

EPDG Service Configuration Mode Commands

Command Modes

Creates Evolved Packet Data GateWay service and enters EPDG service configuration mode.

Exec > Global Configuration > Context > EPDG Service Configuration

configure > **context** context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

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aaa

This command configures AAA parameters for ePDG service.

Product

ePDG

Privilege

Security Administrator, Administrator

Syntax Description

aaa send framed-mtu value
aaa send framed-mtu

no

Disables AAA parameters for ePDG service.

send

Configures AVP to be send to AAA server.

framed-mtu value

This is the framed-MTU AVP value to be sent in DER, which is an integer from 64 through 1500.

Usage Guidelines

Use this command to configure AAA parameters for ePDG service.

Example

The following command configures framed-MTU AVP value 100 to be send to AAA server for ePDG service.

aaa send framed-mtu 100

allow

This command allows duplicate precedence in a TFT for a S2b ePDG session.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

[no] allow { custom-swm-swu-error-mapping | duplicate-prec-in-tft }

no

Disables allowing exception.

custom-swm-swu-error-mapping

Customises mapping of SWm errors with SWu Notify Error Type.

duplicate-prec-in-tft

The duplicate precedence is allowed in a tft for a S2b ePDG session.

Usage Guidelines

Use this command to allow exception with Spec or RFC.

Example

The following command is used to allow duplicate precedence in a tft for a S2b ePDG session.

allow duplicate-prec-in-tft

associate

This command associates configuration of ePDG service to qci-qos mapping and EGTP service.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

```
associate { egtp-service egtp_service_name | gtpc-load-control-profile
gtpc_load_control_profile_name | gtpc-overload-control-profile
gtpc_overload_control_profile_name | qci-qos-mapping qci_qos_mapping |
subscriber-map subscriber_map_name }
no associate { egtp-service | gtpc-load-control-profile
gtpc_load_control_profile_name | gtpc-overload-control-profile
gtpc_overload_control_profile_name | qci-qos-mapping | subscriber-map }
```

no

Disables association.

egtp-service egtp_service_name

The eGTP service should be configured before associating the same with ePDG service.

egtp_service_name is a string and the value must be between 1 and 63.

gtpc-load-control-profile gtpc_load_control_profile_name

Associates GTPC-load-control-profile for the epdg service.

1 and 64.

gtpc-overload-control-profile gtpc_overload_control_profile_name

Associates GTPC-overload-control-profile for the ePDG service.

1 and 64.

qci-qos-mapping qci_qos_mapping

The associated qci-qos mapping table should be configured prior to associating the same with ePDG service. *qci-qos mapping* is a string and the value must be between *I* and *63*.

subscriber-map_name

Configures subscriber map association to get PGW address locally. subscriber map name is a string and the size must be between 1 and 64.

Usage Guidelines

Use this command to associate the ePDG service to egtp service or QCI to QoS mapping.

Example

The following command removes the association of epdg service to egtp service.

no associate egtp-service

bind

This command binds the services.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

bind address bind_address crypto-template crypto_template_service_name
no bind address

no

Disables binding.

address bind address

Specifies the address of the EPDG service. This must be followed by an IPv4 address, using dotted-decimal notation or an IPv6 address, using xx::yy::zz format.

crypto-template crypto_template_service_name

Specifyes the crypto template to use, this is a string of size between 0 and 127.

Usage Guidelines

Use this command to bind the ePDG service.

Example

The following command binds the ePDG Service to the IPv4 address 12.32.44.56.

bind address 12.32.44.56

data-buffering

This command allows to downlink packets to be buffered, while session is in connecting state. By default it is enabled.

Product

ePDG

Privilege

Security Administrator, Administrator

Syntax Description

[no | default] data-buffering

no

Disables data buffering.

default

Sets / restores the data buffering to its default value. By default, the data buffering is enabled.

Usage Guidelines

Use this command to allow to downlink packets to be buffered, while session is in connecting state.

Example

The following command allows to set the default value of the data-buffering.

default data-buffering

dns-pgw

Configures context of dns-client.

Product

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Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

```
dns-pgw { context dns_client_context_name | selection { topology [ weight ] |
  weight } }
{ no | default } dns-pgw { context | selection { topology [ weight ] |
  weight } }
```

default

Configures context of dns-client to its default value.

no

Disables dns-client's context.

context dns_client_context_name

Specifies the dns-client's context name, which is a string and should be between 1 and 79.

selection { topology [weight] | weight }

Specifies the pgw dns selection criteria.

topology: Enables topology selection.

topology weight: Enables topology with weight.

weight: Enables selection with weight-only, disables topology selection.

Usage Guidelines

Enable/disable PGW Selection based on topology and load-balancing of PGWs on weight's from DNS.

Use this command to configure the source in which dns-client is configured, dns-pgw selection toplogy/weight will be used to enable/disable PGW Selection based on topology and load-balancing of PGWs.

Example

Use the following command to configure dns-client context.

dns-pgw context 21

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

Description

Usage Guidelines Use this command to return to the parent configuration mode.

fqdn

Designates ePDG fully qualified domain name.

Product eF

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > ePDG Service Configuration

configure > context context name > epdg service service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

```
fqdn epdg_fqdn
```

{ no | default } fqdn

default

Resets the ePDG fully qualified domain name to its default setting.

no

Disables ePDG FQDN.

fqdn epdg_fqdn

Designates ePDG with fully qualified domain name, name is a string between 1 and 256 alphanumeric characters.

Usage Guidelines

Use this command to configure ePDG FQDN under ePDG service which will be used for longest suffix match during dynamic allocation.

Example

Use the following command to disable ePDG FQDN:

no fqdn

ip

This command configures Internet Protocol (IP) parameters.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > **context** context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

```
ip fragment-chain { max-ooo-fragment fragments | timeout secs }
default ip fragment-chain { max-ooo-fragment | timeout }
```

default

Resets the ePDG Internet Protocol(IP) parameters to default values.

fragment-chain

This option configures ip fragment chain settings during TFT handling.

max-ooo-fragment fragments

This is the number of fragments to buffer per fragment chain for out-of-order reception before receiving first fragment(for L4 packet filtering).

fragments is an integer value from θ through 300.

The default value is 45.

0 represents no buffering is done for out-of-order fragments, correct bearer will be selected with first fragment.

timeout secs

This is the time to hold an ip fragment chain.

secs is an integer value from 1 through 10.

The default value is 5.

Usage Guidelines

Use this command to configure ePDG Internet Protocol (IP) parameters.

Example

Use the following command to configure ePDG IP parameter timeout to 6 seconds:

ip fragment-chain timeout $\it 6$

max-sessions

This command configures the approximate maximum number of sessions ePDG service can support, ranging from 0 to 1000000. Default is 1000000.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

max-sessions value
default max-sessions

default

Resets the approximate maximum number of sessions that ePDG service can support to default value (1000000).

value

This is the approximate maximum number of sessions that ePDG service can support, ranging from 0 to 1000000.

The default value is 1000000.

Usage Guidelines

Use this command to configure the approximate maximum number of sessions that ePDG service can support.

Example

Use the following command to configure the approximate maximum number of sessions that ePDG service can support to 10.

max-sessions 10

mobile-access-gateway

Configures MAG context within epdg service.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

mobile-access-gateway context context_name [mag-service mag_service_name]
no mobile-access-gateway context

no

Disables MAG context.

mobile-access-gateway context context_name [mag-service mag_service_name]

context designates the name of the context in which the MAG service is configured. This must be followed by *context name* of MAG service of size 1 to 79 characters.

mag-service designates the name of the MAG service. This must be followed by *mag_service_name* of size *I* to *63* characters.

Usage Guidelines

Use this command to specify where MIPv6 sessions are routed through this service.

Example

Use the following command to configure MAG context with context name fg.

mobile-access-gateway context fg

newcall

Configures new call related behavior.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

[no | default] newcall duplicate-session notify-delete name

no

Disables new call related behavior.

default

Sets the default value for the new call related behavior. 'notify-delete' is enabled by default.

duplicate-session

Configures action regarding duplicate session.

notify-delete

Initiate delete session request to PGW during reattach if another PGW is selected. Enabled by default.

Usage Guidelines

Use this command to configure new call related behavior.

Example

The following example configures new call related behavior:

newcall duplicate-session notify-delete

pdn-type

This command configures pdn-type related parameters for ePDG service.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

[no] pdn-type ipv6 path-mtu

no

Disables pdn-type related parameters for ePDG service.

Usage Guidelines

Use this command to configure pdn-type related parameters for ePDG service.

Example

Use the following command to disable pdn-type related parameters for ePDG service.

no pdn-type ipv6 path-mtu

pgw-selection

Configures pgw-selection related parameters for the EPDG service.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

```
[ no ] pgw-selection { agent-info error-terminate |
local-configuration-preferred | prefer aaa-pgw-id }
```

no

Disables pgw-selection related parameters for the EPDG service.

pgw-selection agent-info error-terminate

agent-info specifies the action to be taken when MIP6-agent-info is expected but not received from AAA/HSS. **error-terminate** terminates the pgw-selection and rejects the call.

local-configuration-preferred

Configures local PGW selection as the preferred mechanism. Applicable for initial attach. Default is AAA/DNS based selection.

prefer aaa-pgw-id

Configures AAA provided PGW ID(IP address/FQDN) selection as the preferred mechanism for initial attach.

Usage Guidelines

Use this command to terminate the pgw-selection and reject the call when MIP6-agent-info is expected but not received from AAA/HSS.

Example

Use the following command to terminate pgw-selection and reject the call.

pgw-selection agent-info error-terminate

plmn

Configures PLMN related parameters for the EPDG service.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

plmn id mcc mcc_plmn_id mnc mnc_plmn_id
no plmn id

no

Disables PLMN related parameters for the EPDG service.

plmn id mcc mcc_plmn_id mnc mnc_plmn_id

plmn id mcc *mcc_plmn_id* configures MCC part of PLMN ID for the EPDG service and prompts as "Enter a number, ranging from 200...999 - string of size 3 to 3" . *mcc_plmn_id* is a string of three characters, entered as number between 200 and 999.

mnc mnc_plmn_id configures MNC part of PLMN ID for the EPDG service and prompts as "Enter a number, ranging from 00...999 - string of size 2 to 3" . mnc_plmn_id is a string of two to three characters, entered as number between 00 and 999.

Usage Guidelines

Use this command to configure PLMN identifier (MCC and MNC Values) for ePDG Service.

Example

Use the following command to configure PLMN identifier MCC 456 and MNC 64 for ePDG service.

plmn id mcc 456 mnc 64

reporting-action

Configures reporting of events.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > ePDG Service Configuration

configure > **context** context name > **epdg-service** epdg service name

Entering the above command sequence results in the following prompt:

[local]host_name(config-epdg-service)#

Syntax Description

[no] reporting-action event-record

no

Disables RTT record generation for this ePDG service.

event-record

Configures event records.

Syntax Description

Use this command to configure the reporting of events for the EPDG service.

Example

The following command configures the reporting of event records:

reporting-action event-record

setup-timeout

Maximum time allowed for session setup in seconds.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

setup-timeout time
default setup-timeout

default

Sets up the maximum time allowed for a session to default value (as 60 seconds).

setup-timeout time

time is an integer value between 2 and 300.

Usage Guidelines

Use this command to configure maximum time allowed for session setup in seconds.

Example

Use the following command to configure maximum session time as 120 seconds:

```
setup-timeout 120
```

subscriber

Configures a subscriber with a given name.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context_name > epdg service service_name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

[default] subscriber name
no subscriber

default

Configures a subscriber with a given default name.

no

Cancels the subscriber configuration.

subscriber name

Configures a subscriber with a given name, which is a string of size between 1 and 127.

Usage Guidelines

Use this command to configure the subscriber with a given name.

Example

Use the following command to configure the subscriber as sss.

subscriber sss

threshold

This command is used to configure threshold values to set and clear the alarms for each monitoring parameters separately.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > **context** context name > **epdg service** service name

Entering the above command sequence results in the following prompt:

[context name]host name(config-epdg-service)#

Syntax Description

```
threshold { epdg-ikev2-authentication-failures | epdg-ikev2-setup-attempts
  | epdg-ikev2-setup-failure | epdg-ikev2-setup-failure-rate |
epdg-ikev2-setup-success } threshold_value [ clear clear_value ]
no threshold { epdg-ikev2-authentication-failures |
epdg-ikev2-setup-attempts | epdg-ikev2-setup-failure |
epdg-ikev2-setup-failure-rate | epdg-ikev2-setup-success }
```

no

Disables the configuration of a specific threshold for ePDG service.

epdg-ikev2-authentication-failures threshold_value

Configures the threshold value for IKEv2 Authentication Failures.

threshold_value is the threshold value for IKEv2 Authentication Failures, which is an integer between 0 and 1000000.

epdg-ikev2-setup-attempts threshold_value

Configures the threshold value for IKEv2 Setup Attempts.

threshold value is the threshold value for IKEv2 Setup Attempts, which is an integer between 0 and 10000000.

epdg-ikev2-setup-failure threshold_value

Configures the threshold value for IKEv2 Setup Failure.

threshold value is the threshold value for IKEv2 Setup Failure, which is an integer between 0 and 1000000.

epdg-ikev2-setup-failure-rate threshold_value

Configures the threshold value for IKEv2 Setup Failure Rate.

threshold value is the percentage of IKEv2 Setup Failure Rate, which is an integer between 0 and 100.

epdg-ikev2-setup-success threshold_value

Configures the threshold value for IKEv2 Setup Success.

threshold value is the threshold value for IKEv2 Setup Success, which is an integer between 0 and 10000000.

clear *clear_value*

Configures the alarm clear threshold for the following.

- IKEv2 Authentication Failures. *clear_value* is the number of IKEv2 Authentication Failures, which is an integer between 0 and 1000000.
- IKEv2 Setup Attempts. *clear_value* is the number of IKEv2 Setup Attempts, which is an integer between 0 and 10000000.
- IKEv2 Setup Failure. *clear_value* is the number of IKEv2 Setup Failure, which is an integer between 0 and 1000000.
- IKEv2 Setup Failure Rate. *clear_value* is the percentage of IKEv2 Setup Failure Rate, which is an integer between 0 and 100.
- IKEv2 Setup Success. *clear_value* is the number of IKEv2 Setup Success, which is an integer between 0 and 10000000.

Usage Guidelines

Use this command to configure a specific threshold for ePDG service.

Example

The following command configures ePDG IKEV2 Authentication Failures threshold as 50 for a specific ePDG Service.

threshold epdg-ikev2-authentication-failures 50

timeout idle

Configures the subscriber's time-to-live (TTL) settings for the EPDG service.

Product

ePDG

Privilege

System Administrator, Administrator

Command Modes

Exec > Global Configuration > Context Configuration > ePDG Service Configuration

configure > context context name > epdg-service epdg service name

Entering the above command sequence results in the following prompt:

 $[local] \, host_name \, (config-epdg-service) \, \# \,$

Syntax Description

```
timeout idle sec { micro-checkpoint-deemed-idle [ dur ] | micro-checkpoint-periodicity dur }
```

no timeout idle

default timeout idle

no

Disables idle timeout configuration along with the idle seconds micro-checkpoint duration or deemed idle duration configuration.

default

Configures the default value for subscriber's time out settings. The idle timeout default value is 0. The default value of micro-checkpoint-deemed-idle would be 0 seconds and that for micro-checkpoint-periodicity is 10 seconds.

idle*sec*

Designates the maximum duration a session can remain idle, in seconds, before system automatically terminates the session. Must be followed by number of seconds between 0 and 2147483647. Zero indicates function is disabled.

micro-checkpoint-deemed-idledledur

Configures micro-checkpoint duration when UE is deemed idle for this Subscriber. Default is "0" (disabled). dur is an integer between 10 and 1000.

micro-checkpoint-periodicity dur

Configures the micro-checkpoint-periodicity for this Subscriber. Default is "10". dur is the an integer between 10 and 10000.

Syntax Description

Use this command to configure the subscriber's time-to-live (TTL) settings for the EPDG service.

Example

The following command configures the idle timeout to 10° and micro-checkpoint-periodicity to 50° for the subscriber:

timeout idle 10 micro-checkpoint-periodicity 50

username

Sets the options related to username received from mobile.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context name > epdg service service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

```
username { check-mac-address [ failure-handling { continue | terminate
} ] | mac-address-delimiter { NAI-label | colon | colon-or-NAI-label } |
mac-address-stripping }
no username { check-mac-address | mac-address-stripping }
```

no

Cancels the options related to username received from mobile.

username { check-mac-address [failure-handling { continue | terminate }] | mac-address-delimiter { NAI-label | colon | colon-or-NAI-label } | mac-address-stripping }

check-mac-address validates Mac address. By default, Mac address is not validated.

failure-handling { continue | terminate } : MAC Address validation failure handling configuration.

continue ignores failure and continues.

terminate terminates session on request failure.

mac-address-delimiter is the second delimiter to be used to extract the MAC address from username when first delimiter is '@'.

NAI-label NAI-label(.nai) to be used to extract the MAC Address from username as a second delimiter when first delimiter is '@'.

colon Colon(:) to be used to extract the MAC Address from username as a second delimiter when first delimiter is '@' .

colon-or-NAI-la bel Either colon(:) or NAI-Label(.nai) to be used to extract the MAC address from username as a second delimiter when first delimiter is '@'. This is the default option.

mac-address-stripping strips Mac Address from the username. By default, it is disabled.

Usage Guidelines

Use this command to set the options (Validate Mac address / mac-address-delimiter / mac-address-stripping) related to username received from mobile.

Example

Use the following command to set the options related to username received from mobile.

username check-mac-address failure-handling terminate

vendor-specific-attr

Configures the vendor-specific-attributes values on PMIP based S2b interface.

Product

ePDG

Privilege

Security Administrator, Administrator

Command Modes

Exec > Global Configuration > Context > EPDG Service Configuration

configure > context context name > epdg service service name

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-epdg-service)#

Syntax Description

```
vendor-specific-attr { dns-server-req { apco | pco } | pcscf-server-req
{ apco | private-extn } }
default vendor-specific-attr { dns-server-req | pcscf-server-req }
```

default

Configues vendor-specific-attributes to default the value. Default setting is to use APCO IE for DNS Server Address and PrivateExtension IE for PCSCF Server Address.

dns-server-req

Configures the DNS Server Address to be present in PCO/APCO IE.

apco

Configures to use APCO IE to carry information over PMIP based S2b.

pco

Configures to use PCO IE to carry information over PMIP based S2b.

pcscf-server-req

Configures the PCSCF Server Address to be present in APCO/PrivateExtn IE.

apco

Configures to use APCO IE to carry information over GTP based S2b.

private-extn

Configures to use PrivateExtension IE to carry information over GTP based S2b.

Usage Guidelines

Use this command to configure the vendor-specific-attributes values on PMIP based S2b interface.

Example

Use the following command to configure the vendor-specific-attributes values on PMIP based S2b interface to pco.

vendor-specific-attr dns-server-req pco