



Advanced Tuning Parameters

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Feature Summary and Revision History

Summary Data

Table 1: Summary Data

Applicable Product(s) or Functional Area	5G-PCF
Applicable Platform(s)	SMI
Feature Default Setting	Disabled – Configuration Required
Related Changes in this Release	Not Applicable
Related Documentation	Not Applicable

Revision History

Table 2: Revision History

Revision Details	Release
Added procedure to configure the N7 stale session error codes.	2020.05.01
First introduced.	2020.01.0

Feature Description

The PCF Ops Center allows you to configure the advanced tuning parameters for PCF. The tuning parameters primarily consist of the async-threading and http2-threading parameters. These parameters provide the flexibility of the tuning threads responsible for PCF's incoming and outgoing requests over HTTP.



Note Configure the advanced tuning parameter values only if you have a strong understanding of the PCF deployment.

Configuration Support for the Advanced Tuning Parameters

This section describes how to configure the advanced tuning parameters using the CLI. The configuration of the advanced tuning parameters involves:

- Configuring the Async Threading Parameters
- Configuring the HTTP2 Threading Parameters
- Configuring the N7 Stale Session Error Codes

Configuring the Async Threading Parameters

This section describes how to fine tune the async threading parameters.

To configure the http2-threading parameters, use the following configuration in the Policy Ops Center console:

```
config
  advance-tuning
  async-threading
    default-priority default_priority
    default-worker-threads default_worker_threads
    default-queue-size default_queue_size
    default-processing-threads default_processing_threads
    default-drop-oldest-when-full [ true | false ]
    threading-config service_name
    priority priority
    queue-size queue_size
    threads number_threads
  end
```

NOTES:

- **advance-tuning** – Enters the advance tuning configuration mode.
- **async-threading** – Enters the async threading configuration mode.
- **default-priority** *default_priority* – Specifies the default priority level.
- **default-worker-threads** *default_worker_threads* – Specifies the default number of worker threads.

- **default-queue-size** *default_queue_size* – Specifies the default size of the queue.
- **default-processing-threads** *default_processing_threads* – Specifies the default number of threads used for processing.
- **default-drop-oldest-when-full** [**true** | **false**] – Indicates if the oldest message in the queue should be removed when the queue is full.
- **threading-config** *service_name* – Indicates the service name for which the threading configuration is enabled.
- **priority** *priority* – Specifies the priority of the thread.
- **queue-size** *queue_size* – Indicates the queue size.
- **threads** *number_threads* – Specifies the number of threads to be processed.

Configuring the HTTP2 Threading Parameters

This section describes how to refine the http2-threading parameters.

To configure the http2-threading parameters, use the following configuration in the Policy Ops Center console:

```
config
  http2-threading
  min-thread-pool-size min_thread_pool
  max-thread-pool-size max_thread_pool
  idle-thread-timeout-ms idle_thread_timeout
  max-queue-capacity max_queue_capacity
  disable-validation [ true | false ]
end
```

NOTES:

- **http2-threading** *http2_threading* – Configures the parameters for inbound SBA requests that are received by PCF.
- **min-thread-pool-size** *min_thread_pool* – Specifies the minimum number of threads for processing the inbound SBA request. The accepted range contains integers. Default value is 5.
- **max-thread-pool-size** *max_thread_pool* – Specifies the maximum size of the thread pool.
- **idle-thread-timeout-ms** *idle_thread_timeout* – Specifies the time in milliseconds that the thread can remain idle. *idle_thread_timeout* must contain only integers. Default value is 60000.
- **disable-validation** [**true** | **false**] – Disables the validation of the request sent to PCF. [**true** | **false**] must contain the value as true or false. Default value is false.
- **max-queue-capacity** *max_queue_capacity* – Specifies the maximum number of requests that can wait in the queue for processing. *max_queue_capacity* must contain only integers. Default value is 5000.
- **max-thread-pool-size** *max_thread_pool* – Specifies the maximum number of threads that PCF can accommodate in the pool. *max_thread_pool_size* must contain only integers. Default value is 20.

Configuring the N7 Stale Session Error Codes

This section describes how to configure the error codes for the N7 stale sessions.

To configure the `n7-stale-session-error-codes` parameters, use the following configuration in the Policy Ops Center console:

```
config
  advance-tuning
    n7-stale-session-error-codes error_codes
  end
```

NOTES:

- **n7-stale-session-error-codes** *error_codes* – Specifies the error code values for the N7 sessions. When a session is idle, the PCF revalidates it by using the N7NotifyUpdate request. If the N7NotifyUpdate response includes any one or more specified error codes, then the session expiry time is reverted to original value.

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