



## Alarm Profiling

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The router software can monitor the status of the chassis, card or interface module, and ports. It generates alarm messages that are based on the alarm conditions set. To save time and effort, you can change the alarm severity in the alarm configuration using the alarm profiling feature.

The alarm profiling feature enables you to create a unique alarm profile for chassis, card or interface module, and port. Each alarm profile, for example, the chassis alarm profile, is defined with an alarm name. Each alarm profile is classified based on controller types. For each controller type, there is a set of alarms defined with a default severity. You can overwrite the default severity using the alarm profile and suppress the syslog facility based on their preferences. By default, the syslog facility is enabled for an alarm profile.

You can also enable Auto In Service (AINS) through the Alarm Profile. By default, AINS is not enabled for an alarm profile. You must configure it using the **ains** command.

To configure alarm profiles, create profiles for either chassis, card, or port, then define severities for each alarm, and finally, attach the profile at the corresponding chassis, card, or port.

The highest precedence is maintained at the port level and the lowest precedence is maintained at the chassis level. For example, if the chassis profile is already attached and if you want to have a separate profile for a port, you can still create a port profile and attach it to that port. The port inherits the properties of the port profile.

After the alarm profile is attached, these behaviors are shown about the entity:

- Chassis alarm profile—When a chassis alarm profile is attached, by default, the profile is attached to all the interface modules available in the chassis. All these interfaces configured under the chassis are applied with the new alarm severity and AINS.
- Card alarm profile—When a card profile is attached, by default, the profile, along with AINS is attached to all ports that are enabled on the interface module.
- Port alarm profile—When a port profile is attached, the profile, along with the AINS is applied only to that port.



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**Note** Card and port alarm profiles with the same name can be attached to multiple cards and ports, respectively.

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The alarm profile attached to the chassis, card or interface module, and port can be detached, if the profile is no longer required. Before deleting the alarm profile, ensure that you detach the alarm profile from entity; for example, card or port.

To log the alarms, you need to enable the **logging alarm [critical | major | minor | informational]** command at the global configuration mode. Only then are the alarms that are configured for the alarm profile are system logged.

For example, if you have enabled the logging alarm using the **logging alarm critical** command, then for the alarm profile, the alarms with critical severity get system logged only when the syslog is enabled in the alarm profile.


**Note**

- If a port is created on the subslot after configuring the alarm profile, that port starts with default secondary admin state as "auto-in-service". The port moves to "in-service" secondary admin state after completing the default soak-timer.
- If ports are already created before the alarm profile is enabled, the ports move to "in-service" secondary admin state.

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## Limitations of Alarm Profiles

- The alarm profile name must not exceed 32 characters.
- For various alarms, the alarm profiles are not supported for service affecting and non-service affecting classification.
- For various alarms, the alarm severities such as "Not Reported" and "Not Alarmed" are not supported.
- The alarm profile created for chassis, card, or port should be attached to the respective entity. the attaching of the alarm profile of one entity to another entity is not supported. For example, the card alarm profile cannot be attached to the chassis alarm profile, or vice versa.
- The attaching of alarm profile to entities such as, PSU, FAN, and RSP is not supported.
- AINS States is not supported on the PSU, FAN, and RSP in Cisco IOS XE Release 16.6.1vS.
- Maximum of one hundred alarm profiles can be created for the system or node (chassis).
- When a port having line alarm such as SLOS, SLOF, LAIS, and LRDI is shutdown, then after performing the no shutdown operation, the **show facility-alarm status** does not display the asserted line alarm. Only LINK DOWN alarm is displayed.
- Clearing an alarm requires more than 10 seconds.

## Alarm Profile Classification

### Alarm Profile Types

The Alarm Profile types are based on the entities i.e. Chassis, Card or Interface Module and Port. The chassis alarm profile is applicable to all the entities if there is no specific alarm profile is attached. The card alarm

profile is applicable to a specific card/interface module and the port alarm profile is applicable to individual port.

### Alarm Severity

Alarms are filtered based on the severity level. Depending on the requirement, you can override the default severity to a new severity.

The following are severity of alarms supported for each alarm profile associated with the controller type:

- Critical
- Major
- Minor
- Informational

### Alarm Profiling Hierarchy

Based on the alarm profile applied to the chassis, card or interface module, or port, the corresponding alarms and their severity levels are applied in the following order of priority:

**Table 1: Alarm Profile with Alarm Priority**

Alarm Profile	Alarm Priority
Port profile	1
Card profile	2
Chassis profile	3

## How to Configure Alarm Profile

This section provides information about configuring alarm profile for chassis, card, or port.

### Creating Alarm Profile

You can create an alarm profile for chassis, card or interface module, and port. The alarm profile name should be a string with alpha numeric characters. The alarm profile is associated to an alarm with controller types such as SDH or SONET. You can suppress syslog and provide a new severity for the alarm.



**Note** Before including syslog for the alarm, ensure that you enable the **logging alarm** command at the global level. To enable the logging alarms, use the **logging alarm [critical | major | minor | informational]** command.



**Note** You cannot provide the same profile name for chassis, card, or port.

#### Creating Alarm Profile for Chassis

To create the alarm profile *CHASSIS*, use the following commands:

```
router(config)#alarm-profile CHASSIS chassis
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity critical
```

### Creating Alarm Profile for Card

To create the alarm profile *CARD*, use the following commands:

```
router(config)#alarm-profile CARD card
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity critical
```

### Creating Alarm Profile for Port

To create the alarm profile *PORT*, use the following commands:

```
router(config)#alarm-profile PORT port
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity critical
```

## Attaching Alarm Profile to Entity

Once the alarm profile is created for chassis, card, or port, you need to attach the alarm profile to chassis, card, or port. After attaching the alarm profile only, the alarm severity and other alarm functionalities are applied to the chassis, card, or port.

### Attaching Alarm Profile to Chassis

To attach the alarm profile to chassis, use the following commands:

```
router>enable
router#configure terminal
router(config)#alarm-profile chassis attach chassis
router(config)#end
```



#### Note

When an alarm profile is attached to chassis, the profile is applicable to all the cards available on the node but not to cards that are inserted after the profile attach is performed. To attach alarm profile to cards, you need to reattach the alarm profile to the chassis.

### Attaching Alarm Profile to Card

To attach an alarm profile to the card, use the following commands:

```
router>enable
router#configure terminal
router(config)#alarm-profile card attach card slot/bay
router(config)#end
```



**Note** The alarm profile cannot be attached to a slot when there is no card available in the slot.

### Attaching Alarm Profile to Port

Depending on the controller type, the alarm profile is attached to the port. The controller types supported are SONET, SDH, T1, T3, E1, and E3. You need to select the controller and the port, and then attach the profile

To attach the alarm profile to port, use the following commands:

```
router>enable
router#configure terminal
router(config)#controller {sonet | sdh | t1 | e1 | t3 | e3} slot/bay/port
router(config-controller)# attach profile port
router(config-controller)#end
```

## Modifying Alarm Profile

You can modify the existing alarm profile associated with chassis, port, or card. The options that you can modify are the alarm severity and suppress syslog facility. The alarm severity that you can modify are critical, major, minor, and informational.

### Modifying Chassis Alarm Profile

To modify the existing alarm configured for chassis, use the following commands:

```
router(config)#alarm-profile CHASSIS chassis
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity major
```

### Modifying Card Alarm Profile

To modify the existing alarm configured for card, use the following commands:

```
router(config)#alarm-profile CARD card
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity major
```

### Modifying Port Alarm Profile

To modify the existing alarm configured for port, use the following commands:

```
router(config)#alarm-profile PORT port
router(config-alarm-profile)#alarm sonet/sdh
router(config-alarm-properties)#SLOF suppress
router(config-alarm-properties)#SLOF severity major
```

## Detaching Alarm Profile

You can detach the existing alarm profile from chassis, card, or port and attach a new profile. If a new alarm profile is not attached, then the default profile is attached.

### Detaching Alarm Profile from Chassis

When the alarm profile associated with chassis is detached, the profile is removed from all the interfaces available in the chassis. The alarms configured for the profile have no effect on these interfaces even when alarm conditions occur.

To detach the alarm profile associated with chassis, use the following commands:

```
Router(config)#no "alarm-profile attach name 1 CHASSIS chassis"
```

```
Router(config)#no alarm-profile chassis attach chassis
Router(config)#
```

### Detaching Alarm Profile from Card

For the alarm profile associated with card, when detached, the profile is removed from all the ports and the interfaces. While detaching alarm profile, you need to specify the slot and subslot.

To detach the alarm profile associated with card, use the following commands:

```
Router(config)#no alarm-profile attach name 1 CARD 0/9
```

```
Router#no alarm-profile card attach card 0/9
Router#
```

### Detaching Alarm Profile from Port

You need to access specific controller and interface to detach alarm profile associated with the port. The alarm profile is detached from specific interface for the controller.

To detach the alarm profile associated with port, use the following commands:

```
router(config)#no attach profile name 1 0/9/16
router(config-controller)#controller sdh name

Router#controller sonet 0/9/16
Router#no attach profile port
```

## Deleting Alarm Profile




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**Note** Before deleting the alarm profile, detach the profile from chassis, card, or port. Alarm profiles cannot be deleted when profiles are attached.

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If the alarm profile is not required anymore, you can delete the alarm profile.

### Deleting Alarm Profile for Chassis

To delete the alarm profile associated with chassis, use the following command:

```
Router(config)#no alarm-profile CHASSIS chassis
```

### Deleting Alarm Profile for Card

To delete the alarm profile associated with card, use the following command:

```
Router(config)#no alarm-profile CARD card
```

### Deleting Alarm Profile for Port

To delete the alarm profile associated with port, use the following command:

```
Router(config)#no alarm-profile PORT port
```

## Verifying Alarm Profile

Use the following commands to verify the alarm profile configuration:

- **show alarm profile**—Displays the alarm profile configured for chassis.
- **show facility-alarm status**—Displays the alarms status attached to a specific profile.
- **show controller/interface**—shows the operational or attached alarm profile.
- **show logging**—Displays the alarms reporting in syslog.

To display the alarm profile configured for chassis, use the **show alarm profile** command:

```
Router# show alarm profile
Alarm profile CHASSIS:
SONET/SDH:
  Alarm Name                Severity  Syslog
  Section Loss of Frame Failure    CRITICAL Enabled
  Line Alarm Indication Signal     INFO     Enabled
  Line Remote Failure Indication   INFO     Enabled
  Path Alarm Indication Signal     INFO     Enabled
  Path Remote Failure Indication   INFO     Enabled
  Path Loss of Pointer             INFO     Enabled
DS1:
  Alarm Name                Severity  Syslog
  Receiver has loss of signal      CRITICAL Enabled
  Receiver has loss of frame       INFO     Enabled
  Receiver has remote alarm        INFO     Enabled
DS3:
  Alarm Name                Severity  Syslog
  Receiver has loss of signal      MAJOR    Enabled
  DS1 Alarm Indication Signal     MINOR    Enabled
  DS1 Loss Of Frame              INFO     Enabled
  DS1 Remote Alarm Indication     INFO     Enabled
```

To display the alarm status attached to a specific profile, use the **show facility-alarm status** command:

```
Router# show facility-alarm status | inc 0/4/1
SONET 0/4/1.OC48 Feb 01 2018 19:23:10 INFO Section Loss of Frame Failure [1]
```

To display the operational or attached alarm profile, use the **show controllers** command:

```
For show interface - alarm-profile
Router#sh interfaces gigabitEthernet 0/7/0
GigabitEthernet0/7/0 is down, line protocol is down
Alarm-profile: chassis_ains
  Hardware is A900-IMA8CS1Z-M, address is 5006.ab62.3a36 (bia 5006.ab62.3a36)
  MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full Duplex, 1000Mbps, link type is force-up, media type is SX
```

```

output flow-control is unsupported, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 watchdog, 0 multicast, 0 pause input

```

Router# **show interfaces GigabitEthernet 0/1/0**

```

GigabitEthernet0/1/0 is up, line protocol is up
Sec-admin-state: in-service, Soak-time: NA,
soak-Time-left: NA, AINS-state: IS-NR
Hardware is A900-IMA8S1Z, address is f078.1685.3f12 (bia f078.1685.3f12)
MTU 1500 bytes, BW 1000000 Kbit/sec, DLY 10 usec,
   reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
Full Duplex, 1000Mbps, link type is auto, media type is SX
output flow-control is unsupported, input flow-control is on
ARP type: ARPA, ARP Timeout 04:00:00
Last input never, output never, output hang never
Last clearing of "show interface" counters 00:00:37
Input queue: 0/375/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue: 0/40 (size/max)
 5 minute input rate 0 bits/sec, 0 packets/sec
 5 minute output rate 0 bits/sec, 0 packets/sec
   0 packets input, 0 bytes, 0 no buffer
   Received 0 broadcasts (0 IP multicasts)
   0 runts, 0 giants, 0 throttles
   0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
   0 watchdog, 0 multicast, 0 pause input
   0 packets output, 0 bytes, 0 underruns
   0 output errors, 0 collisions, 0 interface resets
   0 unknown protocol drops
   0 babbles, 0 late collision, 0 deferred
   0 lost carrier, 0 no carrier, 0 pause output
   0 output buffer failures, 0 output buffers swapped out

```

To display the alarm status configured for chassis, use the **show facility-alarm status** command:

```

Router# show facility-alarm status
System Totals Critical: 25 Major: 5 Minor: 0
Source          Severity      Syslog String          Description [Index]
-----
subslot 0/12          CRITICAL          Active Card Removed
OIR Alarm [0]
Power Supply Bay 3    CRITICAL          PSU_MISSING             Power Supply/FAN
Module Missing [0]
module R1             MAJOR             Unknown state [0]
SONET 0/4/1           CRITICAL          SLOS                    Section Loss of Signal
  Failure [0]
SONET 0/4/1           CRITICAL          SNET_LINK_DOWN         Physical Port Link
Down [59]
xcvr container 0/4/5  INFO             XCVR_MISSING           Transceiver Missing
[0]
xcvr container 0/4/6  INFO             XCVR_MISSING           Transceiver Missing

```

```

[0]
xcvr container 0/4/7      INFO      XCVR_MISSING      Transceiver Missing
[0]
xcvr container 0/7/1      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/3      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/4      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/5      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/6      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/7      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/8      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/9      CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/11     CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/13     CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/14     CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/7/15     CRITICAL  XCVR_MISSING_LINK_DOWN  Transceiver Missing
- Link Down [1]
xcvr container 0/8/18     INFO      XCVR_MISSING      Transceiver Missing
[0]
xcvr container 0/8/19     INFO      XCVR_MISSING      Transceiver Missing
[0]
xcvr container 0/14/2     INFO      XCVR_MISSING      Transceiver Missing
[0]
xcvr container 0/14/4     INFO      XCVR_MISSING      Transceiver Missing
[0]

```

## Verifying Alarm Profile for Severity Change for SONET or SDH Alarms

The following example verifies when the severity of the SONET or SDH alarms are modified for a Chassis profile using the **show alarm profile** command:

Create a PORT alarm profile for the SONET or SDH alarms:

```

Router(config)#alarm-profile PORT port
Router(config-alarm-properties)#alarm sonet/sdh
Router(config-alarm-properties)#lais severity critical
Router(config-alarm-properties)#puneq severity major
Router(config-alarm-properties)#pais severity major
Router(config-alarm-properties)#end

```

Verify the alarm profile using the **show alarm profile** command:

```

Router#show alarm profile
Alarm profile PORT:
SONET/SDH:
  Alarm Name                               Severity  Syslog
  Line Alarm Indication Signal              CRITICAL Enabled
  Path Alarm Indication Signal              MINOR    Enabled
  Path Payload Unequipped                  MAJOR    Disabled
  Lower Order Path Alarm Indication Signal  MINOR    Disabled

```

Attach PORT alarm profile to port:

```
Router>enable
Router#configure terminal
Router(config)#controller sonet 0/3/3
Router(config-controller)#attach profile PORT
Router(config-controller)#end
```

Modify the severity of the CHASSIS alarm profile for the SONET or SDH alarms:

```
Router(config)#alarm-profile PORT port
Router(config-alarm-properties)#alarm sonet/sdh
Router(config-alarm-properties)#lo_pais suppress
Router(config-alarm-properties)#lais severity info
Router(config-alarm-properties)#end
```

Verify the PORT alarm profile with modified severity:

```
Router#show alarm profile
Alarm profile PORT:
SONET/SDH:
```

Alarm Name	Severity	Syslog
Line Alarm Indication Signal	INFO	Enabled
Path Alarm Indication Signal	MINOR	Enabled
Path Payload Unequipped	MAJOR	Disabled
Lower Order Path Alarm Indication Signal	MINOR	Enabled

## Use Cases

### Use Case 1

The following example explains default alarm profile having LAIS alarm with severity as MINOR and syslog is enabled, and when the alarm is configured as suppressed with default severity, the alarm is not displayed under the **show alarm profile** command.

Use the following steps to suppress the default alarm profile:

1. Create a chassis profile, for example, *chassis* and verify that the LAIS alarm is listed under the **show alarm profile chassis** command.
2. Set the alarm LAIS as suppressed.

The alarm LAIS is not displayed under the **show alarm profile** command.

#### Create chassis profile

```
Router#configure terminal
Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#end
Router#show alarm profile chassis
Alarm profile chassis:
SONET/SDH:
Alarm Name
Severity Syslog
Section Loss of Signal Failure
CRITICAL Enabled
Section Loss of Frame Failure
```

```

                CRITICAL  Enabled
Section Out of Frame Alignment
                CRITICAL  Enabled
Section J0 mismatch
                CRITICAL  Enabled
Section Bit Interleaved Parity
                CRITICAL  Enabled
Line Alarm Indication Signal
                MINOR     Enabled
Line Remote Failure Indication

```

### Set the alarm LAIS as suppressed

```

Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#alarm sonet/sdh
Router(config-alarm-properties)#LAIS suppress
Router(config-alarm-properties)#end

```

**Note that the LAIS alarm is not displayed under the `show alarm profile chassis` command.**

```

Router#show alarm profile
Alarm profile chassis:
DS1:
  Alarm Name
      Severity  Syslog
Section Loss of Signal Failure
      CRITICAL  Enabled
Section Loss of Frame Failure
      CRITICAL  Enabled
Section Out of Frame Alignment
      CRITICAL  Enabled
Section J0 mismatch
      CRITICAL  Enabled
Section Bit Interleaved Parity
      CRITICAL  Enabled
Line Remote Failure Indication
      MINOR     Enabled

```

### Use Case 2

The following example displays default profile having LAIS alarm with severity as MINOR and syslog enabled, and when the alarm is configured as suppressed with severity set to INFO, the alarm is displayed under the **show alarm profile** command.:

Use the following steps to change the LAIS alarm severity:

1. Create a chassis profile, for example, *chassis*.
2. Set the alarm LAIS as suppressed and alarm LAIS severity to INFO.

The alarm LAIS is displayed under the **show alarm profile chassis** command.

#### Create chassis profile

```

Router#configure terminal
Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#end

```

#### Set the alarm LAIS as suppressed and severity to INFO

```

Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#alarm sonet/sdh
Router(config-alarm-properties)#LAIS suppress
Router(config-alarm-properties)#LAIS severity INFO
Router(config-alarm-properties)#end

```

**Note that the LAIS alarm is displayed under the show alarm profile chassis command.**

```

Router#show alarm profile chassis
Alarm profile chassis:
  SONET/SDH:
Alarm Name                Severity  Syslog
Section Loss of Signal Failure  CRITICAL Enabled
Section Loss of Frame Failure  CRITICAL Enabled
Section Out of Frame Alignment  CRITICAL Enabled
Section J0 mismatch           CRITICAL Enabled
Section Bit Interleaved Parity  CRITICAL Enabled
Line Alarm Indication Signal    INFO     Disabled
Line Remote Failure Indication  MINOR    Enabled

```

### Use Case 3

The following example displays default profile having SLOS and PAIS alarms with severity as CRITICAL. Using the chassis profile, you can set the PAIS alarm severity to INFO and verify using the **show alarm profile** command. The show output displays the SLOS as CRITICAL and PAIS as INFO.

Use the following steps to change the PAIS alarm severity:

1. Create a chassis profile, for example, *chassis*.
2. Set the alarm PAIS severity to INFO.

The alarm PAIS is displayed under the **show alarm profile chassis** command.

#### Create a chassis profile

```

Router#configure terminal
Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#end

```

#### Set the alarm PAIS severity to INFO

```

Router(config)#alarm-profile chassis chassis
Router(config-alarm-profile)#alarm sonet/sdh
Router(config-alarm-properties)#PAIS INFO
Router(config-alarm-properties)#end

```

**Note that the PAIS alarm is displayed under the show alarm profile chassis command.**

```

Router#show alarm profile chassis
Alarm profile chassis:
  SONET/SDH:
Alarm Name                Severity  Syslog
Section Loss of Signal Failure  CRITICAL Enabled
Section Loss of Frame Failure  CRITICAL Enabled
Section Out of Frame Alignment  CRITICAL Enabled
Section J0 mismatch           CRITICAL Enabled
Section Bit Interleaved Parity  CRITICAL Enabled
Line Alarm Indication Signal    INFO     Disabled

```

Line Remote Failure Indication	MINOR	Enabled
Path Alarm Indication Signal	INFO	Enabled

#### Use Case 4

The following example displays default profile having SLOS and PAIS alarms with severity as CRITICAL. Using the card profile, you can set the PAIS alarm severity to MAJOR and verify using the **show alarm profile** command. The show output displays the SLOS as MAJOR and PAIS as CRITICAL.

Use the following steps to change the PAIS alarm severity:

1. Create a card profile, for example, *card*.
2. Set the alarm SLOS severity to MAJOR.

The alarm SLOS with severity MAJOR is displayed under the **show alarm profile** command.

#### Create a card profile and set the alarm SLOS severity to MAJOR

```
Router#configure terminal
Router(config)#alarm-profile card card
Router(config-alarm-profile)#alarm sonet/sdh
Router(config-alarm-properties)#SLOS severity MAJOR
Router(config-alarm-properties)#end
```

**Note that the SLOS with severity MAJOR and PAIS with severity CRITICAL are displayed under the show alarm profile command.**

```
Router#show alarm profile
Alarm profile card:
SONET/SDH:
Alarm Name                               Severity      Syslog
Section Loss of Signal Failure           MAJOR        Enabled
Section Loss of Frame Failure            CRITICAL     Enabled
Section Out of Frame Alignment           CRITICAL     Enabled
Section J0 mismatch                      CRITICAL     Enabled
Section Bit Interleaved Parity           CRITICAL     Enabled
Line Alarm Indication Signal             INFO         Disabled
Path Alarm Indication Signal             CRITICAL     Enabled
```

#### Use Case 5

The following example displays default profile having SLOS and PAIS alarms with severity as CRITICAL. Using the port profile, you can set the SLOS alarm severity to MAJOR and PAIS alarm severity to MINOR. Verify using the **show alarm profile** command. The show output displays the SLOS as MAJOR and PAIS as MINOR.

Use the following steps to change the SLOS and PAIS alarm severities:

1. Create a port profile, for example, *port*.
2. Set the alarm severities SLOS to MAJOR and PAIS to MINOR.

The alarm SLOS with severity MAJOR and PAIS to MINOR are displayed under the **show alarm profile** command.

**Create a port profile and set the alarm severities of SLOS to MAJOR and PAIS to MINOR**

```
Router#configure terminal
Router(config)#alarm-profile port port
Router(config-alarm-profile)#alarm sonet/sdh
Router(config-alarm-properties)#DS1_SLOS severity MAJOR
Router(config-alarm-properties)#DS1_PAIS severity MINOR
Router(config-alarm-properties)#end
```

**Note that the SLOS with severity MAJOR and PAIS with severity MINOR are displayed under the `show alarm profile` command.**

```
Router#show alarm profile
Alarm profile port:
SONET/DSH:
  Alarm Name Severity Syslog
Section Loss of Signal Failure CRITICAL Enabled
Section Loss of Frame Failure CRITICAL Enabled
Line Alarm Indication Signal CRITICAL Disabled
Line Remote Failure Indication MINOR Enabled
Path Alarm Indication Signal MAJOR Enabled
Path Remote Failure Indication
```