Mobile Policy PCF Commands

advance-tuning async-threading

Configures threading configuration for HTTP outgoing request from PCF.

Command Modes

Exec > Global Configuration

Syntax Description

advance-tuning async-threading { default-drop-oldest-when-full { false | true } | default-priority *default_priority* **| default-processing-threads** *processing_thread_number* **| default-queue-size** *default_queue_size* **| default-worker-threads** *default_number_worker_threads* **| request-timeout-ms** *request_timeout* **| thread-configuration** *service_name* **drop-oldest-when-full {**

false | true } | priority *thread_priority* **| queue-size** *queue_size* **| threads** *thread_number* **}**

default-drop-oldest-when-full { false | true }

Specify to drop the oldest packet when queue is full.

Must be either "false" or "true".

Default Value: false.

default-priority ***default_priority***

Specify the default priority of thread.

Must be an integer.

Default Value: 5.

default-processing-threads ***processing_thread_number***

Specify the default number of processing threads.

Must be an integer.

Default Value: 10.

default-queue-size ***default_queue_size***

Specify the default size of the queue.

Must be an integer.

Default Value: 100.

default-worker-threads ***default_number_worker_threads***

Specify the default number of worker threads.

Must be an integer.

Default Value: 20.

http2-connect-timeout-ms ***http2_connect_timeout***

Specify the request timeout period in milliseconds.

Must be an integer.

Default Value: 100.

http2-idle-connection-timeout-sec ***http2_client_idle_connect_timeout***

Specify the idle connection timeout for HTTP2 client.

Must be an integer.

Default Value: 60.

max-timeouts-to-reconnect *max_requests_timeouts_http2_connection*

Specify the maximum request timeouts to reconnect HTTP2 connection.

Must be an integer.

Default Value: 0.

Usage Guidelines

Use this command to configure threading configuration for HTTP outgoing request from PCF.

Example

The following command configures the threading configuration for HTTP outgoing request from PCF with default priority of 5:

```
advance-tuning async-threading default-priority 5
```

advance-tuning async-threading threading-config

Configures service threading.

Command Modes

Exec > Global Configuration

Syntax Description

threading-config *service_name* **{ drop-oldest-when-full { false | true } | priority***thread_priority* **|queue-size***queue_size* **|threads***thread_number* **}**

drop-oldest-when-full { false | true }

Specify to drop the oldest packet when the queue is full.

Must be either "false" or "true".

priority *thread_priority*

Specify the threading priority.

Must be an integer.

queue-size *queue_size*

Specify the size of the queue.

Must be an integer.

service-name *service_name*

Specify the service name.

Must be a string.

threads *thread_number*

Specify the number of threads.

Must be an integer.

Usage Guidelines Use this command to configure threading service.

advance-tuning brute-force-recovery

Enables HTTP2 connection recovery parameters via closing connection.

Command Modes Exec > Global Configuration

Syntax Description **brute-force-recovery { max-reconnects** *max_http2_reconnects* **| time-interval-mins** *time_interval* **}**

max-reconnects *max_http2_reconnects*

Specify the maximum number of HTTP2 reconnect attempts to be allowed before restarting REST endpoint for recovery. Counter for previous reconnect attempts gets reset as per time-interval-mins. When set to 0, restart of rest endpoint is not performed even on reaching configured count and system continues attempting reconnect for recovery.

Must be an integer.

Default Value: 0.

time-interval-mins *time_interval*

Specify the time interval in minutes. If there is no HTTP2 reconnect triggered due to timeout for specified duration plus 1 minute then counter for previous reconnect attempts is reset to 0.

Must be an integer.

Default Value: 0.

Usage Guidelines Use this command to enable HTTP2 connection recovery parameters via closing connection.

advance-tuning overload-control

Configures Overload Control configuration for all Diameter interfaces.

Command Modes Exec > Global Configuration

Syntax Description **diameter global**

Usage Guidelines Use this command to configure Overload Control configuration for all Diameter traffic.

advance-tuning diameter global action

Configures the action to take on overload detection.

Command Modes Exec > Global Configuration

Syntax Description **`action throttle-action`** *`throttle_action`*

action throttle-action *throttle_action*

Specify the action to take when overload traffic is detected.

Must be one of the following:

- REJECT
- DROP

Usage Guidelines Use this command to configure the action that must be taken on overload detection.

advance-tuning diameter global limits

Configures the limits for the overload handling parameters for the REST or Diameter interface.

Command Modes Exec > Global Configuration

Syntax Description **`limits max-requests-per-sec`** *`maximum_requests`*

max-requests-per-sec *maximum_requests*

Specify the maximum number of requests that are allowed per second before throttling is applied.

Must be an integer.

Usage Guidelines Use this command to configure the limits for overload handling parameters for the REST or Diameter interface.

advance-tuning http2-threading

Configures threading configuration for HTTP incoming request to PCF.

Command Modes Exec > Global Configuration

Syntax Description **`disable-validation { false | true } { idle-thread-timeout-ms`** *`idle_thread_timeout`* **`| max-queue-capacity`** *`max_packet_capacity`* **`| max-thread-pool-size`** *`max_thread_pool_size`* **`| min-thread-pool-size`** *`min_thread_pool_size`* **`| request-timeout-ms`** *`request_timeout`* **`}`**

disable-validation { false | true }

Specify to enable or disable validation.

Must be either "false" or "true".

Default Value: false.

idle-thread-timeout-ms *idle_thread_timeout*

Specify the thread idle timeout in milliseconds.

Must be an integer.

Default Value: 60000.

max-queue-capacity *max_packet_capacity*

Specify the maximum packet capacity of the queue.

Must be an integer.

Default Value: 5000.

max-thread-pool-size *max_thread_pool_size*

Specify the maximum size of pool of threads.

Must be an integer.

Default Value: 20.

min-thread-pool-size *min_thread_pool_size*

Specify the minimum size of pool of threads.

Must be an integer.

Default Value: 5.

Usage Guidelines Use this command to configure threading configuration for HTTP incoming request to PCF.

Example

The following command configures the threading configuration for HTTP incoming request to PCF with maximum queue capacity of 500:

```
advance-tuning http2-threading max-queue-capacity 500
```

advance-tuning overload-control

Configures threading configuration for HTTP incoming request to PCF.

Command Modes Exec > Global Configuration

Syntax Description `overload-control`

Usage Guidelines Use this command to configure threading configuration for HTTP incoming request to PCF.

advance-tuning n7-stale-session-error-codes

Configures the N7Notify error code values for the N7 sessions for which the session expiration time must be reverted to the previous value. This indicates the value that was set before the N7Notify request was generated.

Command Modes Exec > Global Configuration

Syntax Description **n7-stale-session-error-codes** *error_codes*

n7-stale-session-error-codes *error_codes*

Specifies the N7Notify error code values for the N7 sessions. The session expiration time should be reverted to the previous value for these sessions, which indicates the value before the N7Notify request was generated.

You can specify multiple error codes using comma-separated values.

Default Value: Empty string.

Usage Guidelines Use this command to configure the N7Notify error code values for the N7 sessions.

advance-tuning overload-control rest

Configures Overload Control configuration for all REST traffic.

Command Modes Exec > Global Configuration

Syntax Description **global**

Usage Guidelines Use this command to configure threading configuration for HTTP incoming request to PCF.

advance-tuning overload-control rest global action

Configures the action to take on overload detection.

Command Modes Exec > Global Configuration

Syntax Description **throttle-action** *throttle_action*

throttle-action *throttle_action*

Specify the action to take when overload traffic is detected.

Must be one of the following:

- REJECT
- DROP

Usage Guidelines Use this command to configure the action that must be taken on overload detection.

advance-tuning overload-control rest global limits

Configures the limits for the overload handling parameters for the REST or Diameter interface.

Command Modes Exec > Global Configuration

Syntax Description **limits max-requests-per-sec** *maximum_requests*

max-requests-per-sec *maximum_requests*

Specify the maximum number of requests that are allowed per second before throttling is applied.

Must be an integer.

Usage Guidelines Use this command to configure the limits for overload handling parameters for the REST or Diameter interface.

rest-endpoint

Configures the REST endpoint parameters.

Command Modes Exec > Global Configuration

Syntax Description **rest-endpoint { ips** *ip_address* **| port** *port_number* **| replicas** *replica_count* **| tracing-service-name** *service_name* **}**

certificate-name *certificate_name*

Specify the alias name for the certificate.

http-connection-limit *max_inbound_http_connections*

Specify the maximum number of allowed inbound HTTP connections.

Must be an integer.

Default Value: 200.

inbound-request-timeout-ms *inbound_requests_timeout*

Specify the timeout period for inbound requests in milliseconds.

Must be an integer.

Default Value: 2000.

ips *ip_address*

Specify the IP addresses for the REST service.

Must be an IP address.

outbound-request-timeout-ms *outbound_requests_timeout*

Specify the timeout period for outbound requests in milliseconds.

Must be an integer.

Default Value: 200.

port *port_number*

Specify port number of the REST service.

Must be an integer.

replicas *replica_count*

Specify the replica count.

Must be an integer.

Default Value: 1.

repository *repository_name*

Specify to override the Helm repository.

tracing-service-name *tracing_service_name*

Specify the tracing service name for REST endpoint.

Must be a string.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- http
- https

Default Value: http.

Usage Guidelines

Use this command to configure the REST endpoint.

Example

The following command configures the REST endpoint tracing service name as nPcf-pcf-rest-ep:

```
rest-endpoint tracing-service-name nPcf-pcf-rest-ep
```

rest-endpoint certificate-status

Displays certificate status.

Command Modes

Exec > Global Configuration

Syntax Description

```
show certificate-status
```

certificateName

Displays the certificate name.

Must be a string.

timeToExpire

Displays the time to expire.

Must be a string.

Usage Guidelines Use this command to view certificate status.

rest-endpoint discovered-profiles

Displays the PCF discovered and cached NFs.

Command Modes Exec > Global Configuration

Syntax Description `show discovered-profiles`

Usage Guidelines Use this command to view the PCF discovered and cached NFs.

rest-endpoint discovered-profiles chf

Displays PCF Discover cache for CHF.

Command Modes Exec > Global Configuration

Syntax Description `show discovered-profiles chf`

expiry

The expiration time in seconds.

Must be a string.

ipv4Address

The NF IPv4 address.

Must be a string.

nfInstanceId

The NF Instance ID.

Must be a string.

nfStatus

Is the PCF instance registered to NRF.

Must be a string.

nfType

The NF type.

Must be a string.

port

The NF port number.

Must be a port number.

Usage Guidelines Use this command to view PCF Discover cache for CHF.

rest-endpoint discovered-profiles udr

Displays PCF Discover cache for UDR.

Command Modes Exec > Global Configuration

Syntax Description `show discovered-profiles udr`

expiry

The expiration time in seconds.

Must be a string.

ipv4Address

The NF IPv4 address.

Must be a string.

nfInstanceId

The NF Instance ID.

Must be a string.

nfStatus

Is the PCF instance registered to NRF.

Must be a string.

nfType

The NF type.

Must be a string.

port

The NF port number.

Must be a port number.

Usage Guidelines Use this command to view PCF Discover cache for UDR.

rest-endpoint interface

Configures the NF interfaces.

Command Modes Exec > Global Configuration

Syntax Description **interface** *interface_type* **ip** *ip_address* **[outbound-request-timeout-ms** *outbound_request_timeout* **| notify-update-retry-count** *notify_update_retry_count* **]**

interface *interface_type*

Specify the NF interface type.

ip *ip_address*

Specify the NF interface IP address.

Must be an IP address.

outbound-request-timeout-ms *outbound_request_timeout*

Specify the timeout period for outbound requests in milliseconds.

Must be an integer.

notify-update-retry-count *notify_update_retry_count*

Specify retry count in case of timeout for N7_NotifyUpdate requests. The retry is attempted from the same rest-ep pod to the same peer.

Must be an integer.

Default value is 0.

Usage Guidelines Use this command to configure NF interfaces.

Example

The following command configures the NF interface to restEndpoint with the IP address 11.11.11.11:

```
rest-endpoint interface restEndpoint ip 11.11.11.11
```

rest-endpoint peer-status

Displays the NFs peer status.

Command Modes Exec > Global Configuration

Syntax Description `show peer-status`

connectionDuration

Displays the NF connection uptime duration.

Must be a string.

nfName

Displays the PCF Discover cache for UDR.

Must be a string.

peerIp

Displays the NF peer IP address.

Must be a string.

peerPort

Displays the NF peer port number.

Must be a string.

podIp

Displays the PCF pod IP address.

Must be a string.

Usage Guidelines Use this command to view the NFs peer status.

rest-endpoint registration-status

Displays NRF registration details.

Command Modes Exec > Global Configuration

Syntax Description `show registration-status`

nrfUri

Displays the registered NRF URI.

Must be a string.

podIp

Displays the PCF pod ID.

Must be a string.

registered

Displays whether Is PCF instance is registered to NRF.

Must be a string.

Usage Guidelines Use this command to view NRF registration details.

traffic engine

Configures the default engine group to receive traffic.

Command Modes Exec > Global Configuration

Syntax Description **default-destination** *default_destination*

default-destination *default_destination*

Specify the default engine group to receive the traffic.

Usage Guidelines Use this command to configure the default engine group to receive traffic. Make sure to run this command on the machine with the appropriate product configured.

Example

The following command configures the default engine group as /policy-test:engine/test-test1:group:

```
traffic engine default-destination /policy-test:engine/test-test1:group
```

traffic engine rule

Configures the traffic routing rule parameters.

Command Modes Exec > Global Configuration

Syntax Description **rule** *rule_name* **{ dnn** *dnn_route* **| supi** *supi_route* **| gpsi** *gpsi_route* **| hash-prefix** *hash_prefix_route* **| intf** *interface_route* **| destination** *engine_group* **}**

destination *engine_group*

Specify the engine group to receive traffic.

dnn *dnn_route*

Specify the route on DNN - regex.

Must be a string.

gpsi *gpsi_route*

Specify the route on GPSI - regex.

Must be a string.

hash-prefix *hash_prefix_route*

Specify the route on 2-digit hash - prefix.

Must be a string.

intf *interface_route*

Specify the route on interface type - exact.

Must be a string.

supi *supi_route*

Specify the route on SUPI - regex.

Must be a string.

rule_name

Specify the rule name.

Must be a string.

Usage Guidelines

Use this command to configure the traffic routing rule parameters.