MIPv6 HA Service Configuration Mode Commands

The MIPv6 HA Service Configuration Mode is used to create and manage Mobile IPv6 (MIPv6) access privileges.

Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

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

Important For information on common commands available in this configuration mode, refer to the Common Commands chapter.

aaa accounting

Configures the sending of subscriber session AAA accounting by the Home Agent (HA) service.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

[no] aaa accounting

no

Disables AAA accounting for the HA service.

Usage Guidelines

Enabling the HA service will send all accounting data (start, stop, and interim) to the configured AAA servers. The default is AAA accounting enabled.

Important In order for this command to function properly, AAA accounting must be enabled for the context in which the HA service is configured using the **aaa accounting subscriber radius** command.

AAA accounting for the HA service can be disabled using the **no** version of the command.

Example

The following command disables AAA accounting for the HA service:

```
no aaa accounting
```

bind

Designates the address of the MIPv6HA service and specifies the maximum number of subscribers that can access this service over the interface.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

```
bind address IPv6_address [ max-subscribers count ]
no bind address
```

no

Removes the bound address from the HA service.

address

Specifies the IPv6 address of the MIPv6HA service using IPv6 colon-separated-hexadecimal notation.

max-subscribers *count*

Default: 3000000

Specifies the maximum number of subscribers that can access this service on this interface.

count is an integer from 0 through 4000000.

Important The maximum number of subscribers supported depends on the installed license key and the number of active packet processing cards installed in the system. Refer to the **license key** command for additional information.

Usage Guidelines

Use this command to associate the HA service with a specific logical IP address. The logical IP address or interface takes on the characteristics of a Pi interface. Only one interface can be bound to a service. The interface should be configured prior to issuing this command.

This command also sets a limit as to the number of simultaneous subscribers sessions that can be facilitated by the service/interface at any given time.

When configuring the **max-subscribers** option, be sure to consider the following:

- The total number of interfaces that you will configuring for use as Pi interfaces
- The maximum number of subscriber sessions that all of these interfaces may handle during peak busy hours
- The average bandwidth for each of the sessions
- The type of physical port to which these interfaces will be bound

Taking these factors into account and distributing your subscriber session across all available interfaces will allow you to configure your interfaces to optimally handle sessions without degraded performance.

Example

The following command binds the logical IP interface with the address of *2001:4A2B::1f3F* to the HA service and specifies that a maximum of *600* simultaneous subscriber sessions can be facilitated by the interface/service at any given time.

```
bind address 2001:4A2B::1f3F max-subscribers 600
```

The following command disables a binding that was previously configured:

```
no bind address
```

default

Restore default values assigned for specified parameter.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

default { aaa | refresh-advice-option | refresh-interval-percent | reg-lifetime | sequence-number-validate | setup-timeout | simul-bindings | subscriber | timestamp-replay-protection }

aaa

Restores the AAA setting configured by the **aaa** command to its default of enabled.

refresh-advice-option

Restores the refresh-advice-option setting to its default of disabled.

refresh-interval-percent

Restores the refresh-interval-percent setting to its default of 75.

reg-lifetime

Restores the Mobile IP session registration lifetime setting configured by the **reg-lifetime** command to its default: 600 seconds.

sequence-number-validate

Restores the sequence-number-validate setting to its default of enabled.

setup-timeout

Restore the maximum amount of time allowed for setting up a session to the default: 60 seconds.

simul-bindings

Restores the simultaneous bindings setting to its default: 1.

subscriber

Configures settings for the default subscriber.

timestamp-replay-protection

Restores the timestamp-replay-protection scheme according to RFC 4285.

Usage Guidelines After the system has been modified from its default values, this command is used to set or restore specific parameters to their default values.

Example

The following command is used to return the simultaneous bindings setting parameter to it's default value:

```
default simul-bindings
```

refresh-advice-option

Configures inclusion of refresh advice option in the Binding Acknowledgement sent by the Home Agent (HA).

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Command Modes Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description **refresh-advice-option**

Usage Guidelines Includes the refresh advice option in the binding acknowledgements sent by the home agent. Default is disabled.

refresh-interval-percent

Configures the percentage of the granted lifetime to be used in the refresh interval mobility option in the Binding Acknowledgement sent by the Home Agent (HA).

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Command Modes Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

refresh-interval-percent *value*

value

value represents a percentage expressed as an integer from 1 through 99. Default is 75.

Usage Guidelines

Use this command to configure the amount of the granted lifetime to be used in the refresh interval mobility option in the Binding Acknowledgement sent by the Home Agent (HA).

Example

The following command sets the refresh-interval-percent value to 50%:

refresh-interval-percent 50

reg-lifetime

Specifies the longest registration lifetime that the HA service will be allowed in any Registration Request message from the mobile node.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > **context** *context_name* > **mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

reg-lifetime *time*
no reg-lifetime

no

Sets the registration lifetime to infinite.

time

Specifies the registration lifetime in seconds. *time* is an integer from 1 through 262140. Default is 600.

Usage Guidelines

Use to limit a mobile nodes' lifetime. If the mobile node requests a shorter lifetime than what is specified, it is granted. However, Per RFC 2002, should a mobile node request a lifetime that is longer than the maximum allowed by this parameter, the HA service will respond with the value configured by this command as part of the Registration Reply.

Example

The following command configures the registration lifetime for the HA service to be 2400 seconds:

```
reg-lifetime 2400
```

The following command configures an infinite registration lifetime for MIPv6 calls:

```
no reg-lifetime
```

sequence-number-validate

Configures sequence number validation of the received MIPV6 control packet by the Home Agent (HA) according to RFC 3775.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

sequence-number-validate

Usage Guidelines

Use this command to enable sequence number validation of the received MIPV6 control packet by the Home Agent (HA) as per RFC 3775. Default is enabled.

setup-timeout

The maximum amount of time allowed for session setup.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

setup-timeout *seconds*

seconds

Default: 60 seconds

The maximum amount of time (in seconds) to allow for setup of a session expressed as an integer from 1 through 1000000. Default is 60 seconds.

Usage Guidelines Use this command to set the maximum amount of time allowed for setting up a session.

Example

To set the maximum time allowed for setting up a session to 5 minutes (300 seconds), enter the following command:

```
setup-timeout 300
```

simul-bindings

Specifies the maximum number of "care-of" addresses that can be simultaneously bound for the same user as identified by NAI and Home address.

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Command Modes Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description **simul-bindings** *number*

number

Configures maximum number of "care of" addresses that can be simultaneously bound for the same user as identified by their NAI and home address. *number* is an integer from 1 through 3. Default is 1.

Usage Guidelines Per RFC 2002, the HA service creates a mobile binding record (MBR) for each subscriber session it is facilitating. Each MBR is associated with a care-of address. As the mobile node roams, it is possible that the session will be associated with a new care-of address.

Typically, the HA service will delete an old binding and create a new one when the information in the Registration Request changes. However, the mobile could request that the HA maintains previously stored MBRs. This command allows you to configure the maximum number of MBRs that can be stored per subscriber if the requested.

Example

The following command configures the service to support up to *2* addresses per subscriber:

```
simul-bindings 2
```

timestamp-replay-protection tolerance

Designates timestamp replay protection scheme as per RFC 4285.

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Command Modes

Exec > Global Configuration > Context Configuration > MIPv6HA Service Configuration

configure > context *context_name* **> mipv6ha-service** *service_name*

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-mipv6ha-service)#
```

Syntax Description

timestamp-replay-protection tolerance*seconds*

tolerance *seconds*

Defines the acceptable difference in timing (between timestamps) before rejecting packet, in seconds. *seconds* must be an integer from 0 through 65535. The default is 7.

Usage Guidelines

Use this command to define the acceptable difference in timing (between timestamps) before rejecting packet.