Remove and Replace Cisco NCS 1004 Modules

This chapter describes the procedures to replace Cisco NCS 1004 modules.

⚠️

Caution All the modular slots in the NCS 1004 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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Online Insertion and Removal of a Line Card

The Cisco NCS1004 controller unit provides a push button to initiate Online Insertion and Removal (OIR) during the upgrade or replacement of line cards. The same process is to be followed when a filler module is replaced with a line card. This button is used to prepare the system for the imminent loss of thermal efficiency due to the air leakage from the open slot (when the line card or filler card is removed from the chassis). The OIR button sets all fan units to maximum speed for 90 seconds which brings down the temperature of all internal components. After 90 seconds, the user can safely remove the line card or filler module from the chassis.

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Caution The OIR of procedure for line card or filler module to be performed only when the ambient temperature is below 30-degree C and should be completed within five minutes to prevent overheating of the chassis components.
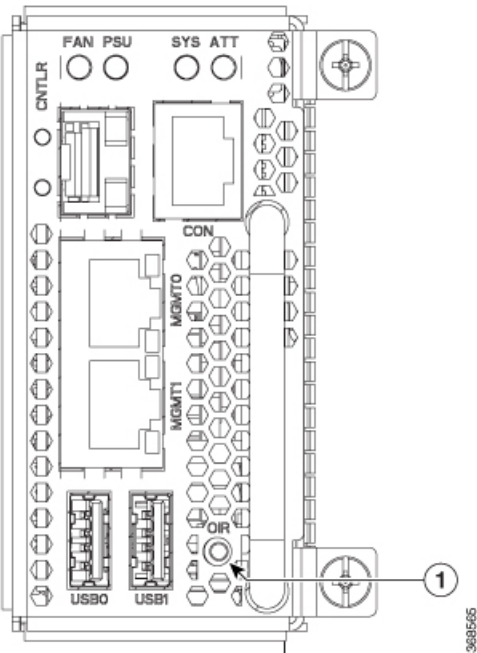
Procedure

Step 1 Press the OIR button; refer the following image.

The ATT LED on the controller unit starts blinking and the fan units are set to the maximum speed.

Caution
Wait for 90 seconds before proceeding.

Figure 1: Replacing a Line Card - OIR Button on the Controller

1	OIR Button

Step 2 After the blinking stops, remove the line card from the chassis and replace it with another line card. For the detailed line card installation procedure, see Line Card Installation.

Fan units continue to run at maximum speed, until the new line card module is inserted back. After the new line card is detected, the speed of the fan units return to their normal speed.

Note
If the filler card or line card is not removed from the chassis within 10 seconds after the ATT LED stops blinking, the fan units return to the normal speed.

Remove and Replace Power Supply Unit

This task has information about removing and replacing the power supply units.

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.
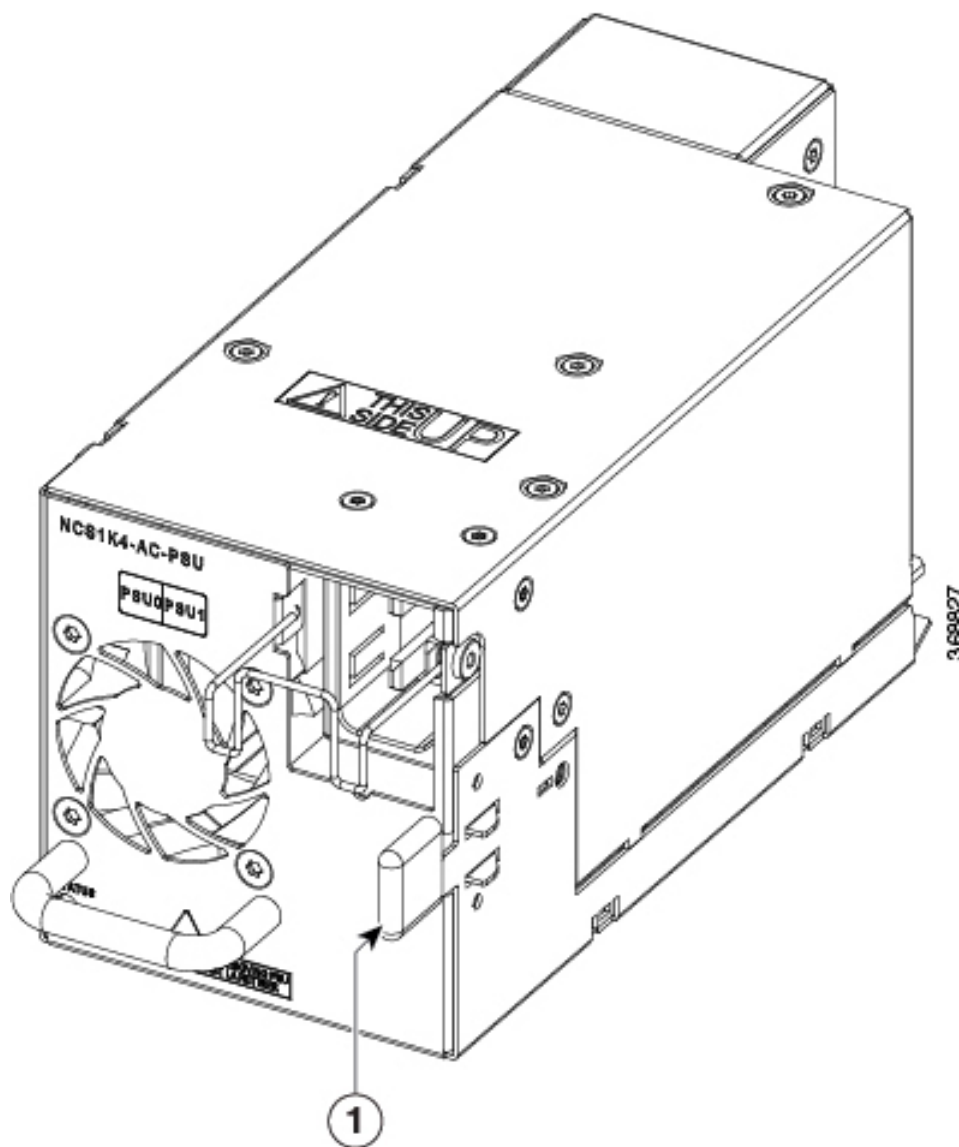
Procedure

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

Figure 2: Locking Latch on the DC PSU
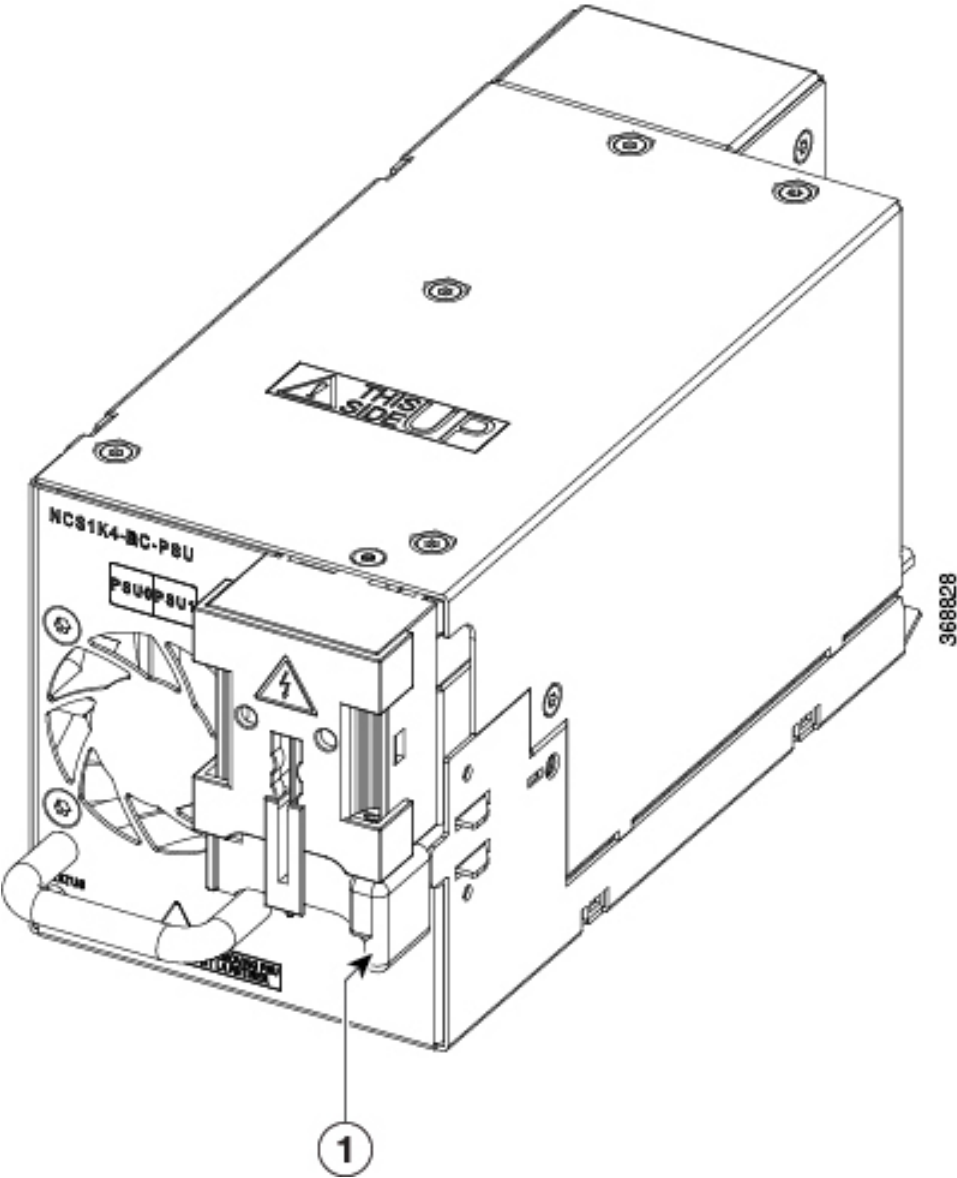
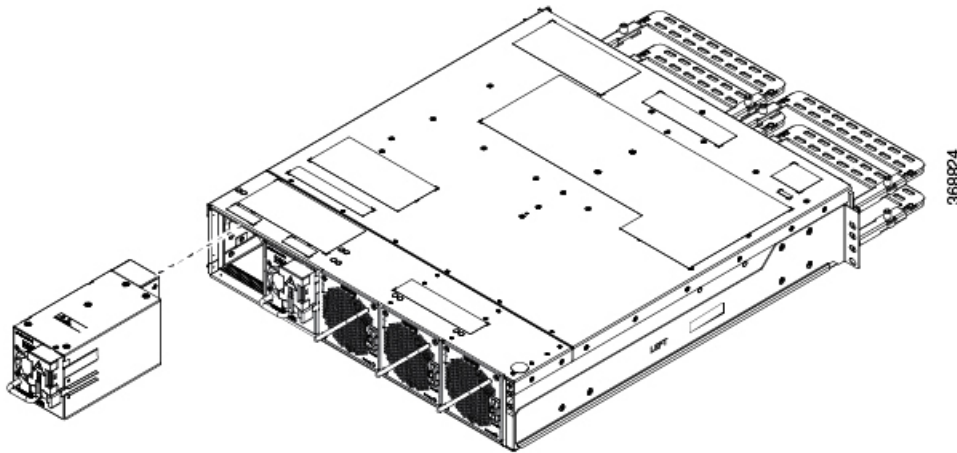| 1	Locking latch

Figure 3: Locking Latch on the AC PSU

1	Locking latch

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

Figure 4: Removing the Power Supply Unit


For replacing the PSU, see Power Supply.

Remove and Replace Controller

This procedure has details about removing and replacing the controller.

Procedure

Step 1	Using a Torx screwdriver, unfasten the two screws on the controller.
Step 2	Using the handle with one hand, and supporting the controller with the other, gently remove the controller from the slot.

Figure 5: Removing the Controller
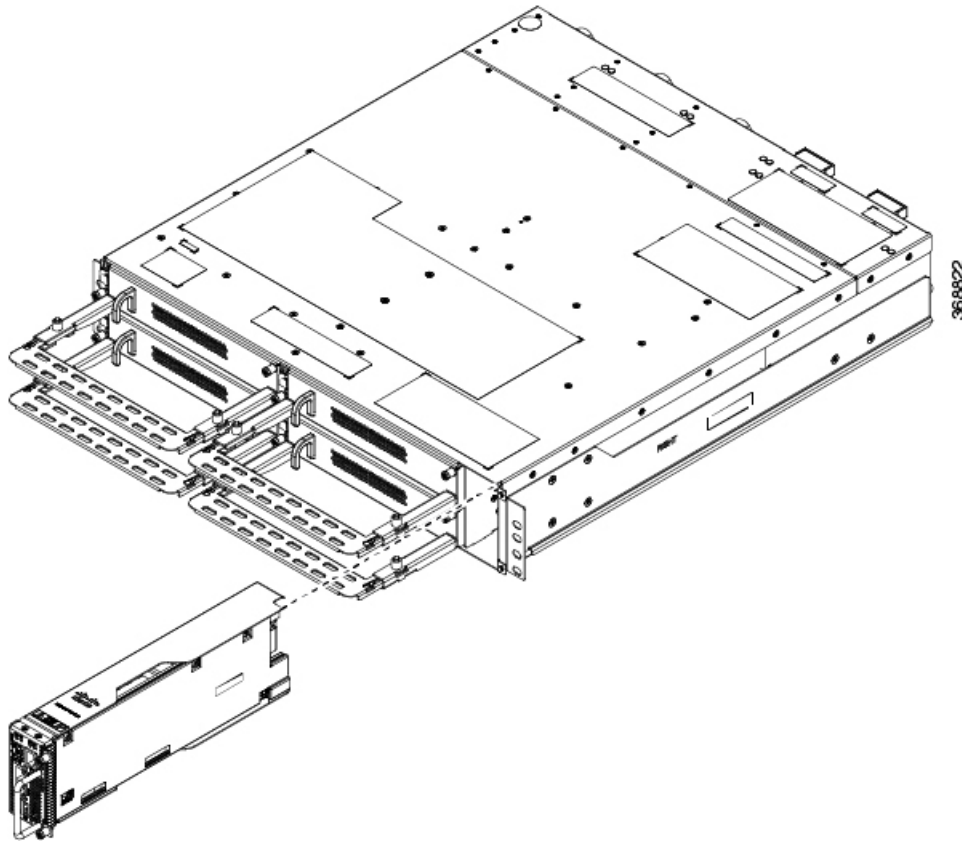
What to do next

For replacing the controller, see Install Controller.
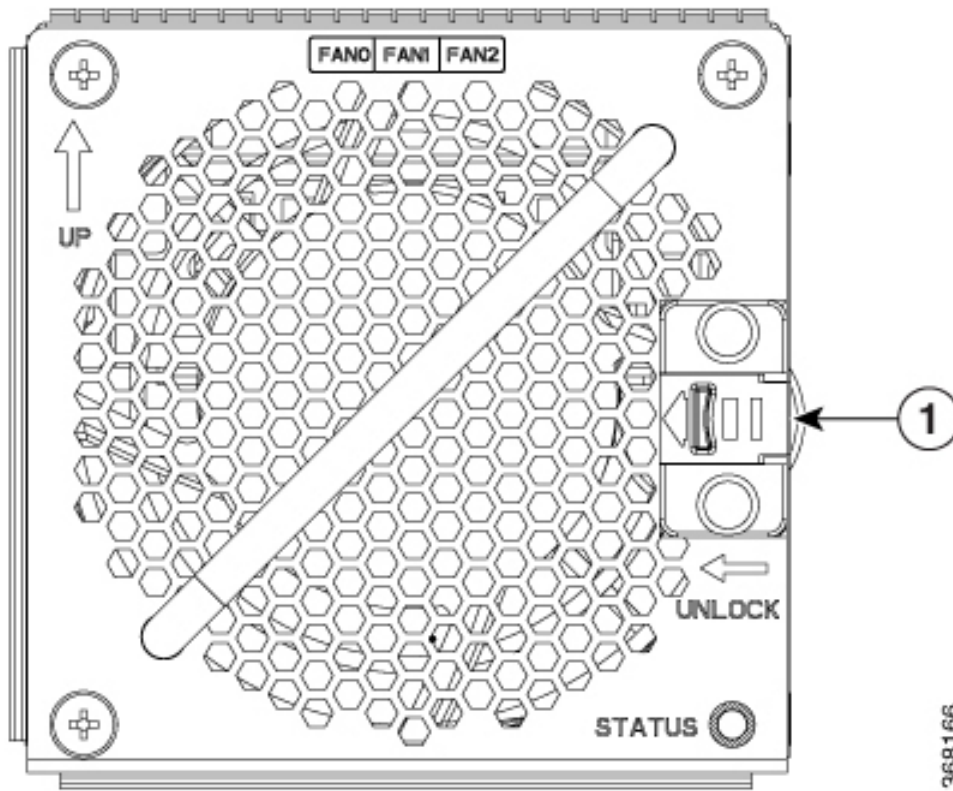
Remove and Replace Fan Unit

This task has information about removing and replacing the fan unit.

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Caution   OIR duration for the fan tray unit at 30-degree C ambient temperature, is five minutes.
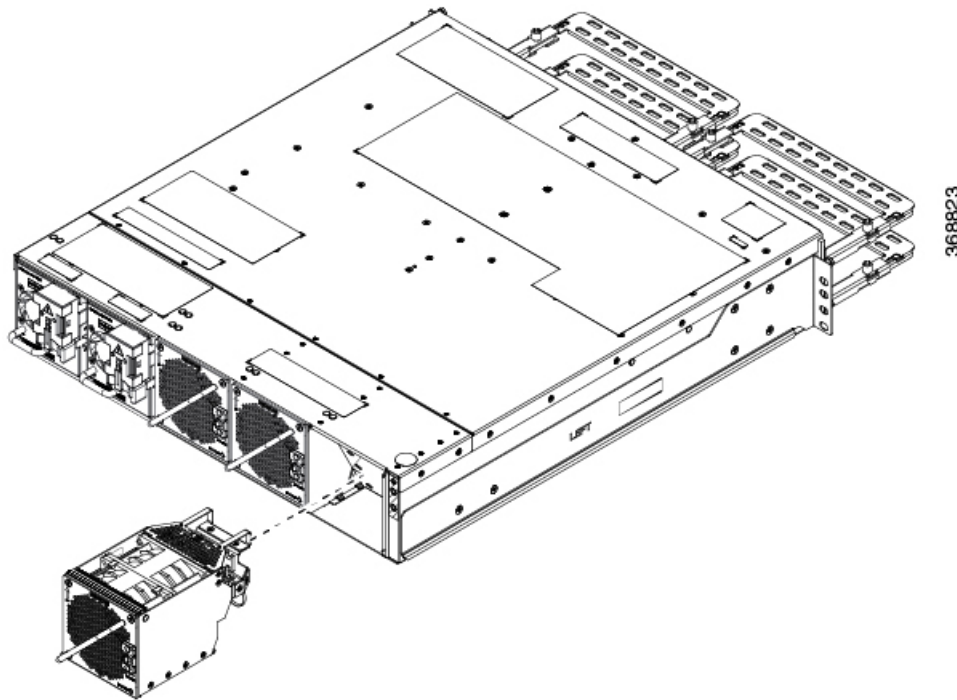
Procedure

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

Figure 6: Spring-loaded Lever in Holding or Unlock Position

1	Sping-loaded lever

Step 2   Use the handle on the fan unit to pull the fan unit out of the chassis, while supporting it with the other hand.

Figure 7: Removing the Fan Unit

What to do next

For replacing the fan unit, see Install Fan Unit.

Wipe Data in Disk Using Secure Erase

When NCS 1004 becomes faulty, contact TAC to open a Return Material Authorization (RMA) request. Before opening a RMA request, the user can securely erase data in NCS 1004 disks using the Secure Erase feature.

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Warning   Use this procedure only during RMA.

Before you begin

The NCS 1004 unit that is planned for RMA must be taken out of the data center and the network. The user must access NCS 1004 only using the console port.

Procedure

Step 1   When NCS 1004 boots (power cycle), the following message appears.

```
Version 2.19.1266. Copyright (C) 2019 American Megatrends, Inc.
BIOS Date: 07/09/2019 14:44:28 Ver: 0ACHI420
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.