

Remove and Replace Cisco NCS 1014 Modules

This chapter describes the procedures to replace Cisco NCS 1014 modules.

Caution All the modular slots in the NCS 1014 chassis should always be populated with respective modules (line-cards, controller, PSU & fan units). Empty line card slots to be populated with filler modules, which are shipped with the chassis. The replacement or upgrade of the modules (Online Insertion or Removal, OIR) to be performed only when the ambient temperature is below 30-degree C. The OIR of modules should be completed within five minutes to prevent overheating of the components.

WARNING: DO NOT INTRODUCE BODY OR OBJECT IN THE CHASSIS / PSU / FAN TRAY / LC SLOTS WHEN INSTALLING OR REMOVING A MODULE. EXPOSED CIRCUITRY IS AN ENERGY HAZARD.

ATTENTION: ÉVITEZ TOUT CONTACT ENTRE VOTRE CORPS OU UN OBJET EXTERNE ET L'INTÉRIEUR DU CHÂSSIS, DU BLOC D'ALIMENTATION, LA FENTE DE VENTILATION DU PLATEAU, OU DE LA FENTE PDS LORSQUE VOUS INSTALLEZ OU RETIREZ UN MODULE. LES CIRCUITS EXPOSÉS CONSTITUENT UN RISQUE D'ÉLECTROCUTION.

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Remove and Replace the Pluggables in the 2.4T Line Card

Use this procedure to remove and replace the pluggables in the 2.4T DWDM line card.

Note This procedure is applicable to replacing pluggables in other line cards too.

Procedure

Step 1 Unfasten the Velcro tapes holding the fibers to the fiber management bracket and free up space to remove the required pluggable.

Step 2 If you want to remove the CIM8 module, then loosen the two screws, else continue with the next step.

Step 3 Use the pull tabs to pull out the required pluggable.

Step 4 Remove the fibers from the required pluggable.

Step 5 Repeat the previous steps until you complete removing all the required pluggables.

Step 6 (Optional) Insert pluggable caps into the pluggable slots when the slots have no pluggable.

What to do next

Install the Pluggables

Remove and Replace a Line Card

Use this procedure to remove and replace the line card or filler card in the Cisco NCS 1014 chassis.

Caution Perform the removal and replacement procedure for a line card or filler card only when the ambient temperature is below 30℃ (80℉). Complete the procedure within five minutes to prevent overheating of the chassis components.

Procedure

Step 1 Using the T-15 six lobe/slot screwdriver, loosen the captive screws available in the line card.

Step 2 Holding the fiber management bracket with one hand and supporting the line card with the other, pull it from the slot.

Caution
Use the fiber management brackets only for pulling out or pushing in the line cards or filler cards. Do not use the fiber management brackets to carry the cards. Always support the line card or filler card at the bottom with your hand.

What to do next

Install the Line Card

Remove the divider from the NCS 1014-2 chassis

Enable installation of two-slot line cards, such as the OXP2-K9, by adapting the NCS 1014-2 chassis.

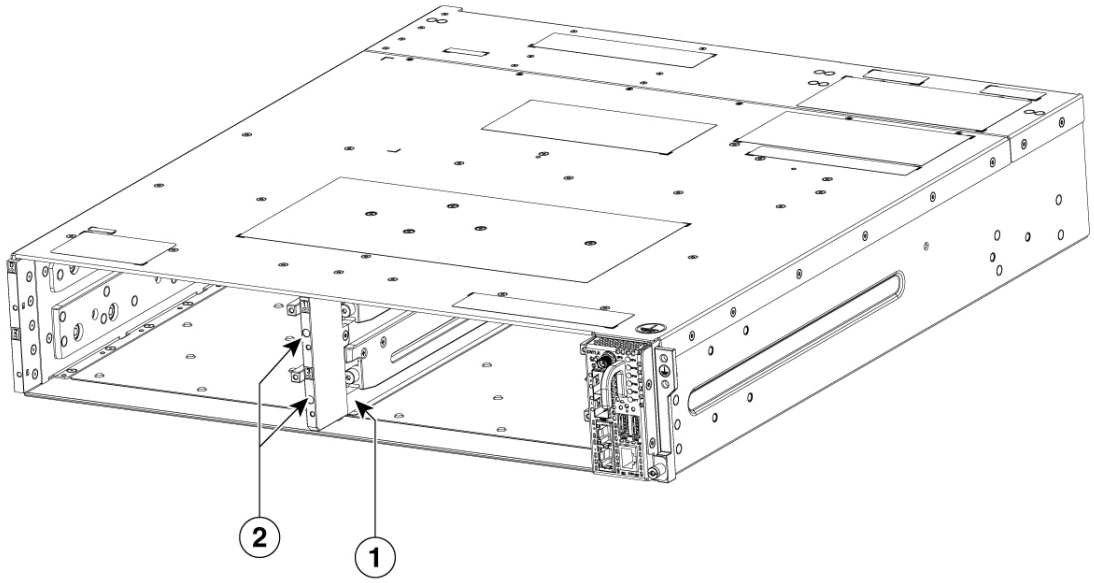
When your chassis includes four single-slot filler cards and a removable internal divider, and you plan to install a dual-slot line card like the OXP2-K9, the internal divider must be removed to accommodate the new card.

Follow these steps to remove the divider from the NCS 1014-2 chassis:

Procedure

Step 1 Identify the screw access holes in the divider.

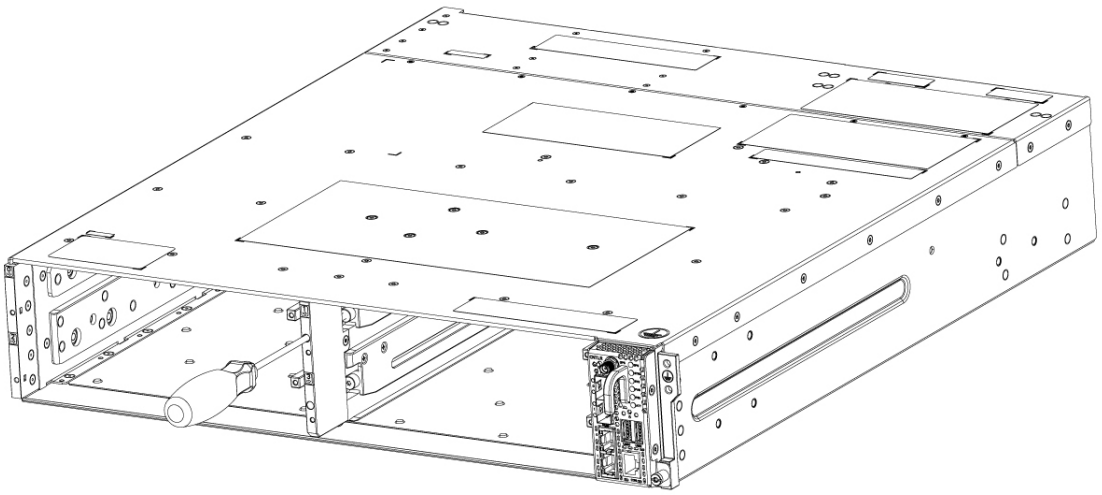
Figure 1: NCS 1014-2 chassis with divider



Callout	Component
1	Divider
2	Screw access holes

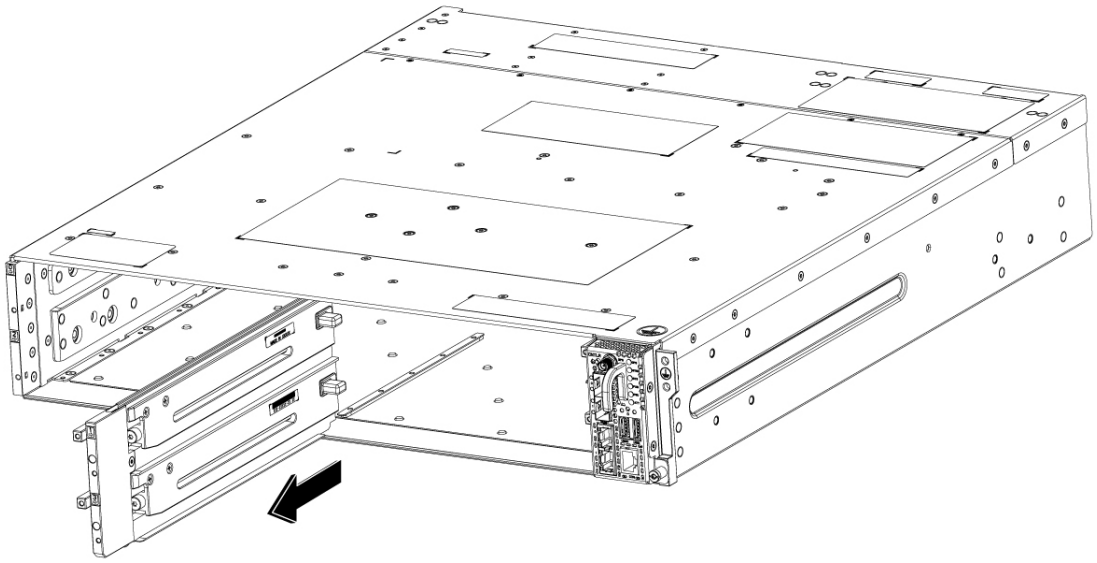
Step 2 Insert the T15 screw driver into a screw access hole and loosen the screw. Repeat for the other screw access hole.

Figure 2: Inserting the screw driver into the screw access hole of the divider



Step 3 Carefully pull the divider straight out of the chassis.

Figure 3: Removing the divider



The divider is successfully removed, and the chassis is ready to accommodate two-slot line cards such as the OXP2-K9 line card.

Remove and replace OXP2-K9 line card

Remove a faulty OXP2-K9 line card to maintain device operation or prepare the chassis for installation.

Removing the OXP2-K9 line card is necessary when the card is faulty or prior to chassis installation, preventing excessive weight and making the process safer.

Also use the same procedure to remove the filler card.

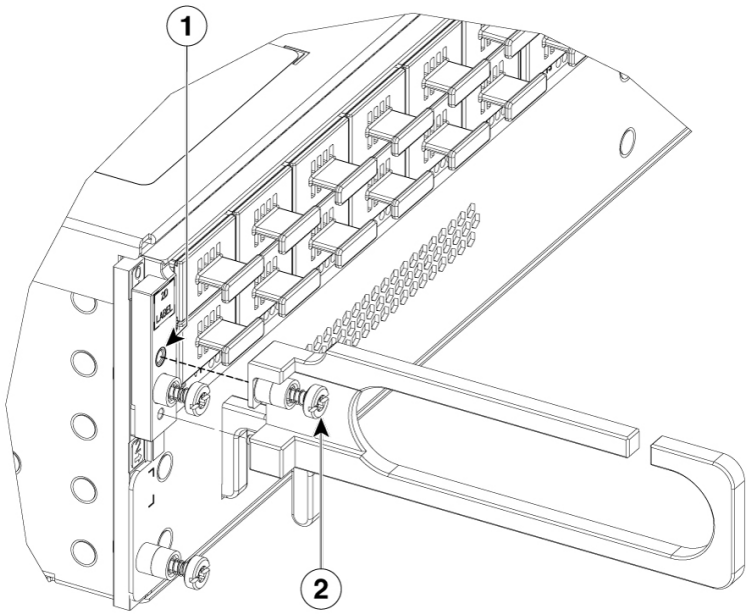
Procedure

Step 1 Identify the alignment holes on the sides of the OXP2-K9 line card.

Step 2 Insert the alignment pin into the hole, place the hook onto the card, and tighten the captive screw to securely fasten the hook.

A pair of hooks used to remove the OXP2-X9 line card are included as accessories in the OXP2-K9 line card package.

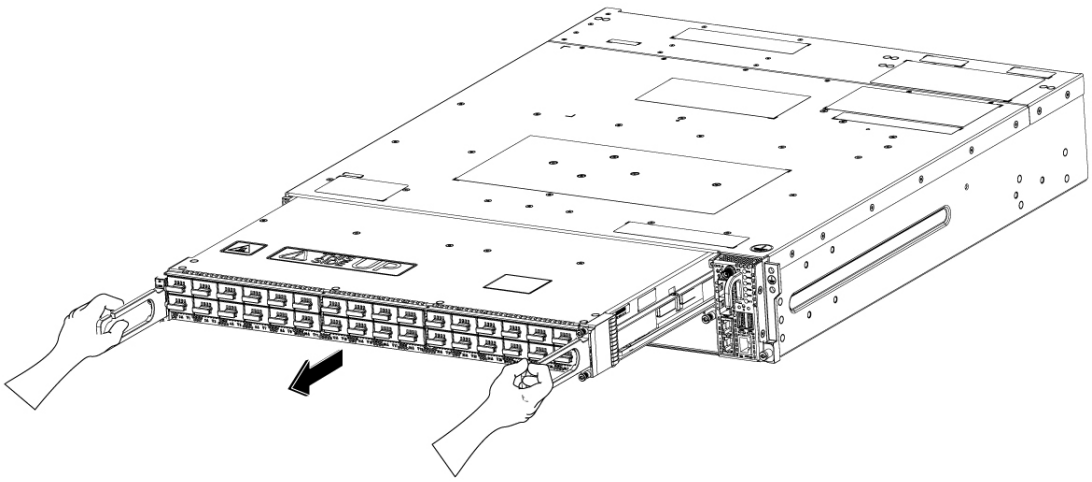
Figure 4: Removing the OXP2-K9 line card



Step 3 Repeat steps 1–2 for the hook on the opposite side of the card.

Step 4 Firmly grip both hooks and gently pull the line card out of the chassis.

Figure 5: Removing the OXP2-K9 line card



The OXP2-K9 line card is removed.

What to do next

Install the OXP2-K9 line card

Remove and Replace the Power Supply Unit (PSU)

Use this procedure to remove and replace a PSU in the Cisco NCS 1014 chassis.

Before you begin

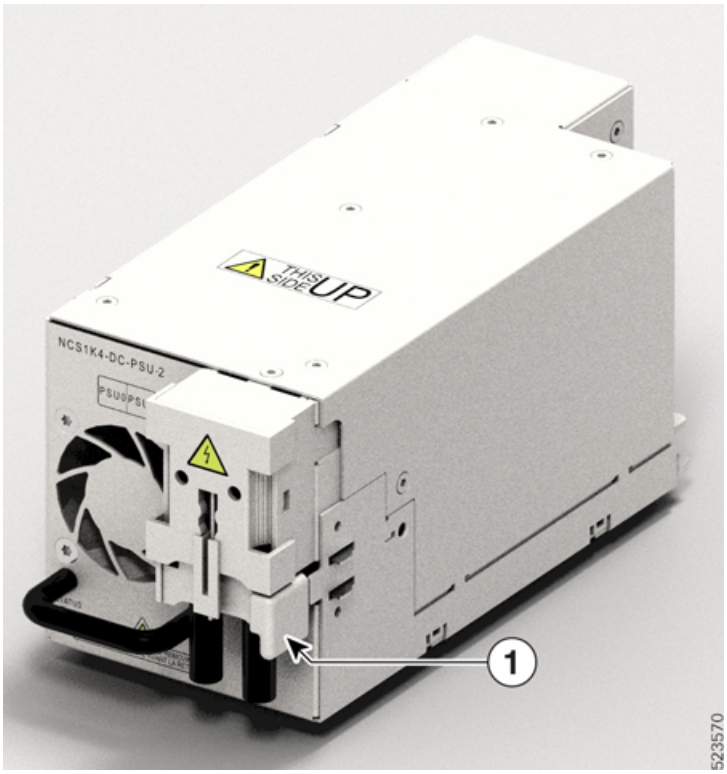
Remove the connections to the power supply:

- Disconnect power from the breaker before disconnecting power from the power supply unit.
- Remove the cable retainers and the power cables, in case of an AC power supply unit.
- Remove the protection covers, fasteners, and lugs, in case of a DC power supply unit.

Procedure

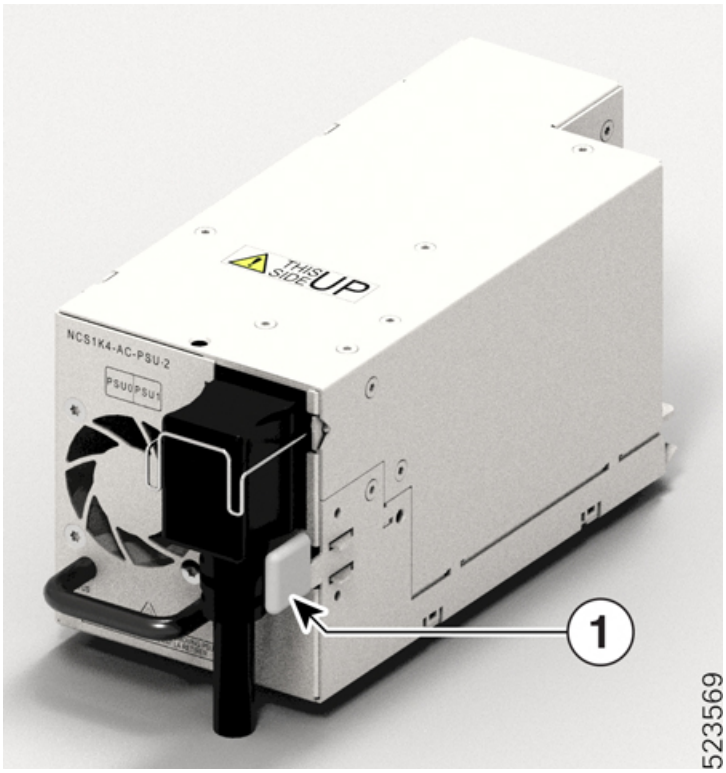
Step 1 Press the locking latch towards the left to release the lock.

Figure 6: Locking Latch on the DC PSU



1	Locking latch

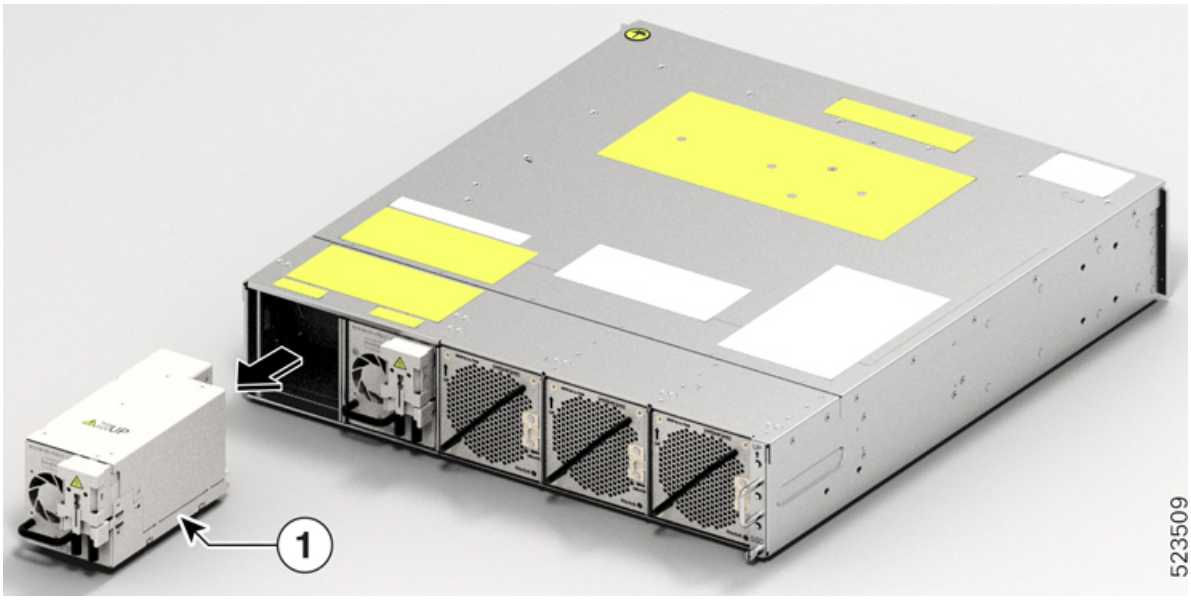
Figure 7: Locking Latch on the AC PSU



1	Locking latch

Step 2 Holding the handle with one hand and supporting the PSU with the other, gently pull out the PSU from the slot.

Figure 8: Removing the PSU



What to do next

Install the Power Supply Units (PSUs).

Remove and Replace the Controller

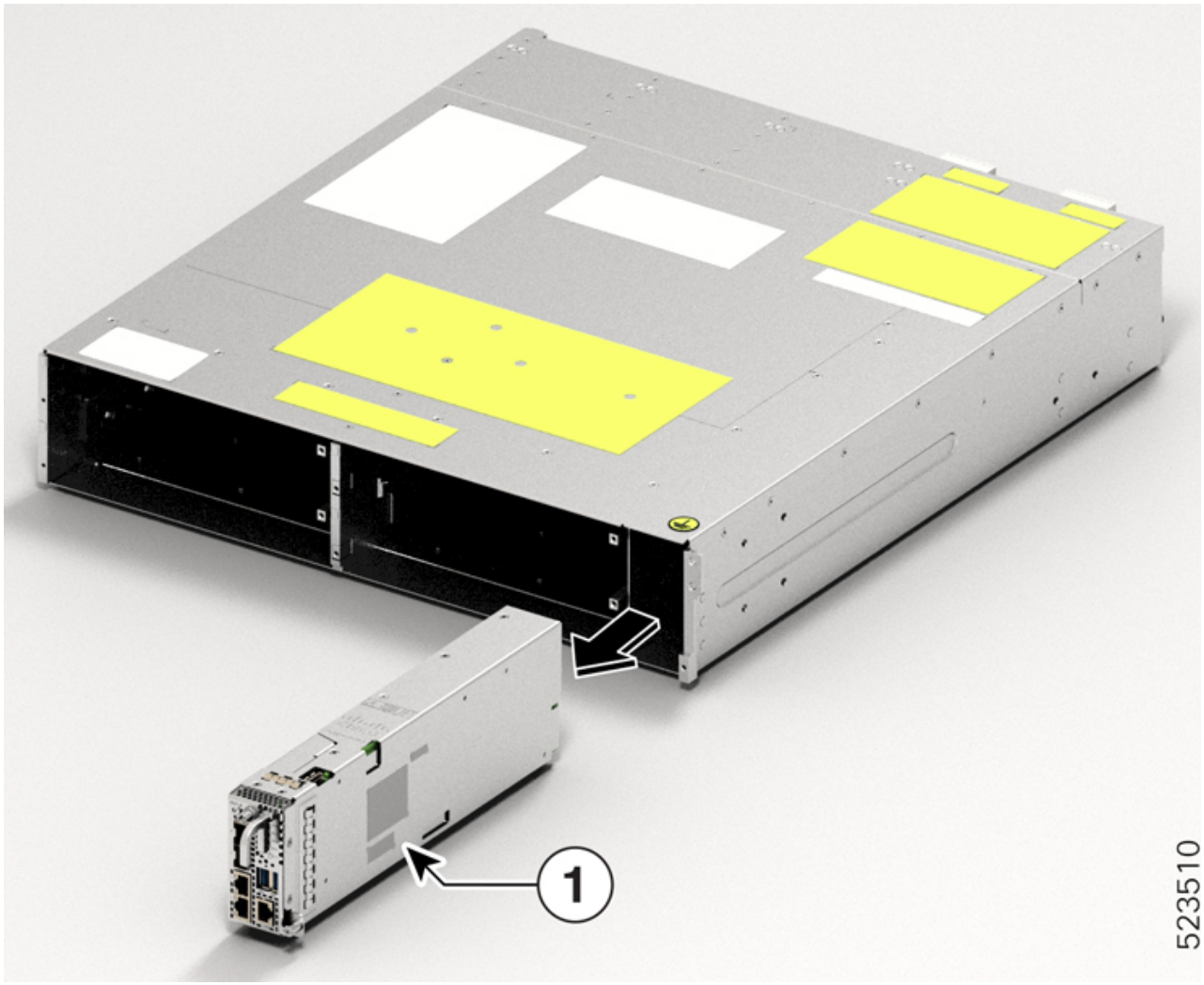
Use this procedure to remove and replace the controller in the Cisco NCS 1014 chassis.

Procedure

Step 1 Using a T15 six lobe/slot screwdriver, unfasten the two screws on the controller.

Step 2 Holding the handle with one hand and supporting the controller with the other, gently pull the controller from the slot.

Figure 9: Removing the Controller



1	Controller Card

What to do next

Install Controller

Remove and Replace the Fan Module

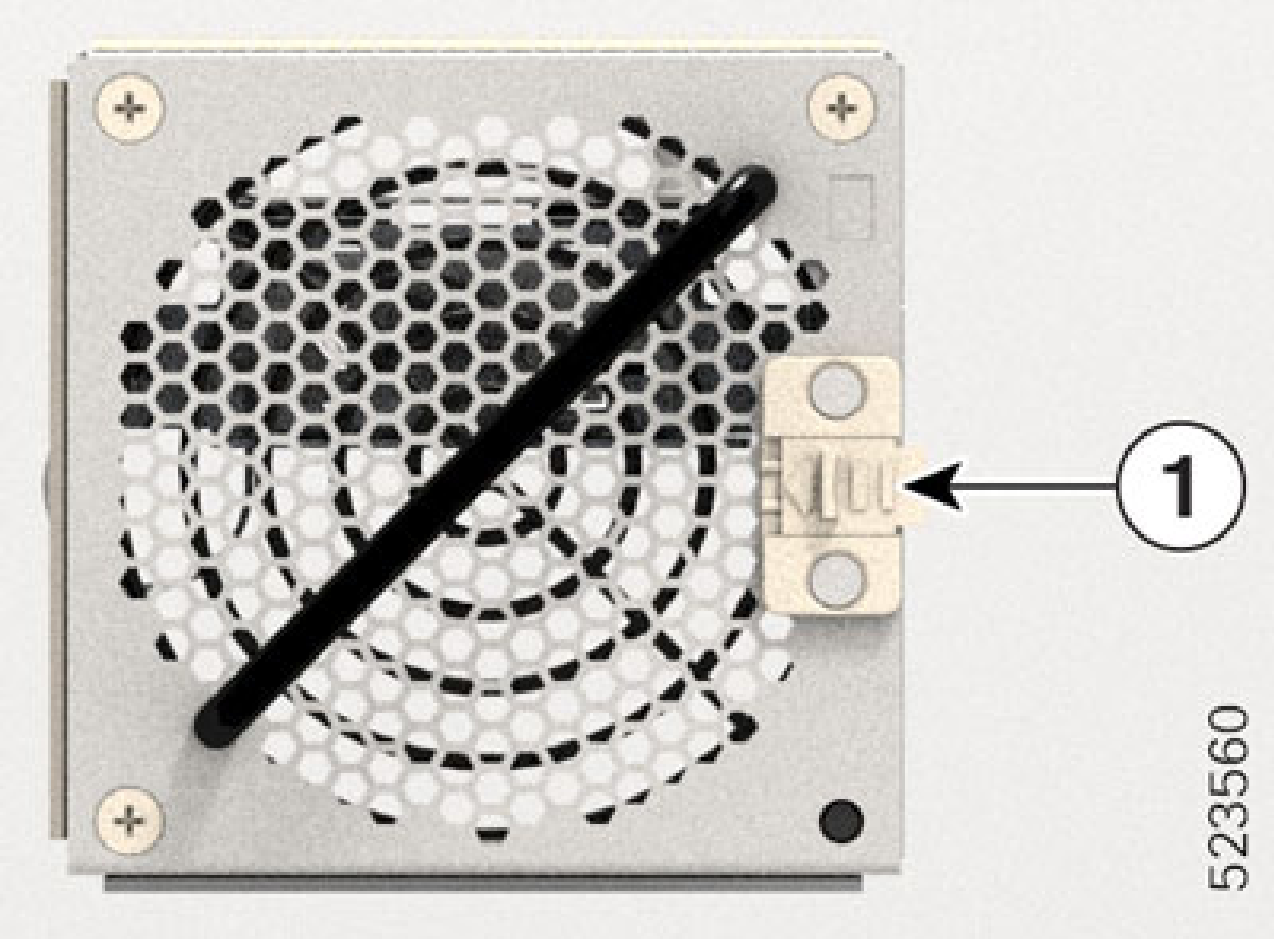
Use this procedure to remove and replace a fan module in the Cisco NCS 1014 chassis.

Caution Online insertion and removal (OIR) duration for the fan module at 30℃ ambient temperature is five minutes.

Procedure

Step 1 Push and hold the spring-loaded lever toward the left with your thumb (unlock position).

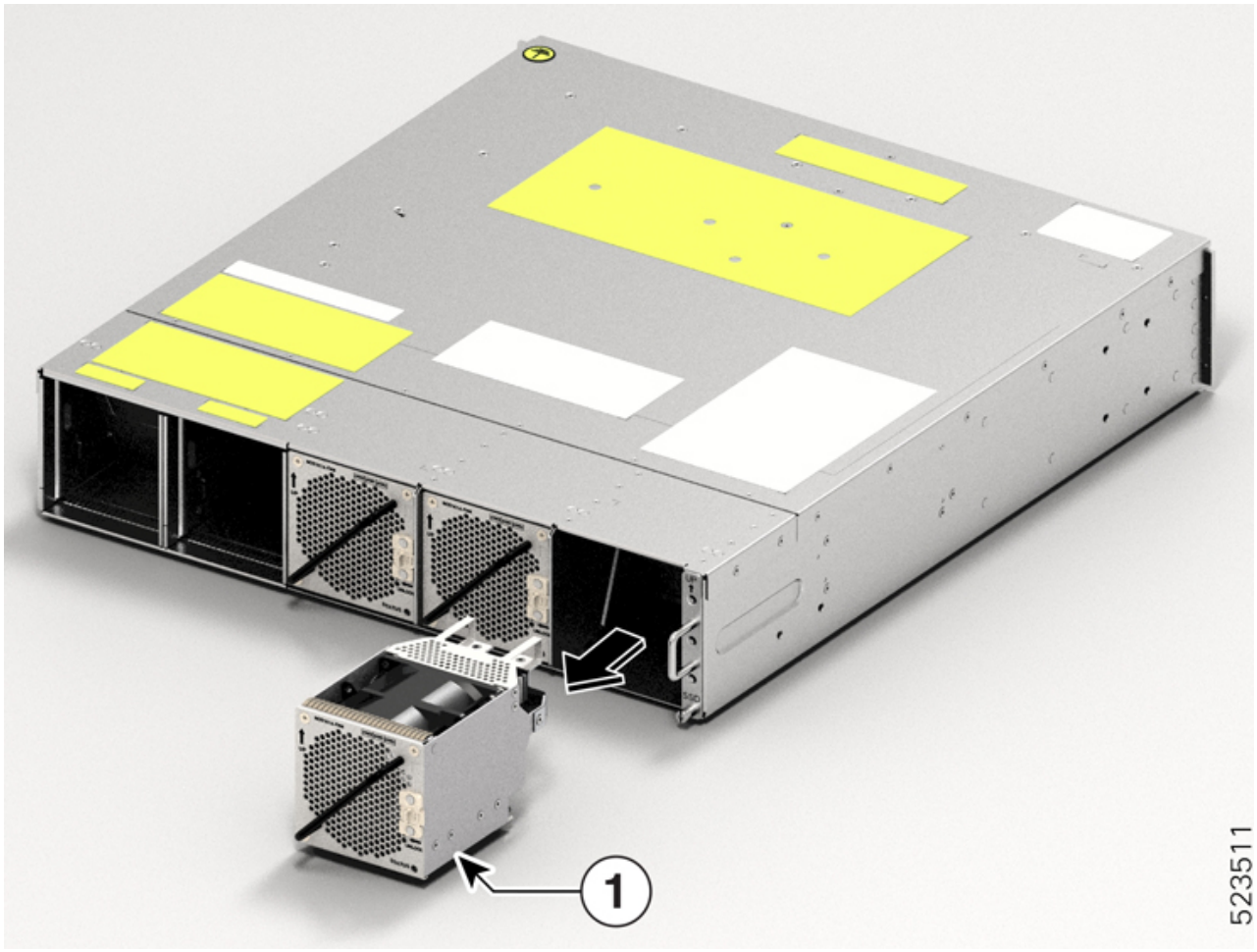
Figure 10: Spring-Loaded Lever in Holding or Unlock Position



1	Sping-loaded lever

Step 2 Holding the handle with one hand and supporting the fan module with the other hand, gently pull it out of the chassis.

Figure 11: Removing the Fan Module



1	Fan module

What to do next

Install Fan Module.

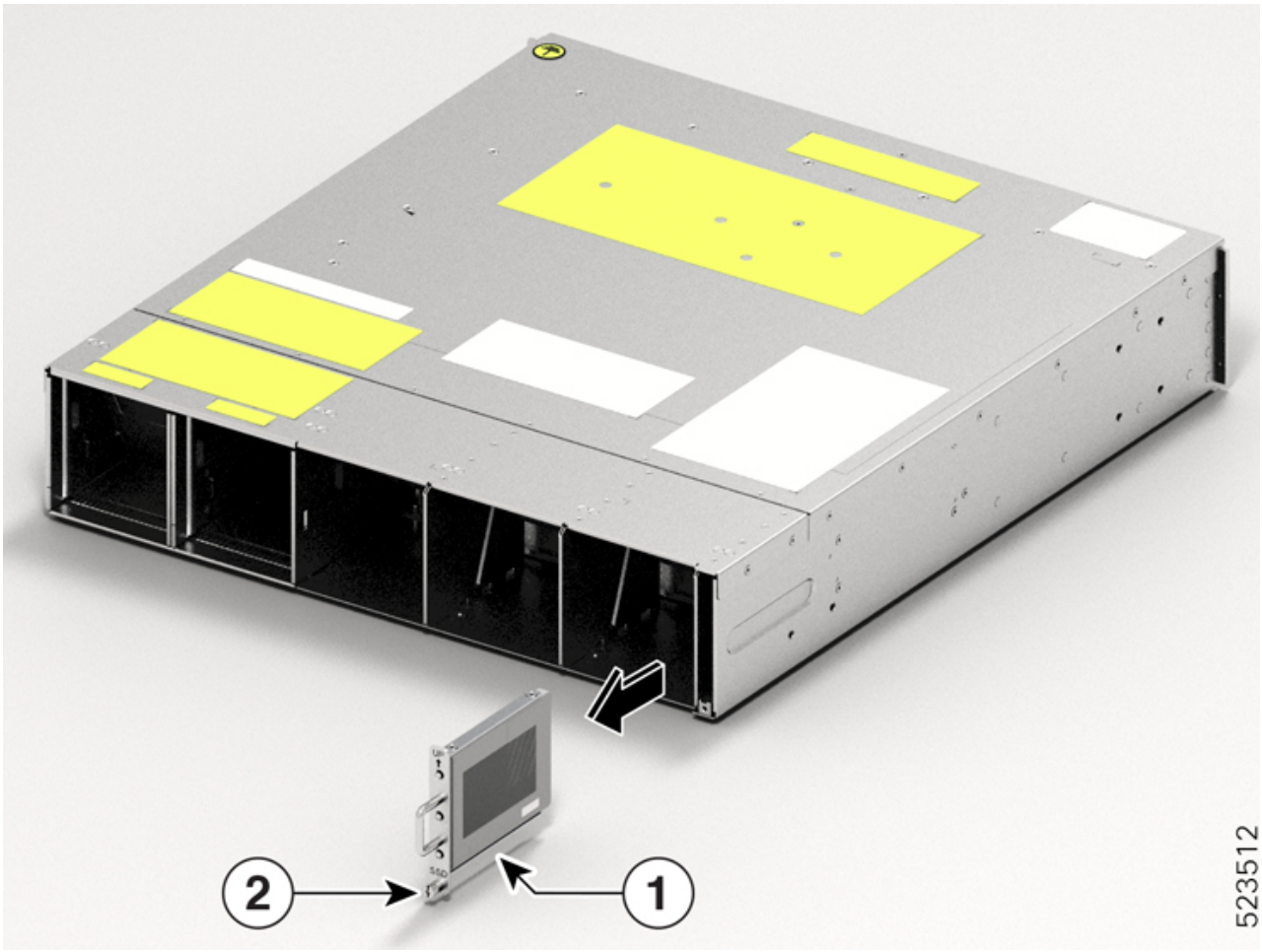
Remove and Replace the Solid State Drive (SSD)

Use this procedure to remove and replace the SSD in the Cisco NCS 1014 chassis.

Procedure

Step 1 Using a T15 six lobe/slot screwdriver, loosen the lone captive screw on the SSD.

Figure 12: Removing the SSD



Callout	Component
1	SSD
2	Captive screw

Step 2 Remove the SSD. To remove, gently pull out the SSD from the slot.

What to do next

Install the Solid State Drive (SSD)

Remove and replace the RTC battery in the controller

Use this procedure to remove and replace the controller RTC battery.

Before you begin

Ensure you have these tools and equipment.

- T-8 Torx torque screwdriver
- Plastic spudger/pry tool
- Plastic or ceramic tweezers
- Electrostatic discharge (ESD) strap or other grounding equipment such as a grounded mat
- Replacement battery – Choose any one from the options:
  - 06032 101 501 — Varta Microbattery Inc.
  - 100272 — Renata

Caution Handle all components only by the carrier edges. Always use an ESD wrist-strap or grounding device to avoid damaging static-sensitive components.

Warning Ensure the system is shut down and power is removed before you begin.

There is danger of explosion if the RTC battery is replaced incorrectly. Replace the RTC battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Follow these steps to remove and replace the RTC battery in the controller.

Procedure

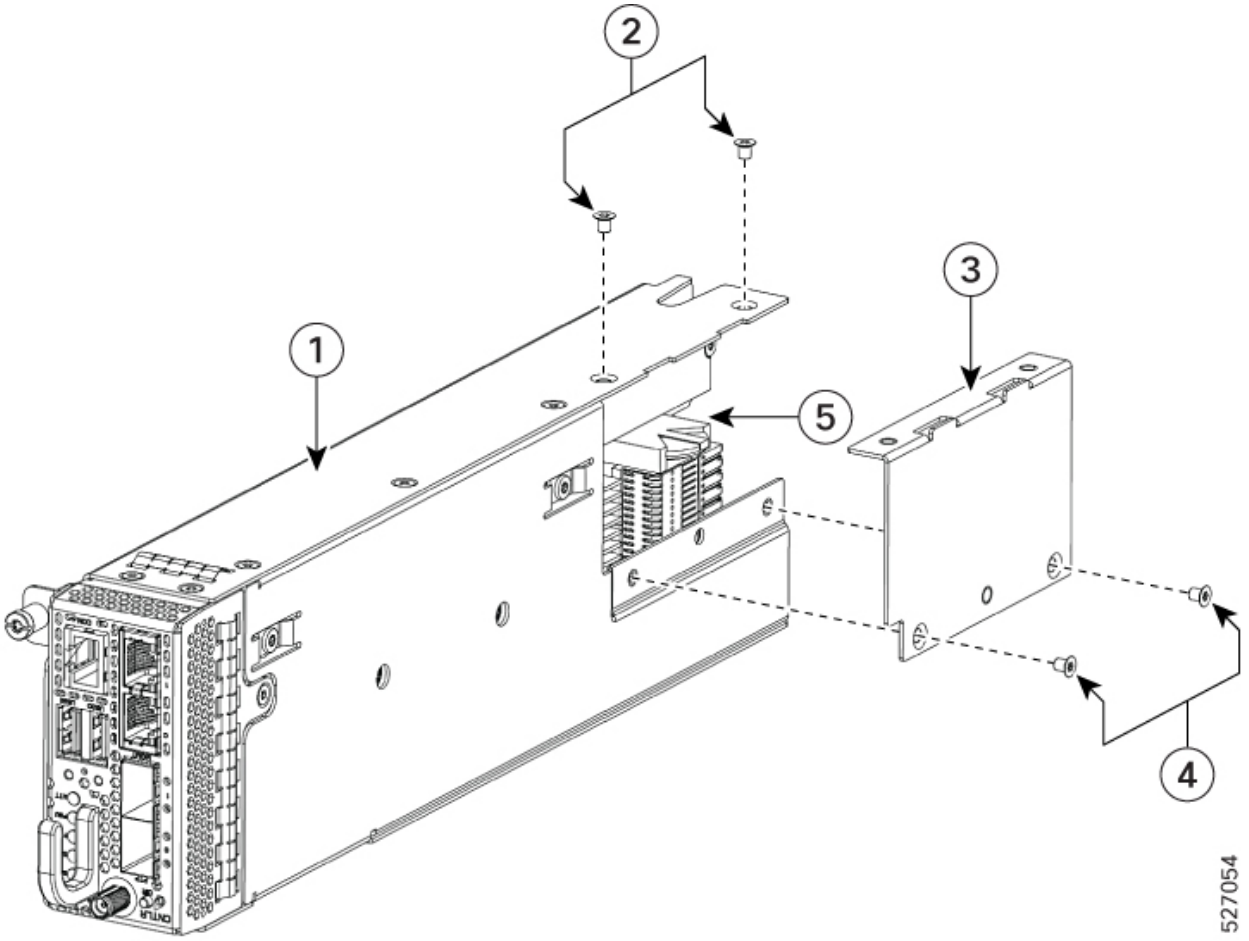
Step 1 Turn the controller upside down so the *This Side Up* label faces the grounded mat.

Before turning over the controller, use the *This Side Up* label to help yourself orient the controller correctly.

Step 2 Remove the side cover.

a) Use a T-8 Torx driver to loosen the four screws—two on the side and two on the top.
b) Gently pull out the side cover.

Figure 13: Removing the side cover



1	Base of the controller
2	Two T-8 Torx screws
3	Side cover
4	Two T-8 Torx screws
5	Vertical RTC battery socket

Step 3 Locate the vertical RTC battery socket directly beneath the side cover.

Step 4 Remove the RTC battery.

a) Use a plastic spudger to gently push against the spring and release the battery from the socket.
b) Carefully lift and remove the battery using plastic or ceramic tweezers.

Step 5 Install the new RTC battery.

a) Identify the battery polarity.

The positive side has the "CR2032" text and a plus sign (+). The negative side is flat.

b) Insert the battery at a slight angle around 30-degrees to the holder's opening, with the flat negative side facing the internal lower spring contact.
c) Gently push the battery inward toward the spring, then press down until it clicks securely into place under the retaining tabs.
d) Ensure the battery is seated snugly and correctly. The positive side of the battery should face the retainer clip/tab when installed in the vertical holder.

Step 6 Reattach the side cover, tightening the four screws with the T-8 Torx driver to a torque value of 5.5 ± 0.5 in-lbs.

The new RTC battery is correctly installed and seated. The controller is ready for reassembly and power-up.

What to do next

- Power on the controller and verify that it recognizes the new RTC battery and no battery errors are reported.
- Safely dispose the old battery according to local practices.

Wipe Data in Disk Using Secure Erase

If the NCS 1014 unit becomes faulty and must be returned, contact Cisco TAC to open a Return Material Authorization (RMA) request. Before opening an RMA request, you can securely erase data in NCS 1014 disks using the Secure Erase feature.

Warning Use this procedure only during RMA.

Before you begin

Take out the NCS 1014 unit that you planned for RMA out of the data center and the network. Access NCS 1014 only using the console port.

Procedure

Step 1 When NCS 1014 boots (power cycle), the following message appears.

```
Version 2.19.1266. Copyright (C) 2023 American Megatrends, Inc.
BIOS Date: 07/31/2023 14:01:08 Ver: 0ACHI0460
Press <DEL> or <ESC> to enter setup.
Press DEL or ESC key to enter BIOS.
```

Press **DEL** or **ESC** key to enter BIOS.

Step 2 Select the **Advanced** tab using the arrow keys.

The disk security details such as HDD Secure Erase are displayed in the Advanced tab.

Step 3 Select **HDD Secure Erase** to securely erase data.

The list of SSDs that support Secure Erase is displayed. D:13 is CPU SSD and D:14 is Chassis SSD.

Step 4 Select the SSD from which you want to erase data using the arrow keys.

Step 5 Select **Yes** in the Confirmation screens.

The system proceeds to securely erase data in the selected SDD after these confirmations.