

Diameter Host Select Configuration Mode Commands

Diameter Host Select Configuration Mode is accessed from the Global Configuration Mode. This mode allows an operator to configure Diameter host tables of peer servers that can be shared by different services.

Command Modes

Exec > Global Configuration > Diameter Host Select Configuration

configure > diameter-host-template *template_name*

Entering the above command sequence results in the following prompt:

`[local]`*`host_name`*`(config-host-template)#`

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

- end, on page 1
- exit, on page 2
- host-select row-precedence, on page 2
- host-select table, on page 5

end

Exits the current configuration mode and returns to the Exec mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

end

Usage Guidelines

Use this command to return to the Exec mode.

exit

Exits the current mode and returns to the parent configuration mode.

Product

All

Privilege

Security Administrator, Administrator

Syntax Description

exit

Usage Guidelines

Use this command to return to the parent configuration mode.

host-select row-precedence

This command configures individual rows of peer servers within the Diameter host table.

Product

GGSN

HA

HSGW

IPSG

PDSN

P-GW

SCM

SAEGW

S-GW

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Diameter Host Select Configuration

configure > diameter-host-template *template_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-host-template)#
```

Syntax Description

In StarOS 14.1 and earlier releases:

host-select row-precedence *precedence* **table { 1 | 2 } host** *host_name* **[realm** *realm_id* **] [secondary host** *sec_host_name* **realm** *sec_realm_id* **]] [-noconfirm]**

host-select row-precedence *precedence* **table prefix-table { 1 | 2 } msisdn-prefix-from** *msisdn_prefix_from* **msisdn-prefix-to** *msisdn_prefix_to* **host** *host_name* **[realm** *realm_id* **] [secondary host** *sec_host_name* **realm** *sec_realm_id* **] [-noconfirm]**

no host-select row-precedence *precedence* **table { 1 | 2 | prefix-table { 1 | 2 } } [-noconfirm]**

In StarOS 15.0 and later releases:

host-select row-precedence *precedence* **table { 1 | 2 } host** *host_name* **[realm** *realm_id* **] [secondary host** *sec_host_name* **realm** *sec_realm_id* **]] [-noconfirm]**
host-select row-precedence *precedence* **table { { range-table { 1 | 2 } { imsi-based { [prefix | suffix]** *imsi-value* **[to** *imsi-value* **] } | msisdn-based { [prefix | suffix]** *msisdn-value* **[to** *msisdn-value* **] } } host** *host_name* **[realm** *realm_id* **] [secondary host** *sec_host_name* **realm** *sec_realm_id* **] algorithm { active-standby | round-robin }] } } [-noconfirm]**
no host-select row-precedence *precedence* **table { 1 | 2 | range-table { 1 | 2 } } [-noconfirm]**

no

Removes the specified row from the primary or secondary table or primary/secondary MSISDN prefix table for 14.0 and earlier releases, or IMSI/MSISDN range table for 15.0 and later releases.

row-precedence *precedence*

Specifies the row in the table as an integer from 1 through 128. Note that the row precedence number in IMSI/MSISDN configuration must be unique.

Important In StarOS release 14.0 and later, *precedence* may be an integer from 1 through 256 for SCM.

table { 1 | 2 }

Specifies the Diameter host table that will be edited.

- **1**: Specifies the primary table
- **2**: Specifies the secondary table

table prefix-table { 1 | 2 } msisdn-prefix-from *msisdn_prefix_from* msisdn-prefix-to *msisdn_prefix_to* host *host_name* [realm *realm_id*] [secondary host *sec_host_name* realm *sec_realm_id*]

Important This command syntax is applicable to StarOS release 14.1 and earlier.

prefix-table { 1 | 2 }: Specifies a primary or secondary table containing ranges of MSISDN prefixes.

msisdn-prefix-from *msisdn_prefix_from* **msisdn-prefix-to** *msisdn_prefix_to*: Specifies the starting and ending Mobile Station International Subscriber Directory Number (MSISDN) prefixes for a row in the prefix-table.

host *host_name*: Identifies the primary Diameter peer server to be added to this row by its host name. *host_name* can be entered as an IP address or a DNS hostname (1 through 128 alphanumeric characters).

secondary host *host_name*: Identifies the secondary Diameter peer server to be added to this row by its host name. *host_name* can be entered as an IP address or a DNS hostname (1 through 128 alphanumeric characters).

realm *realm_id*: Specifies an optional realm ID as an alphanumeric string of 1 through 128 characters.

table { { range-table { 1 | 2 }{ imsi-based { [prefix | suffix] *imsi-value* [to *imsi-value*] } | msisdn-based { [prefix | suffix] *msisdn-value* [to *msisdn-value*] } } host *host_name* [realm *realm_id*] [secondary host *sec_host_name* realm *sec_realm_id*] algorithm { active-standby | round-robin }] } }

Important This command syntax is applicable to StarOS release 15.0 and later.

range-table { 1 | 2 }: Specifies a primary or secondary table containing ranges of IMSI or MSISDN prefix/suffix.

imsi-based { [prefix | suffix] *imsi-value* **[to** *imsi-value* **] }**: Specifies to use the prefix/suffix/range values of IMSI of the subscriber for Diameter peer selection.

msisdn-based { [prefix | suffix] *msisdn-value* **[to** *msisdn-value* **] }**: Specifies to use the prefix/suffix/range values of MSISDN of the subscriber for Diameter peer selection.

host *host_name*: Identifies the primary Diameter peer server to be added to this row by its host name. *host_name* can be entered as an IP address or a DNS hostname (1 through 128 alphanumeric characters).

secondary host *host_name*: Identifies the secondary Diameter peer server to be added to this row by its host name. *host_name* can be entered as an IP address or a DNS hostname (1 through 128 alphanumeric characters).

realm *realm_id*: Specifies an optional realm ID as an alphanumeric string of 1 through 128 characters.

algorithm { active-standby | round-robin }: Specifies to select the algorithm to pick the primary and the secondary hosts either in an active standby mode or in round robin fashion.

[-noconfirm]

Executes the command without prompting for further input from the user.

Usage Guidelines

Use this command to add or modify individual rows in Diameter host server tables. Each table may contain up to 256 rows.

In Releases 15.0 and later, the existing CLI command "**host-select row-precedence**" in the Diameter Host Template Configuration mode is modified to enable the selection of Diameter peer based on the configured prefix/suffix/range values of IMSI or MSISDN of subscriber. This configuration change allows the overlapping range of IMSI or MSISDN values.

PCRF peer selection is based on the first match of prefix/suffix/range on row precedence priorities. If the subscriber's IMSI/MSISDN does not match with any configured IMSI/MSISDN range, then IMS Authorization application selects the default peer.

Important The length of IMSI or MSISDN range is the same in any IMSI or MSISDN host template configuration list.

Once a row is selected the failure handling for the subscriber is done based on this configuration. With this feature being turned on, the primary and the secondary hosts configured can be picked up in an active standby mode or in round robin fashion.

Example

The following command adds a row to a Diameter peer server table with the following parameters:

- row (precedence) = 1
- table = 1 (primary)
- Diameter peer server hostname = minid
- realm = namerica

```
host-select row-precedence 1 table 1 host minid realm namerica
```

host-select table

This command configures a table of peer servers associated with the Diameter host template.

Product

GGSN

HA

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Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Diameter Host Select Configuration

configure > diameter-host-template *template_name*

Entering the above command sequence results in the following prompt:

```
[local]host_name(config-host-template)#
```

Syntax Description

In StarOS 14.1 and earlier releases:

```
host-select table { 1 | 2 | prefix-table { 1 | 2 } } algorithm {
ip-address-modulus [ prefer-ipv4 | prefer-ipv6 ] | msisdn-modulus |
round-robin }
no host-select table
```

In StarOS 15.0 and later releases:

```
host-select table { 1 | 2 | range-table { 1 | 2 } } algorithm {
ip-address-modulus [ prefer-ipv4 | prefer-ipv6 ] | msisdn-modulus |
```

```
round-robin }
no host-select table
```

no

Removes the table associated with the Diameter host template.

table { 1 | 2 | prefix-table { 1 | 2 } }

Important This command syntax is applicable to StarOS release 14.1 and earlier.

Specifies the Diameter host table that will be edited.

- **1**: Specifies the primary table
- **2**: Specifies the secondary table
- **prefix-table { 1 | 2 }**: Specifies a primary or secondary table containing ranges of MSISDN prefixes.

This keyword option enables activating the configured table.

table { 1 | 2 | range-table { 1 | 2 } }

Important This command syntax is applicable to StarOS release 15.0 and later.

Specifies the Diameter host table that will be edited.

- **1**: Specifies the primary table
- **2**: Specifies the secondary table
- **range-table { 1 | 2 }**: Specifies a primary or secondary table containing ranges of IMSI or MSISDN prefix/suffix.

This keyword option enables activating the configured table.

algorithm { ip-address-modulus [prefer-ipv4 | prefer-ipv6] | msisdn-modulus | round-robin }

Specifies the algorithm to be used when selecting a row in this table.

- **ip-address-modulus**: Use an IP address (in binary) to select a row.
  - **prefer-ipv4**: If both IPv4 and IPv6 addresses are available, use the IPv4 address.
  - **prefer-ipv6**: If both IPv4 and IPv6 addresses are available, use the IPv6 address.
- **msisdn-modulus**: Use an MSISDN (without leading "+") to select a row.
- **round-robin**: Select a row in round-robin manner for each new session.



Important The Round Robin algorithm is effective only over a large number of selections, and not at a granular level.

Usage Guidelines

Use this command to add or modify a Diameter host server table associated with a Diameter host template.

Example

The following command adds a primary table that uses the *ip-address-modulus* algorithm for selecting a row:

```
host-select table 1 algorithm ip-address-modulus
```