



# Advanced Tuning Parameters

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## Feature Summary and Revision History

### Summary Data

*Table 1: Summary Data*

Applicable Product(s) or Functional Area	PCF
Applicable Platform(s)	SMI
Feature Default Setting	Disabled – Configuration required to enable
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*—Specify the default priority level.
- **default-worker-threads** *default\_worker\_threads*—Specify the default number of worker threads.
- **default-queue-size** *default\_queue\_size*—Specify the default size of the queue.
- **default-processing-threads** *default\_processing\_threads*—Specify 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*—Specify the service name for which the threading configuration is enabled.
- **priority** *priority*—Specify the priority of the thread.
- **queue-size** *queue\_size*—Specify the queue size.
- **threads** *number\_threads*—Specify 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*—Specify the parameters for inbound SBA requests that are received by PCF.
- **min-thread-pool-size** *min\_thread\_pool*—Specify 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*—Specify the maximum size of the thread pool.
- **idle-thread-timeout-ms** *idle\_thread\_timeout*—Specify 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*—Specify 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*—Specify 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*—Specify 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.