

Total Session Thresholds

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Total Session Thresholds

Threshold monitoring can be enabled for the total session counts described in the following table.

Value	Description
PDSN Services	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all PDSN services counted during the polling interval.
GGSN Services	Enables the generation of alerts or alarms based on the total number of PDP contexts (active and dormant) facilitated by all GGSN services counted during the polling interval.

Value	Description
GPRS Services	Enables the generation of alerts or alarms based on the total number of GPRS sessions or the total number of PDP sessions facilitated by the GPRS services counted during the polling interval.
HA Services	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all HA services counted during the polling interval.
HeNB-GW Services	Enables the generation of alerts or alarms based on the total number of HeNB and UE sessions (active and dormant) facilitated by all HeNB-GW services counted during the polling interval.
HNB-GW Services	Enables the generation of alerts or alarms based on the total number of HNB, UE, Iu sessions (active and dormant) facilitated by all HNB-GW services counted during the polling interval.
HSGW Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all HSGW services counted during the polling interval.
LMA Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all LMA services counted during the polling interval.
LNS Services	Enables the generation of alerts or alarms based on the total number of sessions facilitated by all LNS services counted during the polling interval.
MME Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all MME services counted during the polling interval.
P-GW Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all P-GW services counted during the polling interval.
SAEGW Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all SAEGW services counted during the polling interval.

Value	Description
SGSN Services	Enables the generation of alerts or alarms based on the total number of SGSN sessions or the total number of PDP sessions facilitated by the SGSN services counted during the polling interval.
S-GW Service	Enables the generation of alerts or alarms based on the total number of sessions (active and dormant) facilitated by all S-GW services counted during the polling interval.

Saving Your Configuration

When you configure thresholds they are not permanent unless you save the changes. When you have completed configuring thresholds, save your configuration to flash memory, an external memory device, and/or a network location using the Exec mode command **save configuration**. For additional information on how to verify and save configuration files, refer to the *System Administration Guide* and the *Command Line Interface Reference*.

Total PDSN Session Thresholds

Total PDSN session thresholds generate alerts or alarms based on the total number of sessions facilitated by any PDSN service configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all PDSN sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total PDSN Session Thresholds

Use the following example to configure the total PDSN session thresholds:

```
configure
 threshold total-pdsn-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-pdsn-sessions interval <time>
 threshold monitoring subscriber
      end
```

Total GGSN Session Thresholds

Total GGSN session thresholds generate alerts or alarms based on the total number of PDP contexts facilitated by all GGSN services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all GGSN PDP contexts based on the following rules:

- **Enter condition:** Actual total number of PDP contexts > or = High Threshold
- **Clear condition:** Actual total number of PDP contexts < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total GGSN Session Thresholds

Use the following example to configure the per-GGSN service thresholds:

```
configure
 threshold total-ggsn-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-ggsn-sessions interval <time>
      end
```

Total GPRS Session Thresholds

Total GPRS session thresholds generate alerts or alarms based on the total number of attached subscribers facilitated by all GPRS services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all subscribers attached to the GPRS based on the following rules:

- **Enter condition:** Actual total number of attached subscribers > or = High Threshold
- **Clear condition:** Actual total number of attached subscribers < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total GPRS Session Thresholds

Use the following example to configure the per-SGSN service thresholds:

```
configure
 threshold total-gprs-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-gprs-sessions interval <time>
      end
```

Total GPRS PDP Contexts Thresholds

Total GPRS PDP contexts thresholds generate alerts or alarms based on the total number of PDP contexts facilitated by all GPRS services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all GPRS PDP contexts based on the following rules:

- **Enter condition:** Actual total number of PDP contexts > or = High Threshold
- **Clear condition:** Actual total number of PDP contexts < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total GPRS PDP Context Thresholds

Use the following example to configure the per-GPRS service thresholds:

```
configure
 threshold total-gprs-pdp-sessions <high_thresh> [ clear <low_thresh>]
 threshold poll total-gprs-pdp-sessions interval <time>
      end
```

Total HA Session Thresholds

Total HA session thresholds generate alerts or alarms based on the total number of sessions facilitated by all HA services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all HA sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total HA Session Thresholds

Use the following example to configure the total HA session thresholds:

```
configure
 threshold total-ha-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-ha-sessions interval <time>
 threshold monitoring subscriber
      end
```

Total HeNB-GW Session Thresholds



Important In Release 20, 21.0 and 21.1, HeNBGW is not supported. For more information, contact your Cisco account representative.

Total HeNB-GW service session thresholds generate alerts or alarms based on the total number of HeNB and UE sessions facilitated by all HeNB-GW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold

- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total HeNB Session Thresholds

Use the following example to configure the thresholds for total HNB sessions over IuH interface between HNB and HNB-GW service on HNB-GW node:

```
configure
 threshold total-henbgw-henb-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-henbgw-henb-sessions interval <time>
 threshold monitoring henbgw-service
      end
```

Configuring Total UE Session Thresholds

Use the following example to configure the thresholds for total HeNB-GW UE sessions:

```
configure
 threshold total-henbgw-ue-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-henbgw-ue-sessions interval <time>
 threshold monitoring henbgw-service
      end
```

Total HNB-GW Session Thresholds



Important In Release 20 and later, HNBGW is not supported. For more information, contact your Cisco account representative.

Total HNB-GW service session thresholds generate alerts or alarms based on the total number of IuH, IuCS, and IuPS sessions facilitated by all HNB-GW services configured on the system during the specified polling interval. Thresholds for IuH session is provided for HNB and UE seperately.

Alerts or alarms are triggered for the total of all IuH, IuCS, or IuPS sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total HNB Session Thresholds

Use the following example to configure the thresholds for total HNB sessions over IuH interface between HNB and HNB-GW service on HNB-GW node:

```
configure
 threshold total-hnbgw-hnb-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-hnbgw-hnb-sessions interval <time>
 threshold monitoring hnbgw-service
      end
```

Configuring Total UE Session Thresholds 0

Use the following example to configure the thresholds for total UE sessions over IuH interface between HNB and HNB-GW service on HNB-GW node:

```
configure
 threshold total-hnbgw-ue-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-hnbgw-ue-sessions interval <time>
 threshold monitoring hnbgw-service
      end
```

Configuring Total Iu Session Thresholds

Use the following example to configure the thresholds for total IuPS and/or IuCS sessions over Iu interface between HNB-GW and CN node:

```
configure
 threshold total-hnbgw-iu-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-hnbgw-iu-sessions interval <time>
 threshold monitoring hnbgw-service
      end
```

Total HSGW Session Thresholds

Total HSGW session thresholds generate alerts or alarms based on the total number of sessions facilitated by all HSGW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all HSGW sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total HSGW Session Thresholds

Use the following example to configure the total HSGW session thresholds:

```
configure
 threshold total-hsgw-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-hsgw-sessions interval <time>
 threshold monitoring hsgw-service
      end
```

Total LMA Session Thresholds

Total LMA session thresholds generate alerts or alarms based on the total number of sessions facilitated by all HSGW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all LMA sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total LMA Session Thresholds

Use the following example to configure the total LMA session thresholds:

```
configure
 threshold total-lma-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-lma-sessions interval <time>
 threshold monitoring lma-service
      end
```

Total LNS Session Thresholds

Total LNS session thresholds generate alerts or alarms based on the total number of sessions facilitated by all LNS services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all LNS sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total LNS Session Thresholds

Use the following example to configure the total LNS session thresholds:

```
configure
      threshold total-lns-sessions <high_thresh> [ clear <low_thresh> ]
      threshold poll total-lns-sessions interval <time>
      threshold monitoring subscriber
      end
```

Total MME Session Thresholds

Total MME session thresholds generate alerts or alarms based on the total number of sessions facilitated by all MME services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all MME sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total MME Session Thresholds

Use the following example to configure the total P-GW session thresholds:

```
configure
 threshold total-mme-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-mme-sessions interval <time>
 threshold monitoring mme-service
 end
```

Total P-GW Session Thresholds

Total P-GW session thresholds generate alerts or alarms based on the total number of sessions facilitated by all P-GW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all P-GW sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total P-GW Session Thresholds

Use the following example to configure the total P-GW session thresholds:

```
configure
 threshold total-pgw-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-pgw-sessions interval <time>
 threshold monitoring pgw-service
      end
```

Total SAEGW Session Thresholds

Total SAEGW session thresholds generate alerts or alarms based on the total number of sessions facilitated by all SAEGW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all SAEGW sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total SAEGW Session Thresholds

Use the following example to configure the total SAEGW session thresholds:

```
configure
 threshold total-saegw-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-saegw-sessions interval <time>
 threshold monitoring saegw-service
      end
```

Total SGSN Session Thresholds

Total SGSN session thresholds generate alerts or alarms based on the total number of attached subscribers facilitated by all SGSN services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all subscribers attached to the SGSN based on the following rules:

- **Enter condition:** Actual total number of attached subscribers > or = High Threshold
- **Clear condition:** Actual total number of attached subscribers < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total SGSN Session Thresholds

Use the following example to configure the per-SGSN service thresholds:

```
configure
 threshold total-sgsn-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-sgsn-sessions interval <time>
      end
```

Total SGSN PDP Contexts Thresholds

Total SGSN PDP contexts thresholds generate alerts or alarms based on the total number of PDP contexts facilitated by all SGSN services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all SGSN PDP contexts based on the following rules:

- **Enter condition:** Actual total number of PDP contexts > or = High Threshold
- **Clear condition:** Actual total number of PDP contexts < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total SGSN PDP Context Thresholds

Use the following example to configure the per-SGSN service thresholds:

```
configure
 threshold total-sgsn-pdp-sessions <high_thresh> [ clear <low_thresh>]
 threshold poll total-sgsn-pdp-sessions interval  <time>
      end
```

Total S-GW Session Thresholds

Total S-GW session thresholds generate alerts or alarms based on the total number of sessions facilitated by all S-GW services configured on the system during the specified polling interval.

Alerts or alarms are triggered for the total of all S-GW sessions based on the following rules:

- **Enter condition:** Actual total number of sessions > or = High Threshold
- **Clear condition:** Actual total number of sessions < Low Threshold

If a trigger condition occurs within the polling interval, the alert or alarm will not be generated until the end of the polling interval.

Configuring Total S-GW Session Thresholds

Use the following example to configure the total S-GW session thresholds:

```
configure
 threshold total-sgw-sessions <high_thresh> [ clear <low_thresh> ]
 threshold poll total-sgw-sessions interval <time>
 threshold monitoring sgw-service
      end
```