

UNCLASSIFIED

**IDENTIFICATION OF VOLATILE
AND NON-VOLATILE STORAGE
AND
SANITIZATION OF SYSTEM
COMPONENTS**

**JUNIPER NETWORKS
EX4200 Switches**

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1 INTRODUCTION

1.1 Purpose

The purpose of this document is to provide direction to identify and remove all non-volatile (NV) storage from the Juniper Networks EX4200 switching platforms.

1.2 Scope

This document only addresses the EX4200 switching platforms. While other platforms offered by Juniper Networks may contain similar hardware components, this document only applies to these devices. Furthermore, this document only provides direction for the identification and removal of NV storage components. It does not address destruction procedures for those components. As all of the NV storage components used in the EX4200 are commercial off-the-shelf (COTS) components, directions for destruction of those components are left to the governing Department, Agency, or Office.

2 EQUIPMENT OVERVIEW

2.1 Identification of Chassis

EX-series switches provide scalable connectivity for the enterprise market, including branch offices, campus locations, and data centers. The switches run under the JUNOS software, which provides Layer 2 and Layer 3 switching, routing, and security services. The same JUNOS code base that runs on EX-series switches also runs on all Juniper Networks J-series, M-series, MX-series, and T-series routing platforms.

EX 4200 switches provide connectivity for medium- and high-density environments and scalability for growing networks. These switches can be deployed wherever you need a high density of Gigabit Ethernet ports (24 to 480 ports) or redundancy. Typically, EX 4200 switches are used in large branch offices, campus wiring closets, and data centers where they can be positioned as the top device in a rack to provide connectivity for all the devices in the rack.

You can connect individual EX 4200 switches together to form one unit and manage the unit as a single chassis, called a *virtual chassis*. You can add more member switches to the virtual chassis as needed, up to a total of 10 members.

EX 4200 switches are available in models with 24 or 48 ports and with either all ports equipped for Power over Ethernet (PoE) or only 8 ports

equipped for PoE. All models provide ports that have 10/100/1000Base-T Gigabit Ethernet connectors and optional 1-gigabit small form-factor pluggable (SFP) transceivers, 10-gigabit small form-factor pluggable (SFP+) transceivers, or 10-gigabit small form-factor pluggable (XFP) transceivers for use with fiber connections.

Additionally, a 24-port model provides 100Base-FX/1000Base-X SFP transceivers. This model is typically used as a small distribution switch.

All EX 4200 switches have dedicated 64-Gbps virtual chassis ports that allow you to connect the switches to each other. You can also use optional uplink module ports to connect members of a virtual chassis across multiple wiring closets.

To provide carrier-class reliability, EX 4200 switches include:

- Dual redundant power supplies that are field-replaceable and hot-swappable. An optional additional connection to an external power source is also available.
- A field-replaceable fan tray with three fans. The switch remains operational if a single fan fails.
- Redundant Routing Engines in a virtual chassis configuration. This redundancy enables GRES (graceful Routing Engine switchover) and nonstop active routing.
- JUNOS software with its modular design that enables failed system processes to gracefully restart.

Optional uplink modules are available for all EX 3200 and EX 4200 models. Uplink modules provide two 10-gigabit small form-factor pluggable (XFP) transceivers, four 1-gigabit small form-factor pluggable (SFP) transceivers, or two 10-gigabit small form-factor pluggable (SFP+) transceivers. You can use XFP, SFP, or SFP+ ports to connect an access switch to a distribution switch or to interconnect member switches of a virtual chassis across multiple wiring closets.



Figure 2-1: EX4200**2.2 Description of Field Replaceable Units (FRU)**

The power supply, fan tray, and transceivers are hot-removable and hot-insertable: You can remove and replace them without powering off the switch or disrupting switch functions. The uplink module is a hot-swappable FRU: You can remove an uplink module and replace it with another uplink module of the same type without turning off power to the switch or rebooting the switch. If you install an uplink module of a different type or install an uplink module in a switch that had previously booted without an uplink module, you must reboot the switch in order for the switch to detect the uplink module.

None of these components contain NV RAM. All NV RAM is soldered to the system board.

3 POWER DOWN AND REMOVAL OF NON-VOLATILE STORAGE

In order to ensure that no user data or system configurations remain resident on an EX4200 platform, the following steps must be performed:

1. Power must be removed from the system to clear all volatile storage
2. The FLASH chip must be removed from the system board

A detailed process is included in the following sections.

3.1 System Power Down

Power down the system by setting the switch on each installed unit to the “off” position. Remove any connected power cords.

3.2 Disassembly of the EX4200 Chassis and Identification of NV storage

The EX4200 does not contain NV storage that is replaceable as it is soldered to the system board. In order to access the memory for removal, refer to the following steps:

1. Remove the fan tray and power supplies from the system.
2. Remove the five screws from the top of the system (figure 3-1)



Figure 3-1: Top side screws

3. Remove six screws from left side of chassis (figure 3-2)

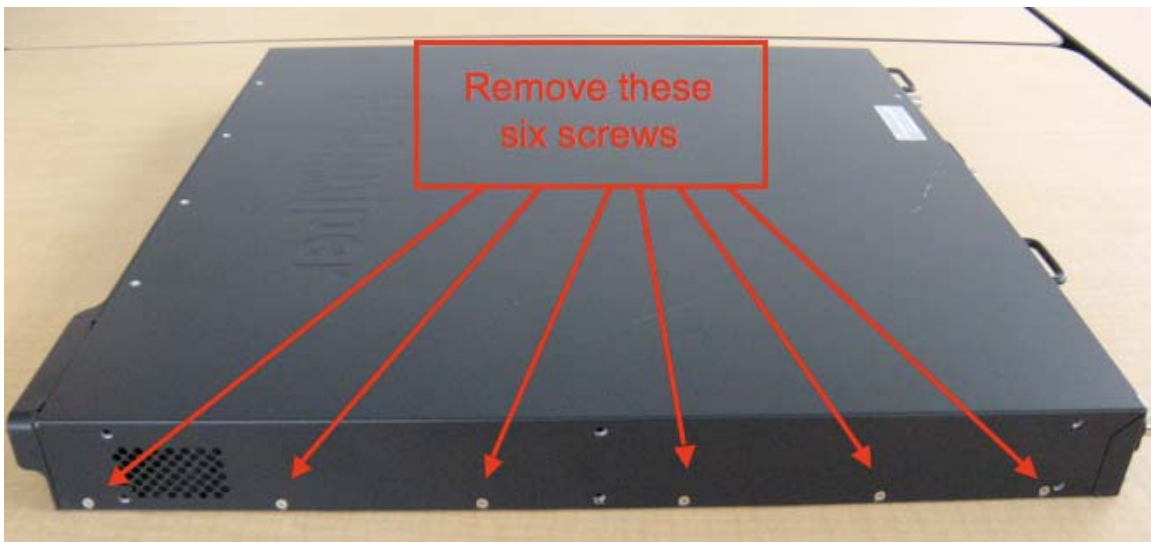


Figure 3-2: Left side screws

4. Remove six screws from right side of chassis (figure 3-3)

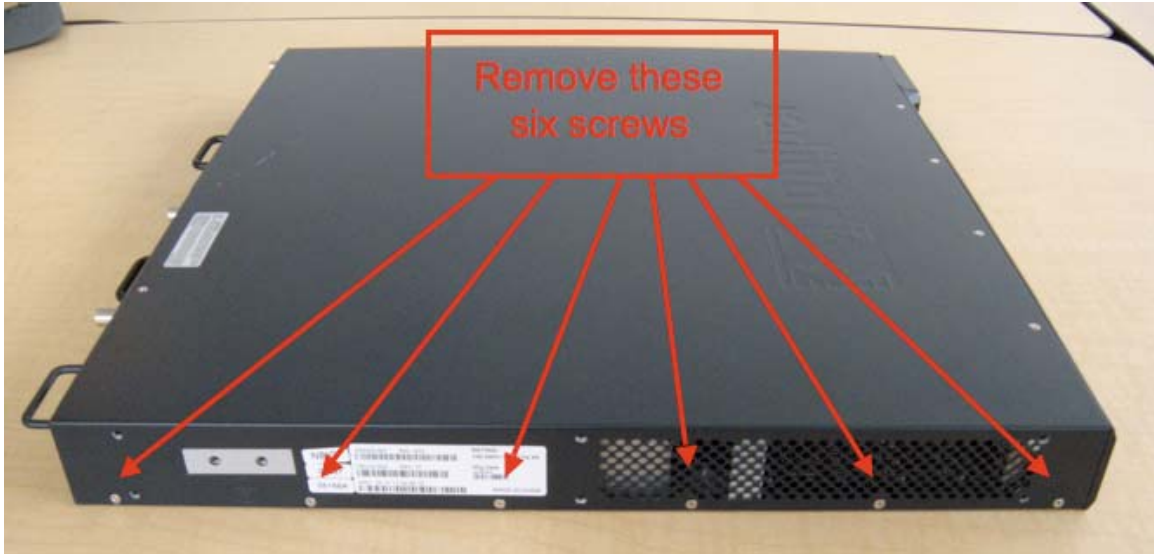


Figure 3-3: Right side screws

5. Remove seven screws from rear of chassis (figure 3-4)

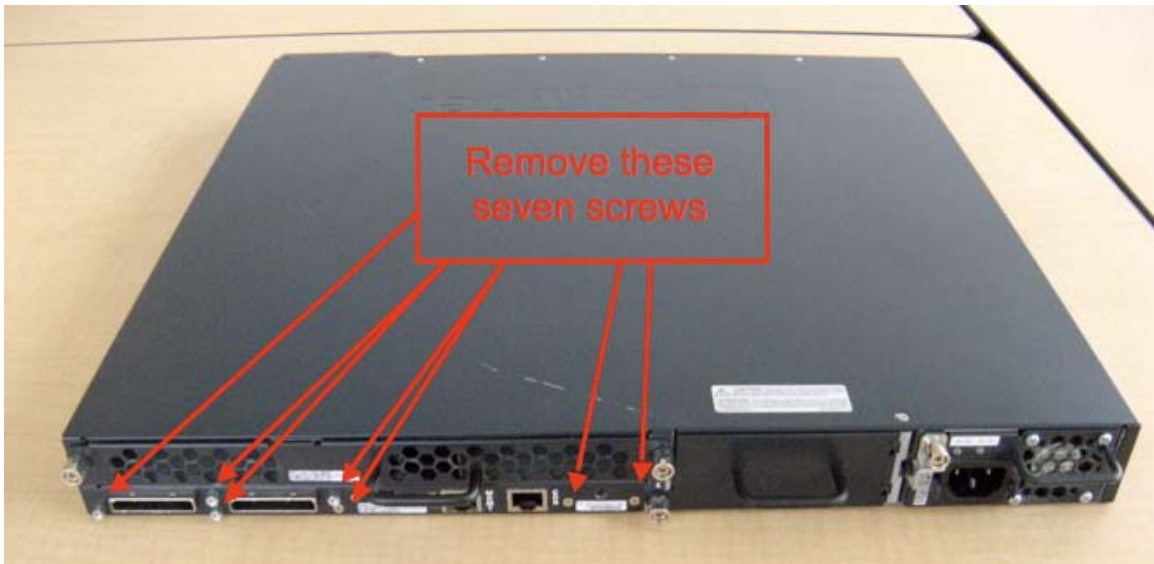


Figure 3-4: Rear screws

6. Remove the top of the chassis and note the location of fan tray plate (figure 3-5)

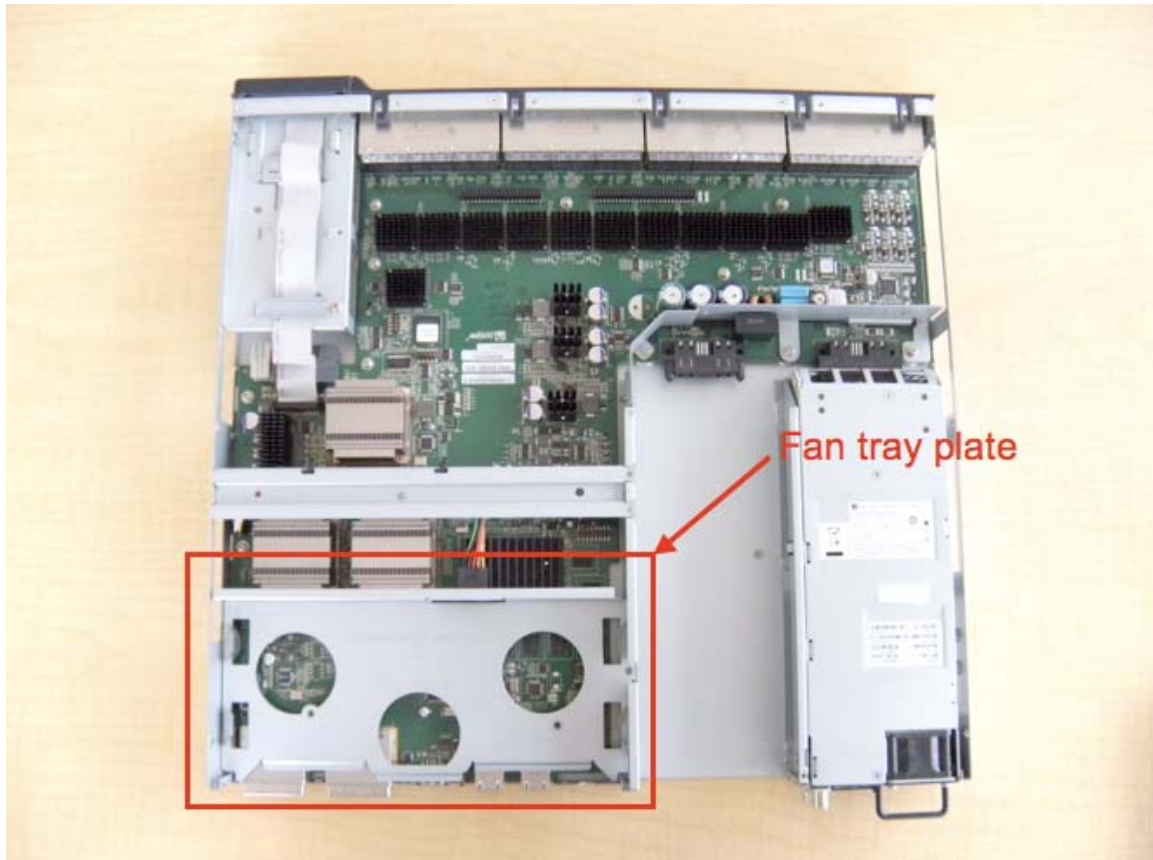


Figure 3-5: Open Chassis

7. Remove three screws that hold the fan tray plate in place (figure 3-6)

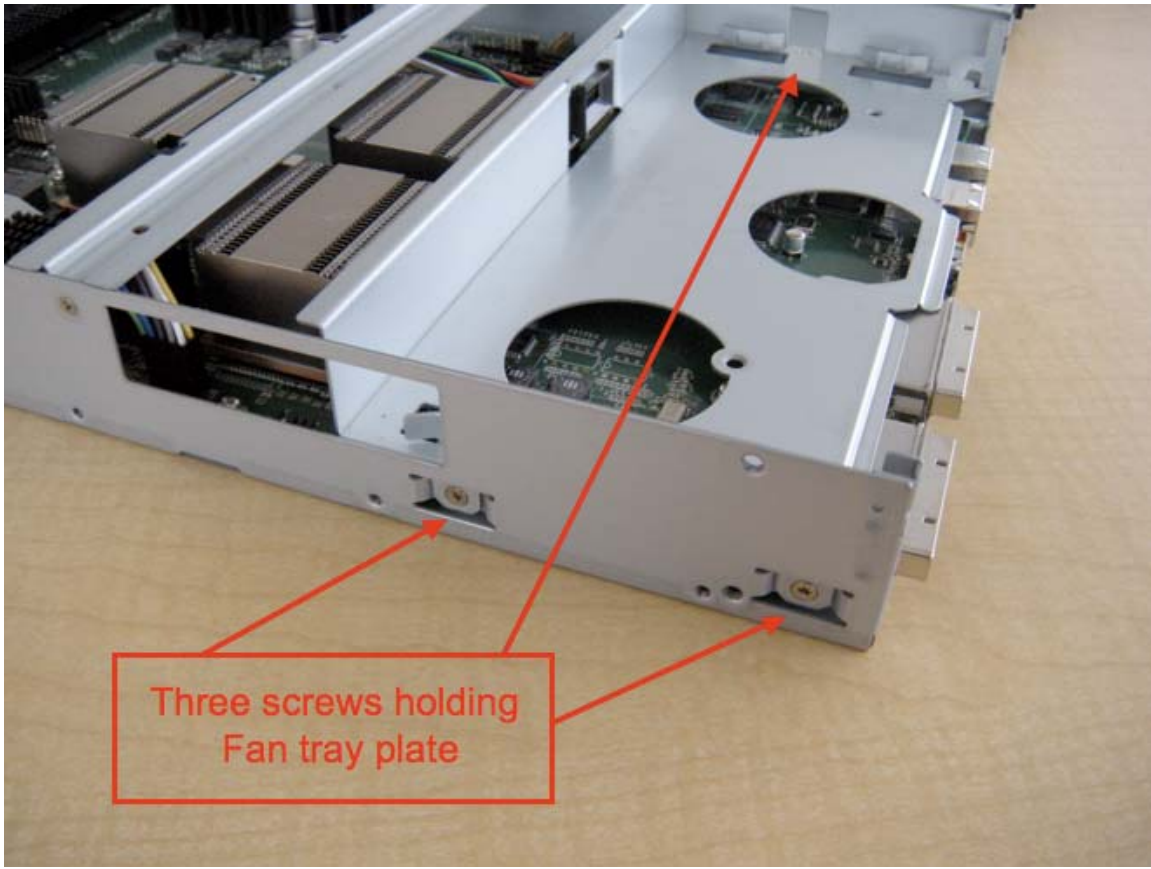


Figure 3-6: Fan tray plate screws

8. Locate NV storage (figure 3-7)

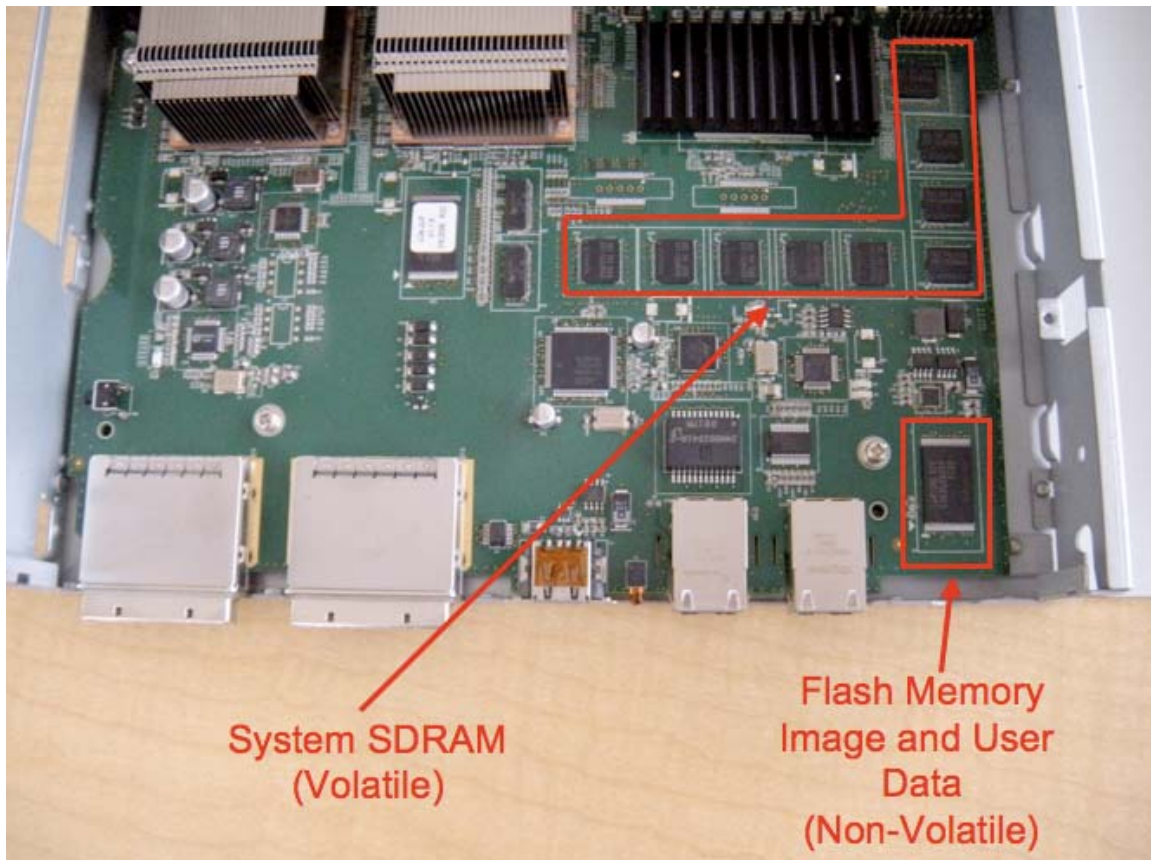


Figure 3-7: Locate NV storage (Flash)

3.3 Removal of the FLASH Chip from the System Board

Once the NV storage has been located, utilize a screwdriver or other means to remove it from the system board.

NOTE : Before removal, ensure J-TAC and the appropriate account team has been notified of your intentions.