update**][**accounting-on**] [**accounting-off**]
no track-accounting

Context config>router>radius-proxy>server>cache
config>service>vprn>radius-proxy>server>cache

Description This command specifies the type of RADIUS accounting packets from RADIUS client (a WIFI AP) that the router should track.

The **no** form of the command removes the parameters from the configuration.

Default no track-accounting

Parameters **stop —** The router will remove the corresponding ESM host and forward the accounting-stop packet to the external RADIUS server.

accounting-on | accounting-off — The router will remove all ESM hosts associated with the RADIUS client (a WIFI AP), and forward the accounting-on packet to the external RADIUS server.

interim-update — The router will update the associated ESM-host with the RADIUS client (e.g. a WIFI AP) that generated the interim-update. The interim-updates with the updated information are sent to the RADIUS server as scheduled.

LUDB Matching of RADIUS Proxy Cache Commands

local-user-db

Syntax **local-user-db** *local-user-db-name* [**create**]
no local-user-db *local-user-db-name*

Context config>subscr-mgmt

Description This command enables the context to configure a local user database.

Default not enabled

Parameters *local-user-db-name* — Specifies the name of a local user database.

dhcp

Syntax **dhcp**

Context config>subscr-mgmt>loc-user-db

Description This command configures DHCP host parameters.

host

Syntax **host**

Context config>subscr-mgmt>loc-user-db

Description This command enables the context to configure DHCP host parameters.

match-radius-proxy-cache

Syntax **match-radius-proxy-cache**

Context config>subscr-mgmt>loc-user-db>dhcp>host

Description This command enables the context to configure match-radius-proxy-cache parameters.

fail-action

Syntax **fail-action** {**continue**|**drop**}
no fail-action

Context config>subscr-mgmt>loc-user-db>dhcp>host>match-radprox-cache

Description This command specifies the router's action when failed to find matched radius-proxy-server cache entry.

The **no** form of the command reverts to the default.

Default drop

Parameters **continue —** Specifies that the will proceed with ESM authentication without dropping the DHCP packet.

drop — Specifies that the router will drop the DHCP packet.

mac-format

Syntax **mac-format** *format*
no mac-format

Context config>subscr-mgmt>loc-user-db>dhcp>host>match-radprox-cache

Description This command specifies the format of MAC address used for matching incoming DHCP DISCOVER against the RADIUS proxy cache.

The **no** form of the command reverts to the default.

Default mac-format "aa:"

Parameters *format* — Specifies the format string that specifies the format of MAC address.

Values mac-format: (only when match is equal to mac)
like ab: for 00:0c:f1:99:85:b8
or XY- for 00-0C-F1-99-85-B8
or mmmm. for 0002.03aa.abff
or xx for 000cf19985b8

match

Syntax **match** {**circuit-id**|**mac**|**remote-id**}
match option [1..254]
no match

Context config>subscr-mgmt>loc-user-db>dhcp>host>match-radprox-cache

Description This command specifies the field/option of DHCP packet that is used to match against the radius-proxy-server cache.

The **no** form of the command reverts to the default.

Default mac

Parameters **circuit-id —** Specifies to match the circuit-id in DHCP option82

remote-id — Specifies to match the remote-id in DHCP option82

mac — Specifies to match the MAC address of DHCP client

option — Specifies to use specified DHCP option , 1 — 254

server

Syntax **server** [**service** *service-id*] **name** *server-name*
no server

Context config>subscr-mgmt>loc-user-db>dhcp>host>match-radprox-cache

Description This command specifies the name of radius-proxy-server and optionally id of the service that the radius-proxy-server resides in.

The **no** form of the command removes the parameters from the configuration.

Default no server

Parameters **service** *service-id* **—** Specifies the ID or name of the service.

Values 1..214748365
svc-name up to 64 char maximum

name *server-name* **—** Specifies the name of radius-proxy-server up to 32 characters in length.

WLAN-GW-Group Commands

wlan-gw-group

Syntax **wlan-gw-group** *group-id* [**create**]
no wlan-gw-group *group-id*

Context config>isa

Description This command creates a WLAN GW group. Note that the wlan-gw-group ID shares the same number space with the nat-group.

The **no** form of the command removes the group

Default none

Parameters *group-id* — Specifies WLAN Gateway Integrated Service Adaptor (ISA) Groups.

Values 1 — 4

active-iom-limit

Syntax **active-iom-limit** *number*
no active-iom-limit

Context config>isa>wlan-gw-group

Description This command specifies the number of WLAN-GW IOMs used as active IOMs from the total number of configured WLAN-GW IOMs. If there are more configured IOM than active-iom-limit, then the remaining number of IOMs will be designated as backup(s).

The **no** form of the command removes the number from the configuration.

Parameters *number* — Specifies the number of IOM's in this WLAN Gateway ISA group that are intended for active use.

Values 1 — 3

iom

Syntax **iom** *slot-number*
no iom

Context config>isa>wlan-gw-group

Description This command designates the specified IOM as a WLAN-GW IOM. Each WLAN-GW IOM MUST be configured with two MS-ISA modules.

The **no** form of the command removes the number from the configuration.

Default none

Parameters *slot-number* — Indicates the IOM slot of the MDA associated with this member.

Values 1 — 10

nat

Syntax **nat**

Context config>isa>wlan-gw-group

Description This command enables the context to configure NAT parameters under wlan-gw-group.

radius-accounting-policy

Syntax **radius-accounting-policy** *nat-accounting-policy*
no radius-accounting-policy

Context config>isa>wlan-gw-group>nat

Description This command configures the RADIUS accounting policy to use for each MDA in this ISA group.

The no form of the command removes the accounting policy from the configuration.

Default none

Parameters *nat-accounting-policy* — Specifies the RADIUS accounting policy up to 32 characters in length.

session-limits

Syntax **session-limits**

Context config>isa>wlan-gw-group>nat

Description This command configures the ISA NAT group session limits.

reserved

Syntax **reserved** *num-sessions*
no reserved

Context config>isa>nat>session-limits

Description This command configures the number of sessions per block that will be reserved for prioritized sessions.

Parameters *num-sessions* — Specifies the number of sessions reserved for prioritized sessions.

Values 0 — 4194303

watermarks

Syntax **watermarks high** *percentage* **low** *percentage*
no watermarks

Context config>isa>nat>session-limits

Description This command configures the ISA NAT group watermarks.

high *percentage* **—** Specifies the high watermark of the number of sessions for each MDA in this NAT ISA group.

Values 2 — 100

low *percentage* — Specifies the low watermark of the number of sessions for each MDA in this NAT ISA group.

Values 1 — 99

Port Policy Commands

port-policy

Syntax **port-policy** *port-policy-name* [**create**]
no port-policy *port-policy-name*

Context config

Description This command either creates a new port-policy with create parameter or enters the configuration context of an existing port-policy.

Default none

Parameters *port-policy-name* — Specifies the name of port-policy.

create — Keyword used to create a port-policy.

egress-scheduler-policy

Syntax **egress-scheduler-policy** *port-sched-plcy*
egress-scheduler-policy

Context config>port-policy

Description This command specifies the port-scheduler-policy to use in the egress direction for the internal port connecting the WLAN-GW IOM to the MS-ISA.

Default none

Parameters *port-sched-plcy* — Specifies the name of the port-scheduler-policy up to 32 characters in length.

Soft-GRE Group Interface Commands

group-interface

Syntax **group-interface** *ip-int-name* [**create**]
group-interface *ip-int-name* [**create**] **lns**
group-interface *ip-int-name* [**create**] **softgre**
no group-interface *ip-int-name* [**create**]

Context config>service>ies>subscriber-interface
config>service>vprn>subscriber-interface

Description This command creates a group interface. This interface is designed for triple-play services where multiple SAPs are part of the same subnet. A group interface may contain one or more SAPs.

Use the **no** form of the command to remove the group interface from the subscriber interface.

Default no group interfaces configured

Parameters *ip-int-name* — Specifies the interface name of a group interface. If the string contains special characters (#, $, spaces, etc.), the entire string must be enclosed within double quotes.

lns — Specifies to use LNS.

softgre — Specifies to use dynamic GRE encapsulation.

ip-mtu

Syntax **ip-mtu** *octets*
no ip-mtu

Context config>service>ies>subscriber-interface
config>service>vprn>subscriber-interface

Description This command specifies the maximum size of frames on this group-interface. Packets larger than this will get fragmented.

The **no** form of the command removes this functionality.

Default none

Parameters *octets* — Specifies the largest frame size (in octets) that this interface can handle.

Values 512 — 9000

soft-gre

Syntax **soft-gre**

Context config>service>ies>subscriber-interface>group-interface

config>service>vprn>subscriber-interface> group-interface

Description This command enables the context to configure soft-gre parameters.

Default none

egress

Syntax **egress**

Context config>service>ies>subscriber-interface>group-interface>soft-gre

Description This command enables the context to configure egress QoS parameters for soft GRE tunnels.

agg-rate-limit

Syntax **agg-rate-limit** *kilobits-per-second*
no agg-rate-limit

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress

Description This command configures the the aggregate rate limit of each shaper associated with this interface.

The **no** form of the command removes the value from the configuration.

Default none

Parameters *kilobits-per-second* — Specifies the aggregate rate limit.

Values 1 — 100000000, max

hold-time

Syntax **hold-time infinite**
hold-time [1..86400]
no hold-time

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress
config>service>vprn>subscriber-interface> group-interface>soft-gre>egress

Description This command configures the time for which egress shaping resources associated with a soft-GRE tunnel are held after the last subscriber on a tunnel is deleted.

Parameters *1..86400* — Specifies the time, in seconds, for which shaping resources are held in seconds after last subscriber is deleted.

Values infinite | 1..86400

qos

Syntax **qos** *policy-id*
no qos

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress

Description This command configures the identifier of the egress QoS policy associated with each Soft GRE tunnel of this interface.

The **no** form of the command removes the policy ID from the configuration.

Default 1

Parameters *policy-id* — Specifies to apply the specified sap-*egress-policy-id*.

Values 1 — 65535
name: A string up to 64 characters.

scheduler-policy

Syntax **scheduler-policy** *scheduler-policy-name*
no scheduler-policy

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress

Description This command configures the identifier of the egress scheduler policy associated with each Soft GRE tunnel of this interface.

The **no** form of the command removes the scheduler policy name from the configuration.

Default none

Parameters *scheduler-policy-name* — Specifies the identifier of the egress scheduler policy associated with each Soft GRE tunnel of this interface

shape-multi-client-only

Syntax [**no**] **shape-multi-client-only**

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress

Description This command enables the egress shaping is only enabled for a soft GRE tunnel while there are multiple UE (User Equipment) using it.

The **no** form of the command disables the egress shaping.

shaping

Syntax **shaping** {**per-retailer**|**per-tunnel**}
no shaping

Context config>service>ies>subscriber-interface>group-interface>soft-gre>egress

Description This command configures the the granularity of the egress shaping for soft GRE on this group interface.

The no **form** of the command removes the parameter from the configuration.

Parameters **per-tunnel —** Specifies that a separate shaper is applied to each Soft GRE tunnel.

per-retailer — Specifies that a separate shaper is applied to each retailer Mobile Network Operator's fraction of the soft GRE tunnel payload.

gw-address

Syntax **gw-address** *ip-address*
no gw-address

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command specifies gateway endpoint address for the soft-GRE tunnel.

The **no** form of the command removes the value from the soft-gre configuration.

Default none

Parameters *ip-address* — Specifies the IP address of the WLAN Gateway GRE function of this system on this group interface.

gw-ipv6-address

Syntax **gw-ipv6-address** *ipv6-address*
no gw-ipv6-address

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command specifies a gateway IPv6 endpoint address for the soft-GRE tunnel.

The **no** form of the command removes the IPv6 the gateway IPv6 endpoint address for the soft-GRE tunnel.

Default none

Parameters *ipv6-address* — Specifies the gateway IPv6 endpoint address

Values ipv6-address : x:x:x:x:x:x:x:x (eight 16-bit pieces)
x:x:x:x:x:x:d.d.d.d
x - [0..FFFF]H
d - [0..255]D

mobility

Syntax **mobility**

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command enables the context to configure mobility parameters.

hold-time

Syntax **hold-time** *time in s*
no hold-time

Context config>service>ies>subscriber-interface>group-interface>soft-gre>mobility
config>service>vprn>subscriber-interface> group-interface>soft-gre>mobility

Description This command configures the minimum time that a User Equipment will be held associated with its current Access Point (AP) before being associated with a new AP.

The hold time is used to prevent overwhelming the systemwith mobility triggers, by limiting the rate at which a UE can move from one AP to another while the system is very busy already.

Default no default

Parameters *time in s* — Specifies a hold-down time, in seconds, for handling of successive mobility triggers for a UE. It is the minimal time a UE stays associated with an AP.

Values 0..255

trigger

Syntax **trigger** [**data**] [**iapp**]
no trigger

Context config>service>ies>subscriber-interface>group-interface>soft-gre>mobility
config>service>vprn>subscriber-interface> group-interface>soft-gre>mobility

Description This command specifies the type of packet used as a mobility trigger.

Ths **no** form of the command removes the parameters from the configuration and disables data-plane mobility.

Parameters **data —** Specifies that data traffic be used as a trigger.

iapp — Specifies that Inter Access Point Protocol (IAPP) messages be used as a trigger.

router

Syntax **router** *router-instance*
no router

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command specifies the routing instance that soft-GRE gateway endpoint resides in.

The **no** form of the command removes the value from the soft-gre configuration.

Default none

Parameters *router-instance* — Specifies the identifier of the virtual router instance where the tunneled User Equipment traffic is routed.

tcp-mss-adjust

Syntax **tcp-mss-adjust** *segment-size*
no tcp-mss-adjust

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command configures the TCP Maximum Segment Size (MSS) adjustment for the soft GRE gateway.

The **no** form of the command disables adjusting tcp-mss values.

Default none

Parameters *segment-size* — Specifies the value to put into the TCP Maximum Segment Size (MSS) option if not already present, or if the present value is higher.

Values 160 — 10240

vlan-tag-ranges

Syntax **vlan-tag-ranges**

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command enables the context to configure vlan-to-retail-map parameters to map dot1Q tags to retail-service-id. The WIFI AP could insert a dot1Q tag in the Layer 2 frame within the GRE tunnel to indicate the retail service provider for the subscriber.

Default none

default-retail-svc-id

Syntax **default-retail-svc-id** *service-id*
no default-retail-svc-id

Context config>service>ies>subscriber-interface>group-interface>soft-gre>vlan-tag-ranges

config>service>vprn>subscriber-interface> group-interface>soft-gre>vlan-tag-ranges

Description This command specifies the id of default retail service if there is no match found in VLAN to retail map configuration (specified by the **vlan** command)

Default none

Parameters *service-id* — specifies the identifier of the retail service to be used by default of a value in the retail service map of this interface.

Values 1 — 2147483650
svc-name: up to 64 characters in length.

retail-svc-id

Syntax **retail-svc-id** *service-id*
no retail-svc-id

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre

Description This command configures the retailer service.

Parameters *service-id* — specifies the identifier of the retail service.

Values 1 — 2147483650
svc-name: up to 64 characters in length.

vlan

Syntax **vlan start** [0..4095] **end** [0..4095] **retail-svc-id** *service-id*
no vlan start [0..4095] **end** [0..4095]

Context config>service>ies>subscriber-interface>group-interface>soft-gre>retailer
config>service>vprn>subscriber-interface> group-interface>soft-gre>retailer

Description This command creates a mapping from a range of VLANs (appearing in the soft-GRE encapsulated Layer 2 frame) to a retail service ID.

The **no** form of the command removes the parameters from the configuration.

Default none

Parameters **start** [0..4095] — Specifies the start VLAN tag of this range.

Values

end [0..4095] — Specifies the end VLAN tag of this range.

Values

retail-svc-id *service-id* — Specifies the identifier of the retail service to be used by default of a value in the retail service map of this interface.

Values 1 — 2147483650
svc-name: up to 64 characters in length.

wlan-gw-group

Syntax **wlan-gw-group** *group-id*
no wlan-gw-group

Context config>service>ies>subscriber-interface>group-interface>soft-gre
config>service>vprn>subscriber-interface> group-interface>soft-gre

Description This command specifies the id of wlan-gw-group that the soft-GRE gateway binds to.

The **no** form of the command removes the value from the soft-gre configuration.

Default none

Parameters *group-id* — Specifies the ISA WLAN-GW Group

Values 1 — 4

Migrant User Support Commands

http-redirect-policy

Syntax **http-redirect-policy** *policy-name*
no http-redirect-policy

Context config>subscr-mgmt

Description This command configures the redirect policy to constrain forwarding of an unauthenticated "migrant" WIFI user.

Default none

Parameters *policy-name* — Specifies the HTTP redirect policy name up to 32 characters in length.

forward-entries

Syntax **forward-entries**

Context config>subscr-mgmt>http-rdr-plcy

Description Enters the context to configure entries that need to be forwarded

Default none

dst-port

Syntax **dst-port** *tcp-port*
no dst-port

Context config>subscr-mgmt>http-rdr-plcy

Description This command specifies the port to match the destination port in the HTTP request.

HTTP traffic that does not match this port, is not redirected.

Default 80

Parameters *tcp-port* — Specifies the TCP port.

Values 1 — 65535]

dst-ip

Syntax **[no] dst-ip** ***ip-address*** **protocol** ***ip-protocol*** **dst-port** ***port-number***

Context config>subscr-mgmt>http-rdr-plcy

Description This command configures traffic flow to be forwarded via match in the redirect policy.

Default none

Parameters *ip-address* — Specifies the IP address to match the destination IP address in the IP header of the traffic received from the subscriber.

protocol *ip-protocol* — Specifies the protocol to match the IP protocol in the IP header of the traffic received from the subscriber.

Values tcp, udp

dst-port *port-number* — specifies the port to match the destination port in the HTTP request.

Values 1 — 65535

portal-hold-time

Syntax **portal-hold-time** *seconds*
no portal-hold-time

Context config>subscr-mgmt>http-rdr-plcy

Description This command configures the time for which the forwarding state applicable during redirect phase is held in the system, after the user has been authenticated on the portal. This allows the http response from the portal to be forwarded back on the existing connection.

none

Parameters *seconds* — Specifies how long the system holds on to re-direct forwarding resources of a subscriber, after it has left the re-direct portal.

Values 1 — 60

url

Syntax **url** *rdr-url-sting*
no url

Context config>subscr-mgmt>http-rdr-plcy

Description This command configures the HTTP URL to re-direct the matching traffic to. It also can specify inclusion of original URL, MAC address and IP address of the subscriber in the redirect URL.

none

Parameters *rdr-url-sting* — Specifies the URL to redirect to.

Values

rdr-url-string		[255 chars max]
macro substitutions:		
	$URL	Request-URI in the HTTP GET Request received
	$MAC	string that represents the MAC address of the subscriber host
	$IP	a string that represents the IP address of the subscriber host

soft-gre

Syntax **soft-gre**

Context config>service>vprn>sub-if>grp-if
config>service>ies>sub-if>grp-if

Description This command enables the context to configure soft GRE parameters.

vlan-tag-ranges

Syntax **vlan-tag-ranges**

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre

Description This command enters the context for per vlan range configuration.

Default none

default-retail-svc-id

Syntax **default-retail-svc-id** *service-id*

Context config>service>vprn>sub-if>grp-if>soft-gre>ranges
config>service>ies>sub-if>grp-if>soft-gre>ranges

Description This command configures the default retailer service for WIFI users.

Default none

range

Syntax [**no**] **range start** [0..4095] **end** [0..4095]

Context config>service>vprn>sub-if>grp-if>soft-gre>ranges
config>service>ies>sub-if>grp-if>soft-gre>ranges

Description This command creates or enters the context of specified VLAN range for configuration applicable to that range of VLANs.

Default none

Parameters **start** [0..4095] — Specifies the start of the vlan range.

end [0..4095] — Specifies the end of vlan the range.

dhcp

Syntax **dhcp**

Context config>service>vprn>sub-if>grp-if>soft-gre>ranges
config>service>ies>sub-if>grp-if>soft-gre>ranges

Description Enters the context to create DHCP configuration for WLAN-GW ISA subscribers (e.g. migrant subscribers).

Default none

active-lease-time

Syntax **active-lease-time** [**hrs** *hours*] [**min** *minutes*] [**sec** *seconds*]
no active-lease-time

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the lease time for an authenticated user.

Default none

Parameters **hrs** *hours* — Specifies the number of initial lease time hours.

Values 1 — 1

min *minutes* — Specifies the number of initial lease time minutes.

Values 5 — 59

sec *seconds* — Specifies the number of initial lease time seconds.

Values 1 — 59

initial-lease-time

Syntax **initial-lease-time** [**hrs** *hours*] [**min** *minutes*] [**sec** *seconds*]
no initial-lease-time

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the lease time for a user which is migrant (unauthenticated)

Default none

Parameters **hrs** *hours* — Specifies the number of initial lease time hours.

Values 1 — 1

min *minutes* — Specifies the number of initial lease time minutes.

Values 5 — 59

sec *seconds* — Specifies the number of initial lease time seconds.

Values 1 — 59

l2-aware-ip-address

Syntax **l2-aware-ip-address** *ip-address*
no l2-aware-ip-address

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the l2-aware NAT inside IP address to be assigned via DHCP on WLAN-GW ISA.

Default none

Parameters *ip-address* — Specifies the l2-aware NAT inside IP address.

primary-dns

Syntax **primary-dns** *ip-address*
no primary-dns

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the primary DNS address to be returned via DHCP on WLAN-GW ISA.

Default none

Parameters *ip-address* — Specifies the primary DNS address

secondary-dns

Syntax **secondary-dns** *ip-address*
no secondary-dns

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp

config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the secondary DNS address to be returned via DHCP on WLAN-GW ISA.

Default none

Parameters *ip-address* — Specifies the secondary DNS address.

primary-nbns

Syntax **primary-nbns** *ip-address*
no primary-nbns

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the primary NBNS address to be returned via DHCP on WLAN-GW ISA.

Default none

Parameters *ip-address* — Specifies the primary NBNS address.

secondary-nbns

Syntax **secondary-nbns** *ip-address*
no secondary-nbns

Context config>service>vprn>sub-if>grp-if>soft-gre>dhcp
config>service>ies>sub-if>grp-if>soft-gre>dhcp
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>dhcp
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>dhcp

Description This command configures the secondary NBNS address to be returned via DHCP on WLAN-GW ISA.

Default none

Parameters *ip-address* — Specifies the secondary NBNS address.

http-redirect-policy

Syntax **http-redirect-policy** *policy-name*
no http-redirect-policy

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre

config>service>vprn>sub-if>grp-if>soft-gre>ranges>range
config>service>ies>sub-if>grp-if>soft-gre>ranges>range

Description This command specifies http redirect policy on ISA to redirect http traffic to the URL specified in the policy.

Default none

Parameters *policy-name* — Specifies the name of the http redirect policy under subscriber-management context.

nat-policy

Syntax **nat-policy** *policy-name*
no nat-policy

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range
config>service>ies>sub-if>grp-if>soft-gre>ranges>range

Description This command specifies the NAT policy for WLAN-GW ISA subscribers.

Default none

authentication

Syntax **authentication**

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range
config>service>ies>sub-if>grp-if>soft-gre>ranges>range

Description Enters the context to create configuration for authenticating a user from the WLAN-GW ISA.

Default none

authentication-policy

Syntax **authentication-policy** *policy-name*
no authenticatin-policy

Context config>service>vprn>sub-if>grp-if>soft-gre>authentication
config>service>ies>sub-if>grp-if>soft-gre>authentication
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>authentication
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>authentication

Description This command specifies authentication policy configured under aaa context for authenticating users on WLAN-GW ISA.

Default none

Parameters *policy-name* — Specifies the name of the authentication policy up to 32 characters in length.

hold-time

Syntax **hold-time** [**hrs** *hours*] [**min** *minutes*] [**sec** *seconds*]
no hold-time

Context config>service>vprn>sub-if>grp-if>soft-gre>authentication
config>service>ies>sub-if>grp-if>soft-gre>authentication
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>authentication
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>authentication

Description This command configures the minimum time that a user is held down after a failed authentication attempt.

Default .none

Parameters **hrs** *hours* — the minimum time that a user is held down in hours.

Values 1 — 1

min *minutes* — the minimum time that a user is held down in minutes

Values 5 — 59

sec *seconds* — the minimum time that a user is held down in seconds.

Values 1. — 59

data-triggered-ue-creation

Syntax [**no**] **data-triggered-ue-creation**

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range
config>service>ies>sub-if>grp-if>soft-gre>ranges>range

Description This command enables or disables data-triggered subscriber creation for WIFI subscribers.

Default none

track-mobility

Syntax **track-mobility**

Context config>service>vprn>sub-if>grp-if>soft-gre
config>service>ies>sub-if>grp-if>soft-gre
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range

config>service>ies>sub-if>grp-if>soft-gre>ranges>range

Description This command enters the context to configure RADIUS-proxy cache information required for subscribers that are created via "data-triggered" authentication. The RADIUS proxy cache enables efficient handling of UE mobility.

none

mac-format

Syntax **mac-format** *mac-format*
no mac-format

Context config>service>vprn>sub-if>grp-if>soft-gre>track-mobility
config>service>ies>sub-if>grp-if>soft-gre>track-mobility
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>track-mobility
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>track-mobility

Description This command configures how the MAC address is represented by the RADIUS proxy server.

Default none

Parameters *mac-format* — Specifies how the MAC address is represented by the RADIUS proxy server

Values

mac-format	like ab:	for 00:0c:f1:99:85:b8
	or XY-	for 00-0C-F1-99-85-B8
	or mmmm.	for 0002.03aa.abff
	or xx	for 000cf19985b8

radius-proxy-cache

Syntax **radius-proxy-cache router** *router-instance* **server** *server-name*
no radius-proxy-cache

Context config>service>vprn>sub-if>grp-if>soft-gre>track-mobility
config>service>ies>sub-if>grp-if>soft-gre>track-mobility
config>service>vprn>sub-if>grp-if>soft-gre>ranges>range>track-mobility
config>service>ies>sub-if>grp-if>soft-gre>ranges>range>track-mobility

Description This command specifies the RADIUS-proxy server to allow subscribers created via data-triggered authentication to create an entry. This RADIUS proxy cache entry allows efficient handling of UE mobility.

Default none

Parameters **router** *router-instance* — Specifies the router instance.

Values

router-name	Base
service-id	1 — 2147483647

server *server-name* — Specifies the server name up to 32 characters in length.

Show Commands

acct-on-off-group

Syntax **acct-on-off-group** [*group-name*]

Context show>aaa

Description This command displays Acct-On-Off group information and the associated RADIUS server policies

Parameters *group-name* — Displays information pertaining to the specified acct-on-off group.

Sample Output

```
# show aaa acct-on-off-group "group-1"
===============================================================================
Acct-On-Off-Group Information
===============================================================================
acct on off group name               : group-1
  - controlling Radius-Server-policy :
        aaa-server-policy-3
  - monitored by Radius-Serer-policy :
        aaa-server-policy-4
-------------------------------------------------------------------------------
Nbr of Acct-on-off-groups displayed : 1
-------------------------------------------------------------------------------
===============================================================================
```

radius-proxy-server

Syntax **radius-proxy-server** *server-name*
radius-proxy-server *server-name* **cache**
radius-proxy-server *server-name* **cache hex-key** *hex-string*
radius-proxy-server *server-name* **cache string-key** *string*
radius-proxy-server *server-name* **cache summary**
radius-proxy-server *server-name* **statistics**
radius-proxy-server

Context show>router

Description This command displays summary of RADIUS-proxy cache or specific entries.

Parameters *server-name* — Displays information about the specified server name.

cache — Displays messages used to generate the key for the cache of this RADIUS proxy server.

hex-key *hex-string* **—** Displays information about the specified hex string.

Values 0x0 — 0xFFFFFFFF (maximum of 64 hex nibbles)]

string-key *string* **—** Displays information about the specified string.

summary — Displays a summary of the cache of the RADIUS proxy servers.

statistics — Displays statistics about the RADIUS proxy Servers of this system.

Sample Output

```
system# show router 10 radius-proxy-server "myProxyServer1"
===============================================================================
RADIUS Proxy server "myProxyServer1"
===============================================================================
Description                 : myDesc
Purpose                     : authentication
Administrative state        : in-service
Default acct server policy  : myRadiusServerPolicy1
Default auth server policy  : myRadiusServerPolicy2
Send accounting response    : true
Last management change      : 02/17/2012 14:54:28
-------------------------------------------------------------------------------
Cache settings
-------------------------------------------------------------------------------
Administrative state        : enabled
Key packet type             : access-accept
Key attribute type          : 12
Key vendor ID               : (Not Specified)
Timeout (s)                 : 60
Track accounting            : stop interim-update accounting-on accounting-off
Load balance key            : source-ip-udp
===============================================================================
Interfaces
-------------------------------------------------------------------------------
myInterface1
myInterface2
myInterface3
-------------------------------------------------------------------------------
No. of Interface(s): 3
===============================================================================
Usernames/RADIUS server policies
===============================================================================
Id Username-match                    RADIUS-server-policy             Purpose
-------------------------------------------------------------------------------
1.  aaa                               myRadiusServerPolicy2            auth
===============================================================================
```

soft-gre-tunnels

Syntax **soft-gre-tunnels local-ip** *ip-address* **remote-ip** *ip-address* **ue**
soft-gre-tunnels [**local-ip** *ip-address*] [**remote-ip** *ip-address*][**isa-group** *wlan-gw-group-id*] [**member** [1..255]] [**summary**] [**detail**]

Context show>router

Description This command displays soft GRE tunnel operational information.

Sample Output

```
System# show router 50 wlan-gw soft-gre-tunnels
===============================================================================
Soft GRE tunnels
Remote IP address           : 20C9::7:1:2
Local IP address            : 2032::1:1:7
ISA group ID                : 1
ISA group member ID         : 3
Time established            : 2013/07/02 07:45:31
Number of UE                : 1
Tunnel QoS
----------
Operational state           : active
Number of UE                : 1
Remaining hold time (s)     : N/A
-------------------------------------------------------------------------------
No. of tunnels: 1
===============================================================================
System#
```

radius-server-policy

Syntax **radius-server-policy** *policy-name* [**acct-on-off**]
radius-server-policy *policy-name* **associations**
radius-server-policy *policy-name* **msg-buffer-stats**
radius-server-policy *policy-name* **statistics**
radius-server-policy [**acct-on-off**]

Context show>aaa

Description This command displays RADIUS server policy information.

Parameters *policy-name* — Displays information pertaining to the specified policy name.

associations — Displays the association between the RADIUS server policy and the applications referencing the policy (RADIUS proxy, route downloader, authentication policy, accounting policy, dynamic services policy).

statistics — Displays statistics of the RADIUS server policy and RADIUS servers referenced in the policy.

acct-on-off — Displays the acct-on-off operational state for the RADIUS server policy.

msg-buffer-stats — – Displays statistics for the RADIUS message buffering.

Sample Output

```
# show aaa radius-server-policy "aaa-server-policy-1"
===============================================================================
RADIUS server policy "aaa-server-policy-1"
===============================================================================
Description                 : Radius AAA server policy
Acct Request script policy  : (Not Specified)
Auth Request script policy  : (Not Specified)
Accept script policy        : script-policy-1
```

```
Acct-On-Off                : Enabled (state Not Blocked)
-------------------------------------------------------------------------------
RADIUS server settings
-------------------------------------------------------------------------------
Router                     : "Base"
Source address             : (Not Specified)
Access algorithm           : direct
Retry                      : 3
Timeout (s)                : 5
Hold down time (s)         : 30
Last management change     : 02/20/2013 13:32:05
===============================================================================

===============================================================================
Servers for "aaa-server-policy-1"
===============================================================================
Idx Name                              Address         Port        Oper State
                                                      Auth/Acct
-------------------------------------------------------------------------------
1   server-1                          172.16.1.1      1812/1813   in-service
===============================================================================


# show aaa radius-server-policy acct-on-off
===============================================================================
RADIUS server policies AcctOnOff state
===============================================================================
Name                                    OperState      LastStateChange
-------------------------------------------------------------------------------
aaa-server-policy-1                     on             02/20/2013 21:23:57
aaa-server-policy-2                     NotApplicable  NotApplicable
aaa-server-policy-3                     sendAcctOn     NotApplicable
aaa-server-policy-4                     off            02/20/2013 21:40:57
-------------------------------------------------------------------------------
No. of policies: 4
===============================================================================

# show aaa radius-server-policy "aaa-server-policy-1" acct-on-off
===============================================================================
RADIUS server policy "aaa-server-policy-1" AcctOnOff info
===============================================================================
Oper state                 : on
Session Id                 : 242FFF0000000451253EED
Last state change          : 02/20/2013 21:23:57
Trigger                    : startUp
Server                     : "server-1"
===============================================================================


# show aaa radius-server-policy "aaa-server-policy-3" msg-buffer-stats
===============================================================================
RADIUS server policy "aaa-server-policy-3" message buffering stats
===============================================================================
buffering acct-interim     : enabled
  min interval (s)         : 60
  max interval (s)         : 3600
  lifetime (hrs)           : 12
buffering acct-stop        : enabled
  min interval (s)         : 60
  max interval (s)         : 3600
  lifetime (hrs)           : 12
```

```
Statistics
-------------------------------------------------------------------------------
Total acct-stop messages in buffer                        : 6
Total acct-interim messages in buffer                     : 10
Total acct-stop messages dropped (lifetime expired)       : 0
Total acct-interim messages dropped (lifetime expired)    : 0
Last buffer clear time                                    : N/A
Last buffer statistics clear time                         : N/A
-------------------------------------------------------------------------------
===============================================================================


# show aaa radius-server-policy "aaa-server-policy-1" statistics
===============================================================================
RADIUS server policy "aaa-server-policy-1" statistics
===============================================================================
Tx transaction requests                          : 383
Rx transaction responses                         : 383
Transaction requests timed out                   : 0
Transaction requests send failed                 : 0
Packet retries                                   : 0
Transaction requests send rejected               : 0
Authentication requests failed                   : 0
Accounting requests failed                       : 0
Ratio of access-reject over auth responses       : 0%
Transaction success ratio                        : 100%
Transaction failure ratio                        : 0%
Statistics last reset at                         : n/a

Server 1 "server-1" address 172.16.1.1 auth-port 1812 acct-port 1813
-------------------------------------------------------------------------------
Tx request packets                               : 383
Rx response packets                              : 383
Request packets timed out                        : 0
Request packets send failed                      : 0
Request packets send failed (overload)           : 0
Request packets waiting for reply                : 0
Response packets with invalid authenticator      : 0
Response packets with invalid msg authenticator : 0
Authentication packets failed                    : 0
Accounting packets failed                        : 0
Avg auth response delay (10 100 1K 10K) in ms    :   27.1   22.8   22.8   22.8
Avg acct response delay (10 100 1K 10K) in ms    :   6.24   12.5   11.5   11.5
Statistics last reset at                         : n/a

===============================================================================


# show aaa radius-server-policy "myRadiusServerPolicy1" associations
===============================================================================
RADIUS Proxy Associations
===============================================================================
Router RADIUS Proxy Server Purpose Username
-------------------------------------------------------------------------------
Base myProxyServerBase acc (default)
vprn10 myProxyServer1 acc (default)
-------------------------------------------------------------------------------
No. of associations: 2
```

```
# show aaa radius-server-policy "aaa-server-policy-1" associations
===============================================================================
RADIUS Proxy Associations
===============================================================================
Router RADIUS Proxy Server Purpose Username
-------------------------------------------------------------------------------
Base   myProxyServerBase   acc     (default)
-------------------------------------------------------------------------------
No. of associations: 1
===============================================================================
No route downloader entries found.
===============================================================================
Authentication Policy Associations
===============================================================================
Authentication Policy
-------------------------------------------------------------------------------
auth-policy-1
-------------------------------------------------------------------------------
No. of associations: 1
===============================================================================
===============================================================================
Accounting Policy Associations
===============================================================================
Accounting Policy
-------------------------------------------------------------------------------
acct-policy-1
acct-policy-2
-------------------------------------------------------------------------------
No. of associations: 2
===============================================================================
No dynamic-services policy entries found.


acct-on-off-group
Syntaxacct-on-off-group [<group-name>]
Contextshow>aaa
DescriptionThis command displays Acct-On-Off group information and the associated
RADIUS server policies
Parametersgroup-name — Displays information pertaining to the specified acct-on-off
group.
Sample Output:

# show aaa acct-on-off-group "group-1"
===============================================================================
Acct-On-Off-Group Information
===============================================================================
acct on off group name               : group-1
  - controlling Radius-Server-policy :
        aaa-server-policy-3
  - monitored by Radius-Serer-policy :
        aaa-server-policy-4

-------------------------------------------------------------------------------
Nbr of Acct-on-off-groups displayed : 1
-------------------------------------------------------------------------------
===============================================================================
```

wlan-gw-group

Syntax **wlan-gw-group** *wlan-gw-group-id*
wlan-gw-group *wlan-gw-group-id* **associations**
wlan-gw-group *wlan-gw-group-id* **member** [1..255] [**statistics**]
wlan-gw-group

Context show>isa

Description This command displays WLAN-GW group information including soft GRE tunnels.

Parameters *wlan-gw-group-id* — Displays information about the specified wlan-gw-group-id.

associations — Displays information about association for the specified wlan-gw-group-id.

member [1..255] **—** Displays information about the WLAN-GW-specific status and basic statistics information about the specified member.

statistics — Displays statistics information about the members of the specified WLAN-GW group.

Sample Output

```
ystem# show isa wlan-gw-group 1
===============================================================================
WLAN Gateway group 1
===============================================================================
test
Administrative state        : in-service
Operational state           : in-service
Active IOM limit            : 2
Port policy                 : myPortPol
Last Mgmt Change            : 02/17/2012 14:54:27
-------------------------------------------------------------------------------
NAT specific information for ISA group 1
-------------------------------------------------------------------------------
Reserved sessions           : 10
High Watermark (%)          : 20
Low Watermark (%)           : 10
Accounting policy           : natAccPol
Last Mgmt Change            : 02/17/2012 15:01:31
-------------------------------------------------------------------------------
===============================================================================
===============================================================================
ISA Group 1 members
===============================================================================
Group    Member     State          Mda     Addresses     Blocks     Se-%    Hi     Se-
Prio
-------------------------------------------------------------------------------
-----------------------------------------------
        1               1             active        3/1            0
0          < 1      N         10
1               2             active        3/2            0               0
< 1      N         10
1               3             active        4/1            0               0
< 1      N         10
1               4             active        4/2            0               0
< 1      N         10
-------------------------------------------------------------------------------
-----------------------------------------------
```

```
No. of members: 4
===============================================================================
System# show isa wlan-gw-group 1 member 2
===============================================================================
ISA WLAN Gateway Group 1 Member 2
===============================================================================
MDA                                                     : 3/2
Number of Soft-GRE tunnels                              : 0
Number of UE                                            : 0
Number of activated Egress Encapsulation Group members  : 0
Number of pending Egress Encapsulation Group members    : 0
Number of tunnel QoS problems                           : 0
===============================================================================
```

gtp-session

Syntax **gtp-session imsi** *imsi* **apn** *apn-string* | **gtp-session** [**mgw-address** *ip-address*] [**mgw-router** *router-instance*] [**remote-control-teid** *teid*] [**local-control-teid** *teid*] [**detail**]
gtp-session imsi *imsi*
gtp-statistics

Context show>subscr-mgmt>wlan-gw

Description This command displays GTP session information.

Parameters **imsi** *imsi* — Specifies the IMSI (International Mobile Subscriber Identity) of this UE.

apn *apn-string* — Specifies the APN (Access Point Name).

mgw-address *ip-address* — Specifies the IP address of the Mobile Gateway, \that is the source IP address in the tunnel header of received packets.

mgw-router *router-instance* — Specifies the identifier of the virtual router instance where the GTP tunnel is terminated.

remote-control-teid *teid* — Specifies the remote control plane Tunnel Endpoint Identifier (TEID).

local-control-teid *teid* — Specifies the local control plane Tunnel Endpoint Identifier (TEID).

detail — Displays detailed information.

gtp-statistics

Syntax **gtp-statistics**

Context show>subscr-mgmt>wlan-gw

Description This command displays GTP statistics.

mgw-profile

Syntax **mgw-profile** *profile-name*

mgw-profile *profile-name* **associations**
mgw-profile

Context show>subscr-mgmt>wlan-gw

Description This command displays Mobile Gateway profile information.

ssid

Syntax **ssid**

Context show>subscr-mgmt>wlan-gw

Description This command displays SSID information.

statistics

Syntax **statistics**

Context show>subscr-mgmt>wlan-gw

Description This command displays statistics information.

ue

Syntax **ue** [**vlan** *qtag*] [**mpls-label** *label*] [**retail-svc-id** *service-id*] [**ssid** *service-set-id*] [**previous-access-point** *ip-address*]
ue mac *ieee-address*

Context show>subscr-mgmt>wlan-gw

Description This command displays user equipment information.

Parameters **vlan** *qtag* — Displays information about the VLAN Q-tag present in the traffic received from this UE.

Values 1 — 4095

mpls-label *label* — Displays information about the MPLS label present in the traffic received from this UE.

retail-svc-id *service-id* — Displays information about the identifier of the specified retail service.

ssid *service-set-id* — Displays information about the Service Set ID (SSID) of this UE.

previous-access-point *ip-address* — Displays information about the IP address of the previous Access Point (AP) of this UE.

mac *ieee-address* — Displays information about the MAC address of this UE.

Values xx:xx:xx:xx:xx:xx or xx-xx-xx-xx-xx-xx

Sample Output

```
System# show subscriber-mgmt wlan-gw ue
===============================================================================
User Equipments
===============================================================================
MAC address                 : 00:02:00:00:00:39
-------------------------------------------------------------------------------
VLAN Q-tag                  : 1
MPLS label                  : (Not Specified)
Tunnel router               : 50
Tunnel remote IP address    : 20C9::7:1:2
Tunnel local IP address     : 2032::1:1:7
Retail service              : N/A
SSID                        : 1
Previous Access Point IP    : (Not Specified)
IMSI                        : (Not Specified)
Last move time              : 2013/07/02 07:45:31

-------------------------------------------------------------------------------
No. of UE: 1
===============================================================================
System#
```

Tools Commands

acct-on

Syntax **acct-on** [**radius-server-policy** *policy-name*] [**force**]

Context tools>perform>aaa

Description This command triggers a RADIUS Accounting-On message:

- for all radius-server-policies that have acct-on-off configured.
- for the specified radius-server-policy if the acct-on-off is configured

The Accounting-On message is not sent when the last successful event for the radius server policy was an Accounting-On message. In this case, an Accounting-Off should be sent first. By specifying the keyword “force”, this is overruled.

Parameters **radius-server-policy** *policy-name* — Specifies the radius-server-policy for which the Accounting-On should be sent.

force — Sends an Accounting-On also if the last successful event was an Accounting-On.

acct-off

Syntax **acct-off** [**radius-server-policy** *policy-name*] [**force**] [**acct-terminate-cause** *number*]

Context tools>perform>aaa

Description This command triggers a RADIUS Accounting-Off message:

- for all radius-server-policies that have acct-on-off configured.
- for the specified radius-server-policy if the acct-on-off is configured

The Accounting-Off message is not sent when the last successful event for the radius server policy was an Accounting-Off message. In this case, an Accounting-On should be sent first. By specifying the keyword “force”, this is overruled.

Parameters **radius-server-policy** *policy-name* — Specifies the radius-server-policy for which the Accounting-Off should be sent.

force — Sends an Accounting-On also if the last successful event was an Accounting-Off.

acct-terminate-cause *number* — Overrides the default Acct-Terminate-Cause (User-Request) in the Accounting-Off message.

radius-server-policy

Syntax **radius-server-policy** *policy-name* **msg-buffer** [**session-id** *acct-session-id*]

Context tools>perform>aaa

Description This command dumps the RADIUS message buffer content for the specified radius-server-policy:

- message-type (acct-interim or acct-stop)
- Acct-Session-Id
- Remaining lifetime

When specifying the session-id, the message details are displayed.

Parameters *policy-name* — Specifies the radius-server-policy for which the message buffer content should be displayed.

session-id *acct-session-id* — Display the RADIUS message details for the message with specified session-id that is stored in the RADIUS message buffer.

ue

Syntax **ue**

Context tools>dump>wlan-gw

Description This command dumps user equipment (UE) information.

Sample Output

```
System# tools dump wlan-gw ue
No sessions on Slot #3 MDA #1 match the query
No sessions on Slot #3 MDA #2 match the query
No sessions on Slot #4 MDA #1 match the query
===============================================================================
Matched 1 session on Slot #4 MDA #2
===============================================================================
UE-Mac          : 00:02:00:00:00:39     UE-vlan         : 1
UE IP Addr      : N/A                   Description     : ESM-user
UE timeout      : N/A                   Auth-time       : None
Tunnel MDA      : 4/1                   Tunnel Router   : 50
MPLS label      : N/A                   Shaper          : 1
GRE Src IP Addr : 20C9::7:1:2
GRE Dst IP Addr : 2032::1:1:7
Anchor SAP      : 4/2/nat-out-ip:2049.4
Last-forward    : 07/02/2013 07:22:29   Last-move       : None
Rx Frames       : 2                     Rx Octets       : 744
Tx Frames       : 1                     Tx Octets       : 352
-------------------------------------------------------------------------------
===============================================================================
No sessions on Slot #5 MDA #1 match the query
No sessions on Slot #5 MDA #2 match the query
```

Clear Commands

radius-server-policy

Syntax **radius-server-policy** *policy-name* **msg-buffer** [**acct-session-id** *acct-session-id*]
radius-server-policy *policy-name* **statistics** [**msg-buffer-only**]
radius-server-policy *policy-name* **server** *server-index* **statistics**

Context clear>aaa

Description This command dumps the RADIUS message buffer content for the specified radius-server-policy:

- message-type (acct-interim or acct-stop)
- Acct-Session-Id
- Remaining lifetime

When specifying the session-id, the message details are displayed.

Parameters *policy-name* — Specifies the radius-server-policy for which the information should be cleared.

msg-buffer [**acct-session-id** *acct-session-id*] **—** Deletes all RADIUS messages or the RADIUS message with specified session-id from the RADIUS message buffer.

statistics [msg-buffer-only] — Clears all statistics for the specified radius-server-policy: radius-server-policy statistics, RADIUS server statistics and RADIUS message buffer statistics. With the optional keyword “msg-buffer-only”, only the RADIUS message buffer statistics are cleared.

server *server-index* **statistics —** Clears the RADIUS server statistics for the specified server-index in the specified radius-server-policy.