



Maintaining the Supervisor in the Cisco cBR Chassis



Note Any time a physical Online Insertion/Removal (OIR) is performed, the removed module must be left out 30-60 seconds before re-inserting it in the cBR-8 chassis.

- [Maintaining the Supervisor 160G, on page 1](#)
- [Maintaining the Supervisor 250G, on page 9](#)

Maintaining the Supervisor 160G

Removing the Supervisor Card from the Cisco cBR Chassis

Perform this procedure to remove the following cards:

- Supervisor Card
- Blank card for the Supervisor

Before you begin

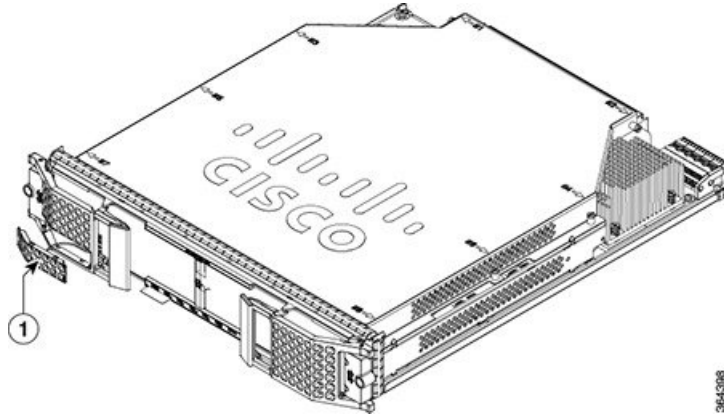


Caution

- In a Cisco cBR with 1+1 Supervisor redundancy, removing the active Supervisor Card or Supervisor PIC results in switchover.
 - In a Cisco cBR with 1+1 Supervisor redundancy, removing the standby Supervisor Card or Supervisor PIC may result in limited packet loss in the active-active backhaul configuration.
 - In a Cisco cBR without Supervisor redundancy, removing the Supervisor Card or Supervisor PIC results in complete loss of service.
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- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.

- Disconnect all the cables and memory stick or flash drives from the Supervisor Card.
- Close the tethered I/O door by pushing the door until it snaps into place on the spring-loaded ejector of the Supervisor Card.

Figure 1: Closing the Tethered I/O Door on the Supervisor Card



1	Tethered I/O door	—
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- Be aware of the weight and size of the equipment. Handle it with care.
- Ensure that a replacement Supervisor Card or a blank card is readily available to replace the removed Supervisor Card or blank card in an operational chassis.



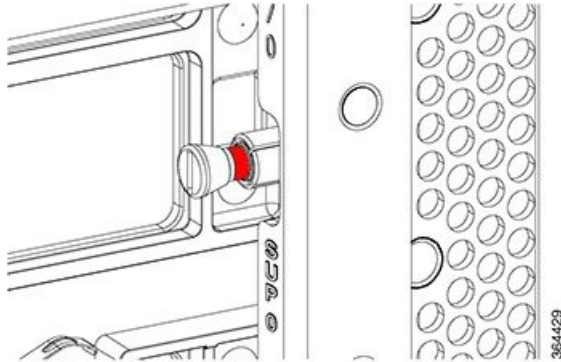
Caution After removing the Supervisor Card or blank card from an operational chassis, install the replacement Supervisor Card or blank card in the chassis within 3 minutes to prevent the chassis from shutting down due to possible overheating of some components.

Required Tools and Equipment

- ESD-preventive wrist strap
- 3/16" flat-blade screwdriver
- Antistatic bag

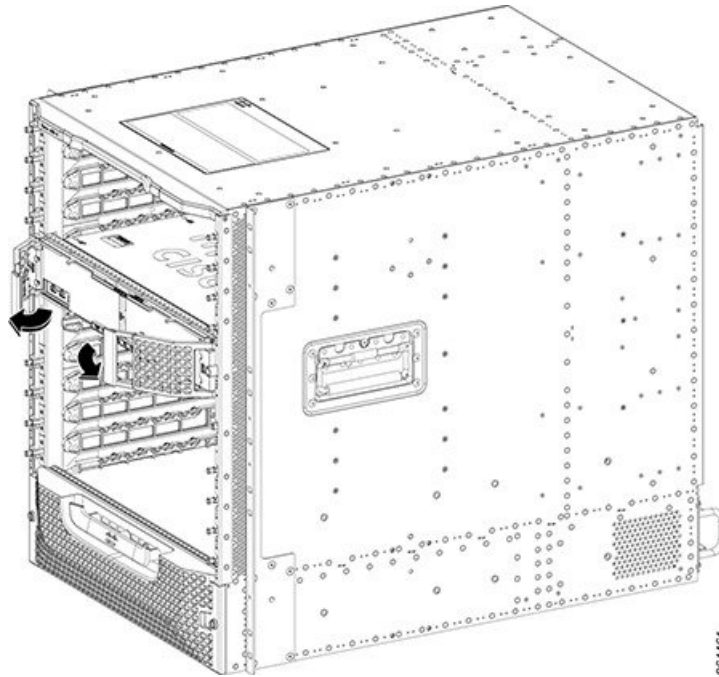
Step 1 Loosen the captive screws on the card using a 3/16" flat-blade torque screwdriver until the red bands are visible on the captive screws.

Figure 2: Loosening the Captive Screws on the Chassis



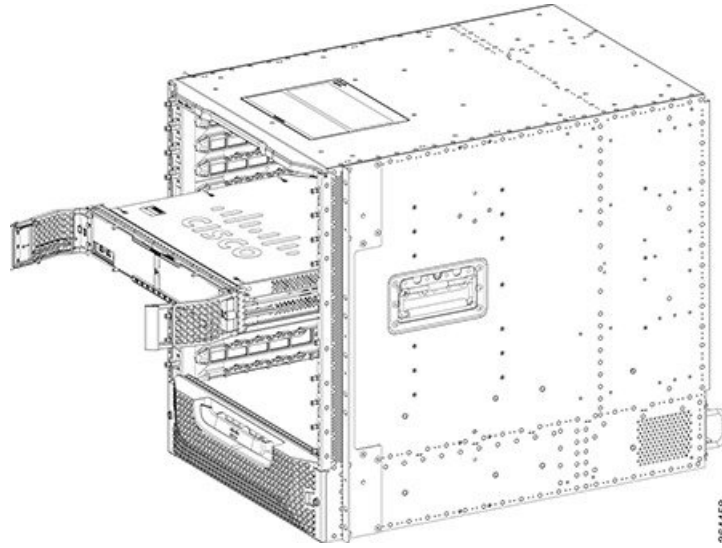
- Step 2** Pull the spring-loaded ejectors on the card until they release and are perpendicular to the faceplate. This disengages the card from the chassis.

Figure 3: Opening Spring-loaded Ejectors on the Supervisor Card



- Step 3** Carefully slide the card out of its slot applying even pressure using both your hands.

Figure 4: Removing the Supervisor Card from the Chassis



Step 4 Grasp the faceplate of the card with one hand and place your other hand under the card to support its weight, and remove the card from its slot.

Step 5 Place the removed Supervisor Card in an antistatic bag.

Note The removed blank card does not need to be placed in an antistatic bag.

What to do next

- [Replace the Supervisor Card or blank card.](#)

Removing the SFP+ Module from the Supervisor PIC

Before you begin



Caution Do not install or remove the SFP+ module with fiber-optic cables still attached to it. Doing so may damage cables, cable connectors, or the optical interfaces and may interfere with the SFP+ module latching properly into its socket connector. Disconnect all cables before removing or installing an SFP transceiver module.

- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
- Removing and installing an SFP+ module can shorten its useful life. Do not remove and insert SFP+ modules more often than is absolutely necessary.

Required Tools and Equipment

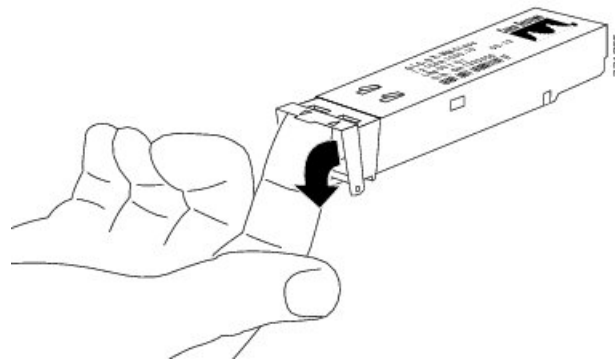
- ESD-preventive wrist strap
- Dust plugs for the SFP+ module
- Antistatic bag

Step 1 Disconnect the fiber-optic cable from the SFP+ port for removing the SFP+ module from the Supervisor PIC. Immediately reinstall the dust plug in the optical bores and the fiber-optic cable LC connectors .

Tip For reattachment of fiber-optic cables, note which connector plug is send (TX) and which is receive (RX).

Step 2 Release the bail clasp on the SFP+ module, by pushing the small tab up and outwards with your index finger to release the bail clasp.

Figure 5: Removing the SFP+ Module Equipped with a Bail Clasp Latch with Tab



Step 3 Grasp the SFP+ module between your thumb and index finger and carefully remove it from the socket.

Step 4 Place the removed SFP+ module in an antistatic bag.

What to do next

[Replace the SFP+ module](#) (if required).

Removing the Supervisor PIC Cable Management Bracket

The Supervisor PIC cable management bracket is usually removed when the Supervisor PIC needs to be replaced.

Before you begin

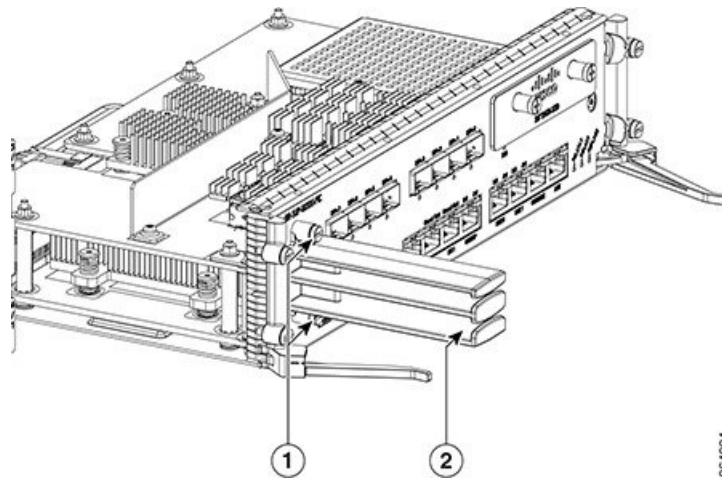
- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
- Remove all the cables that are routed through the Supervisor PIC cable management bracket.

Required Tools and Equipment

- ESD-preventive wrist strap
- 3/16" flat-blade screwdriver

Step 1 Loosen the two captive screws that secure the Supervisor PIC cable management bracket using a 3/16" flat-blade screwdriver.

Figure 6: Removing the Supervisor PIC Cable Management Bracket



1	Captive screws	2	Supervisor PIC cable management bracket
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Step 2 Remove the Supervisor PIC cable management bracket.

What to do next

[Replace the cable management bracket](#) (if required).

Removing the Supervisor PIC from the Cisco cBR Chassis

Perform this procedure to remove the following PIC:

- Supervisor PIC
- Blank PIC for the Supervisor

Before you begin



Caution

- In a Cisco cBR with 1+1 Supervisor redundancy, removing the active Supervisor Card or Supervisor PIC results in switchover.
- In a Cisco cBR with 1+1 Supervisor redundancy, removing the standby Supervisor Card or Supervisor PIC may result in limited packet loss in the active-active backhaul configuration.
- In a Cisco cBR without Supervisor redundancy, removing the Supervisor Card or Supervisor PIC results in complete loss of service.

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- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
 - Disconnect all the cables from the Supervisor PIC.
 - Be aware of the weight and size of the equipment. Handle it with care.
 - Ensure that a replacement Supervisor PIC or a blank PIC is readily available to replace the removed Supervisor PIC or blank PIC in an operational chassis.



Caution

After removing the Supervisor PIC or blank PIC from an operational chassis, install the replacement Supervisor PIC or blank PIC in the chassis within 3 minutes to prevent the chassis from shutting down due to possible overheating of some components.

Restrictions

- The Supervisor Card does not power up if the Supervisor PIC is not present during powering up of the chassis.

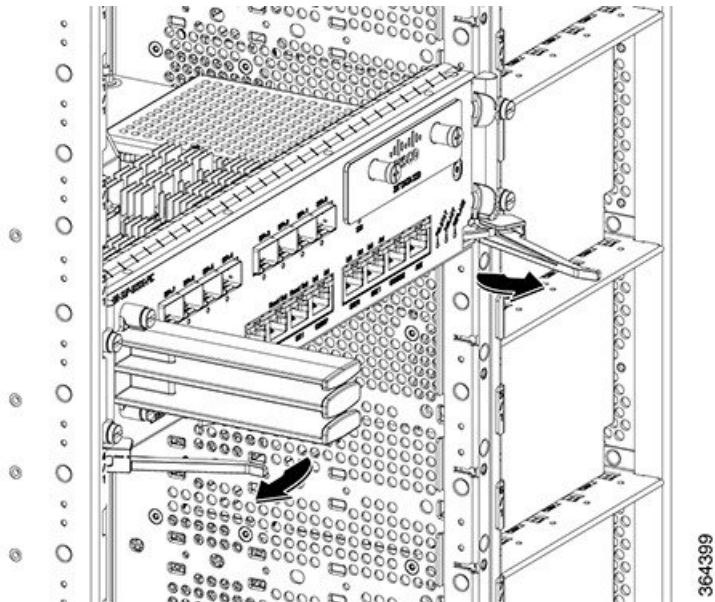
Required Tools and Equipment

- ESD-preventive wrist strap
- 3/16" flat-blade screwdriver
- Antistatic bag

Step 1 Loosen the four captive screws on the PIC using a 3/16" flat-blade screwdriver.

Step 2 Pull the ejector levers on the PIC to disengage the midplane connectors.

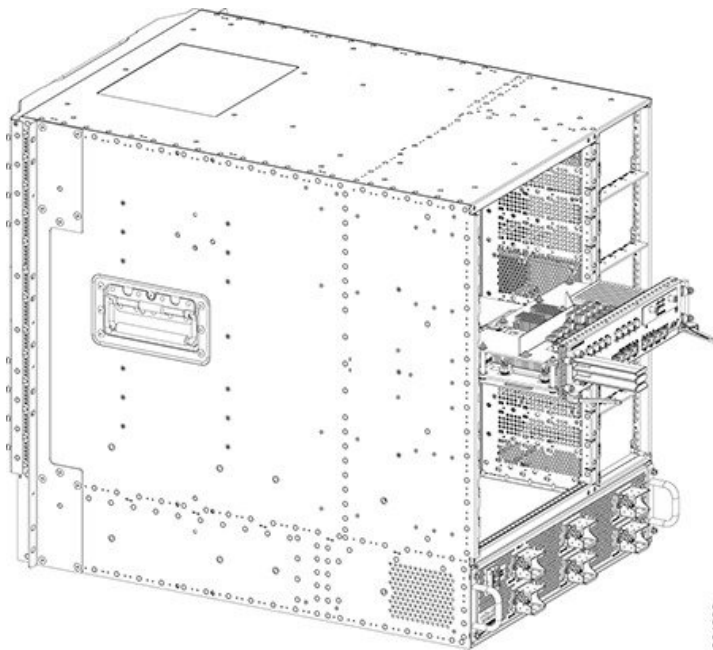
Figure 7: Opening the Ejector Levers on the Supervisor PIC



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Step 3 Carefully slide the PIC out of the slot applying even pressure using both your hands.

Figure 8: Removing the Supervisor PIC from the Chassis



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Step 4 Place the removed Supervisor PIC in an antistatic bag.

Note The removed blank PIC does not need to be placed in an antistatic bag.

What to do next

Replace the Supervisor PIC or blank PIC.

Maintaining the Supervisor 250G

Removing the Supervisor Card from the Cisco cBR Chassis

Perform this procedure to remove the following cards:

- Supervisor Card
- Blank card for the Supervisor

Before you begin

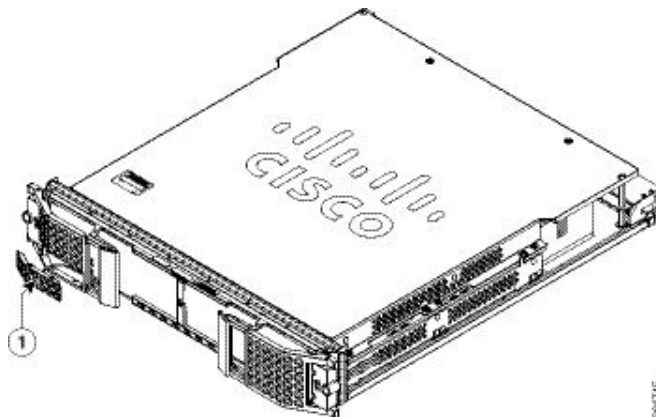


Caution

- In a Cisco cBR with 1+1 Supervisor redundancy, removing the active Supervisor Card or Supervisor PIC results in switchover.
- In a Cisco cBR with 1+1 Supervisor redundancy, removing the standby Supervisor Card or Supervisor PIC may result in limited packet loss in the active-active backhaul configuration.
- In a Cisco cBR without Supervisor redundancy, removing the Supervisor Card or Supervisor PIC results in complete loss of service.

- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
- Disconnect all the cables and memory stick or flash drives from the Supervisor Card.
- Close the tethered I/O door by pushing the door until it snaps into place on the spring-loaded ejector of the Supervisor Card.

Figure 9: Closing the Tethered I/O Door on the Supervisor Card



1	Tethered I/O door	
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- Be aware of the weight and size of the equipment. Handle it with care.
- Ensure that a replacement Supervisor Card or a blank card is readily available to replace the removed Supervisor Card or blank card in an operational chassis.



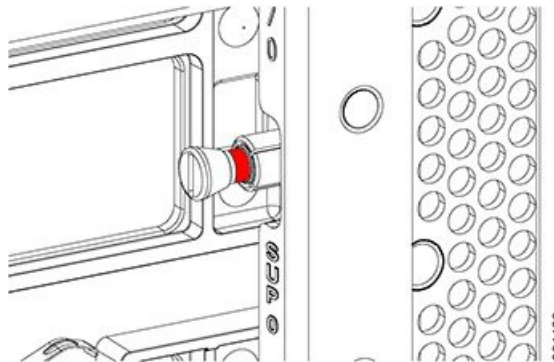
Caution After removing the Supervisor Card or blank card from an operational chassis, install the replacement Supervisor Card or blank card in the chassis within 3 minutes to prevent the chassis from shutting down due to possible overheating of some components.

Required Tools and Equipment

- ESD-preventive wrist strap
- 3/16" flat-blade screwdriver
- Antistatic bag

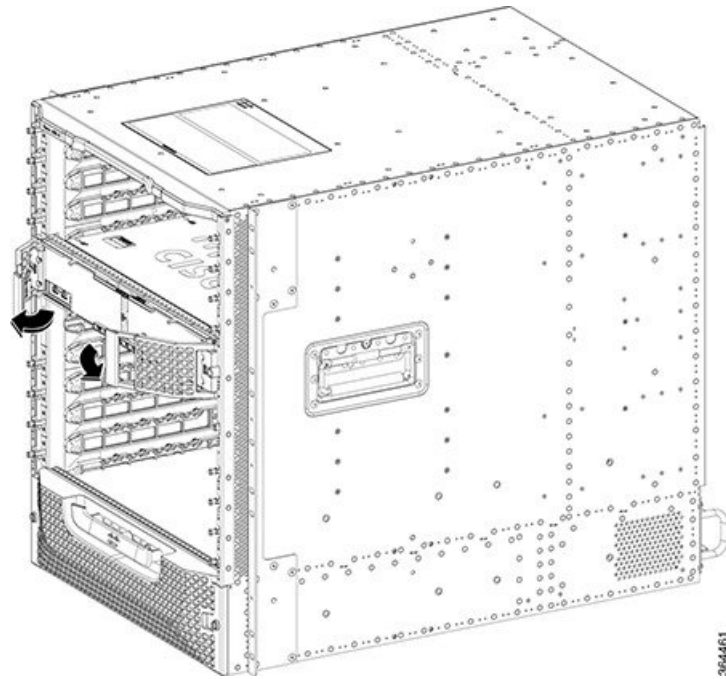
Step 1 Loosen the captive screws on the card using a 3/16" flat-blade torque screwdriver until the red bands are visible on the captive screws.

Figure 10: Loosening the Captive Screws on the Chassis



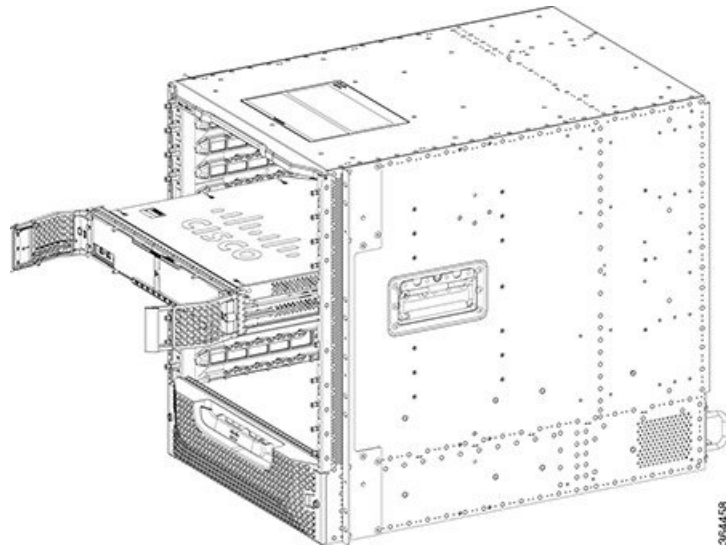
Step 2 Pull the spring-loaded ejectors on the card until they release and are perpendicular to the faceplate. This disengages the card from the chassis.

Figure 11: Opening Spring-loaded Ejectors on the Supervisor Card



Step 3 Carefully slide the card out of its slot applying even pressure using both your hands.

Figure 12: Removing the Supervisor Card from the Chassis



Step 4 Grasp the faceplate of the card with one hand and place your other hand under the card to support its weight, and remove the card from its slot.

Step 5 Place the removed Supervisor Card in an antistatic bag.

Note The removed blank card does not need to be placed in an antistatic bag.

What to do next

- [Replace the Supervisor Card or blank card.](#)

Removing the QSFP+ or QSFP28 Transceiver Module from the Supervisor PIC

Before you begin



Caution Do not install or remove the QSFP28 module with fiber-optic cables still attached to it. Doing so may damage cables, cable connectors, or the optical interfaces and may interfere with the QSFP28 module latching properly into its socket connector. Disconnect all cables before removing or installing a QSFP28 module.



Caution The QSFP+ or QSFP28 transceiver module is a static-sensitive device. Always use an ESD wrist strap or similar individual grounding device when handling QSFP+ or QSFP28 transceiver modules or coming into contact with modules.

Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.

Required Tools and Equipment

- Wrist strap or other personal grounding device to prevent ESD occurrences.
- Antistatic mat or antistatic foam to set the transceiver on.
- Fiber-optic end-face cleaning tools and inspection equipment.

Step 1 For optical QSFP+ or QSFP28 transceiver modules, disconnect the network interface cable from the QSFP+ or QSFP28 transceiver connector.

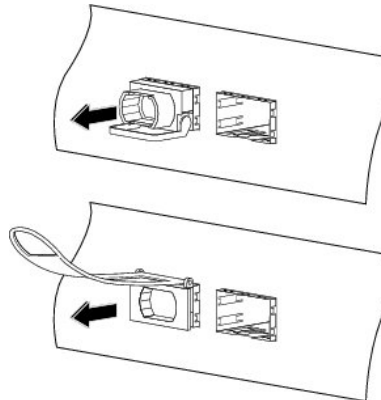
Step 2 For QSFP+ or QSFP28 transceiver modules equipped with a bail-clasp latch (see the below figure, top view):

- Pivot the bail-clasp down to the horizontal position.
- Immediately install the dust plug into the transceivers optical bore.
- Grasp the sides of the QSFP+ or QSFP28 transceiver and slide it out of the module socket.

Step 3 For QSFP+ or QSFP28 transceivers equipped with a pull tab latch (see the below figure, bottom view):

- Immediately install the dust plug into the transceiver's optical bore.
- Grasp the tab and gently pull to release the transceiver from the socket.
- Slide the transceiver out of the socket.

Figure 13: Removing the 40-Gigabit QSFP+ or 100-Gigabit QSFP28 Transceiver Module



Step 4 Place the QSFP+ or QSFP28 transceiver module into an antistatic bag.

What to do next

Replace the [QSFP+ or QSFP28 module](#) (if required).

Removing the Supervisor PIC Cable Management Bracket

The Supervisor PIC cable management bracket is usually removed when the Supervisor PIC needs to be replaced.

Before you begin

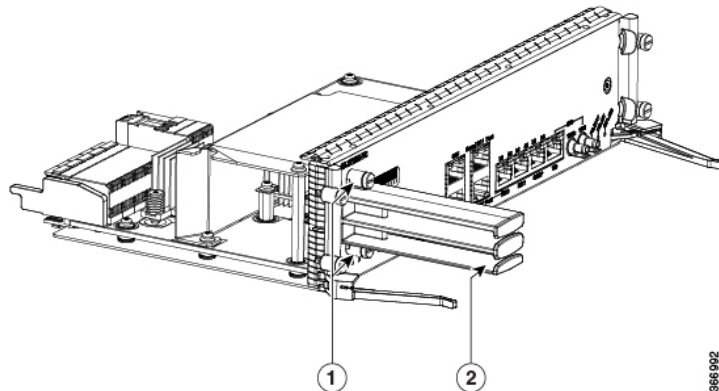
- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
- Remove all the cables that are routed through the Supervisor PIC cable management bracket.

Required Tools and Equipment

- ESD-preventive wrist strap
 - 3/16" flat-blade screwdriver
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Step 1 Loosen the two captive screws that secure the Supervisor PIC cable management bracket using a 3/16" flat-blade screwdriver.

Figure 14: Removing the Supervisor PIC Cable Management Bracket



1	Captive screws	2	Supervisor PIC cable management bracket
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Step 2 Remove the Supervisor PIC cable management bracket.

What to do next

[Replace the cable management bracket](#) (if required).

Removing the Supervisor PIC from the Cisco cBR Chassis

Perform this procedure to remove the following PIC:

- Supervisor PIC
- Blank PIC for the Supervisor

Before you begin



Caution

- In a Cisco cBR with 1+1 Supervisor redundancy, removing the active Supervisor Card or Supervisor PIC results in switchover.
 - In a Cisco cBR with 1+1 Supervisor redundancy, removing the standby Supervisor Card or Supervisor PIC may result in limited packet loss in the active-active backhaul configuration.
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- Attach an ESD-preventive wrist strap to your wrist and connect the other end to the grounding lug connected to the chassis.
 - Disconnect all the cables from the Supervisor PIC.
 - Be aware of the weight and size of the equipment. Handle it with care.

- Ensure that a replacement Supervisor PIC or a blank PIC is readily available to replace the removed Supervisor PIC or blank PIC in an operational chassis.



Caution After removing the Supervisor PIC or blank PIC from an operational chassis, install the replacement Supervisor PIC or blank PIC in the chassis within 3 minutes to prevent the chassis from shutting down due to possible overheating of some components.

Restrictions

- The Supervisor Card does not power up if the Supervisor PIC is not present during powering up of the chassis.

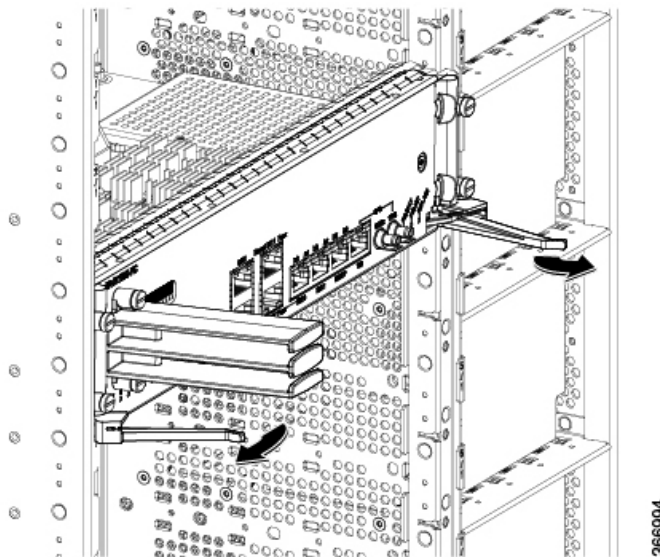
Required Tools and Equipment

- ESD-preventive wrist strap
- 3/16" flat-blade screwdriver
- Antistatic bag

Step 1 Loosen the four captive screws on the PIC using a 3/16" flat-blade screwdriver.

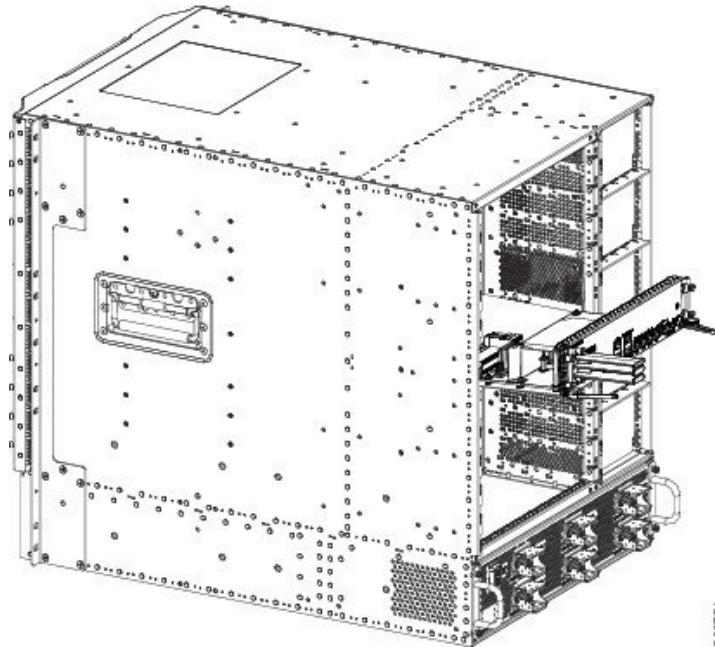
Step 2 Pull the ejector levers on the PIC to disengage the midplane connectors.

Figure 15: Opening the Ejector Levers on the Supervisor PIC



Step 3 Carefully slide the PIC out of the slot applying even pressure using both your hands.

Figure 16: Removing the Supervisor PIC from the Chassis



Step 4 Place the removed Supervisor PIC in an antistatic bag.

Note The removed blank PIC does not need to be placed in an antistatic bag.

What to do next

[Replace the Supervisor PIC or blank PIC.](#)