

UNCLASSIFIED

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

**JUNIPER NETWORKS
SRX SERIES SERVICES GATEWAY
SRX650**

**REVISION 1.0
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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' Secure Services Gateway SRX650 security platform.

1.2 Scope

This document only addresses the SRX650 security platform. While other platforms offered by Juniper Networks may contain similar hardware components, this document only applies to the SRX650. 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 SRX product family 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

The SRX650 is a 2ru chassis with four fixed 10/100/1000 Ethernet ports, eight front-facing Gigabit Port Interface Module (GPIM) slots for additional port capacity, two rear-facing SRE/ACE slots, one rear-facing fan tray, and two rear-facing slots for AC or DC power. The chassis control plane is fixed to the SRE module which can be removed from base chassis, with two front-facing Universal Serial Bus (USB) interfaces, internal Compact FLASH (CF), external CF and internal Dynamic Random Access Memory (DRAM). The USB drives and external CF card can be accessed via the front panel of the SRE module. However, the internal CF and DRAM can not be accessed without removing the SRE from the system.



Figure 2-1: SRX650 Chassis

2.2 Description of Components

The following major components are installed in the SRX650 chassis.

2.2.1 Base Chassis

The Base Chassis is composed of Midplane, System IO card, and sheet metal chassis. All other modules including Fan Tray, Power Supply, gPIMs and SRE/ACE are removable and can be changed in field. The base chassis doesn't contain any storage elements, either volatile or non-volatile.

2.2.2 SRE / ACE

The SRE Module contains volatile memory which is DRAM and the following non-volatile memories, as mentioned above, two USB drive slots which can take USB drives, one internal CF slot which has CF card installed as default, and one external CF slot which can take a CF card.

2.2.3 Port Interface Modules

The PIMs provide expanded input/output (I/O) capability for the SRX650. There is a large variety of PIMs available for the SRX family. There are two types of PIM: non-CPU PIM and CPU PIM. The non-CPU PIMs (16-port and 24-port Ethernet) do not house any storage elements, either volatile or non-volatile, and the CPU PIMs (T1/E1, DS3) house DRAM as volatile storage.

2.2.4 Power Supply Units

The SRX650 has slots for two Power Supply Units (PSUs) on the right side of the back panel. The base system includes a single AC or DC PSU. A second, like PSU (AC+AC or DC+DC) can be installed for redundancy. Neither PSU houses any storage elements, either volatile or non-volatile.

2.2.5 Cooling Subsystem

The Cooling Subsystem consists of one fan tray and an optional air filter. The Cooling Subsystem contains no storage elements, either volatile or non-volatile.

3 POWER DOWN AND REMOVAL OF NON-VOLATILE STORAGE

In order to ensure that no data remains resident on an SRX650 platform, the following steps must be performed:

1. Power must be removed from the system to clear all volatile storage
2. The internal CF must be removed from the SRE module
3. All external USB storage devices and / or external CF card must be removed from the chassis

A detailed process is included in the following sections.

3.1 System Power Down

The SRX650 should be powered down gracefully if time exists to do so. A graceful power down takes less than five minutes to complete. To perform a graceful power down of an SRX650 platform, complete the following steps:

1. Execute the “request system power-off” command from the command line. Wait for positive feedback that the shutdown is complete. If connected via the console, you will see the message “The operating system has halted. Please press any key to reboot.” If connected via Telnet or SSH, your session will be disconnected before the SRX650 completes the power down process. You can verify via the console or observe the LEDs on the front of the chassis. If monitoring the LEDs, ensure the Power LED is off (not solid on or flashing).
2. For a system with one or two AC PSUs, remove all electrical cables from their respective PSUs. For a system with DC PSUs, flip the breaker to the open position. **DO NOT ATTEMPT TO REMOVE POWER CONNECTIONS FROM A DC PSU! SERIOUS INJURY OR DEATH MAY RESULT!**

An emergency power down of a system can be performed by omitting step 1 and simply performing step 2 in the process above. Note that an emergency power down could possibly corrupt the operating system and configurations stored on the NV media. Once the system has been powered down, all volatile storage is clear.

3.2 Removal of internal CF from the System

Once the SRX650 has been powered down, the next step is to remove the SRE module from the system. The SRE module needs to be removed from the system to access the internal CF. The internal CF resides to the right side of the SRE module.

1. Place an electrostatic bag or antistatic mat on a flat, stable surface.
2. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and connect the strap to one of the ESD points on the chassis. Make sure the router is attached to a proper earth ground.
3. Use a #2 Phillips screwdriver to unfasten the 2 SRE screws that secure the SRE module to the chassis.



Figure 3-1: Removing SRE Module

4. Eject the SRE module by pulling the SRE ejector.
5. Locate the CF on the SRE board according to the figure below:

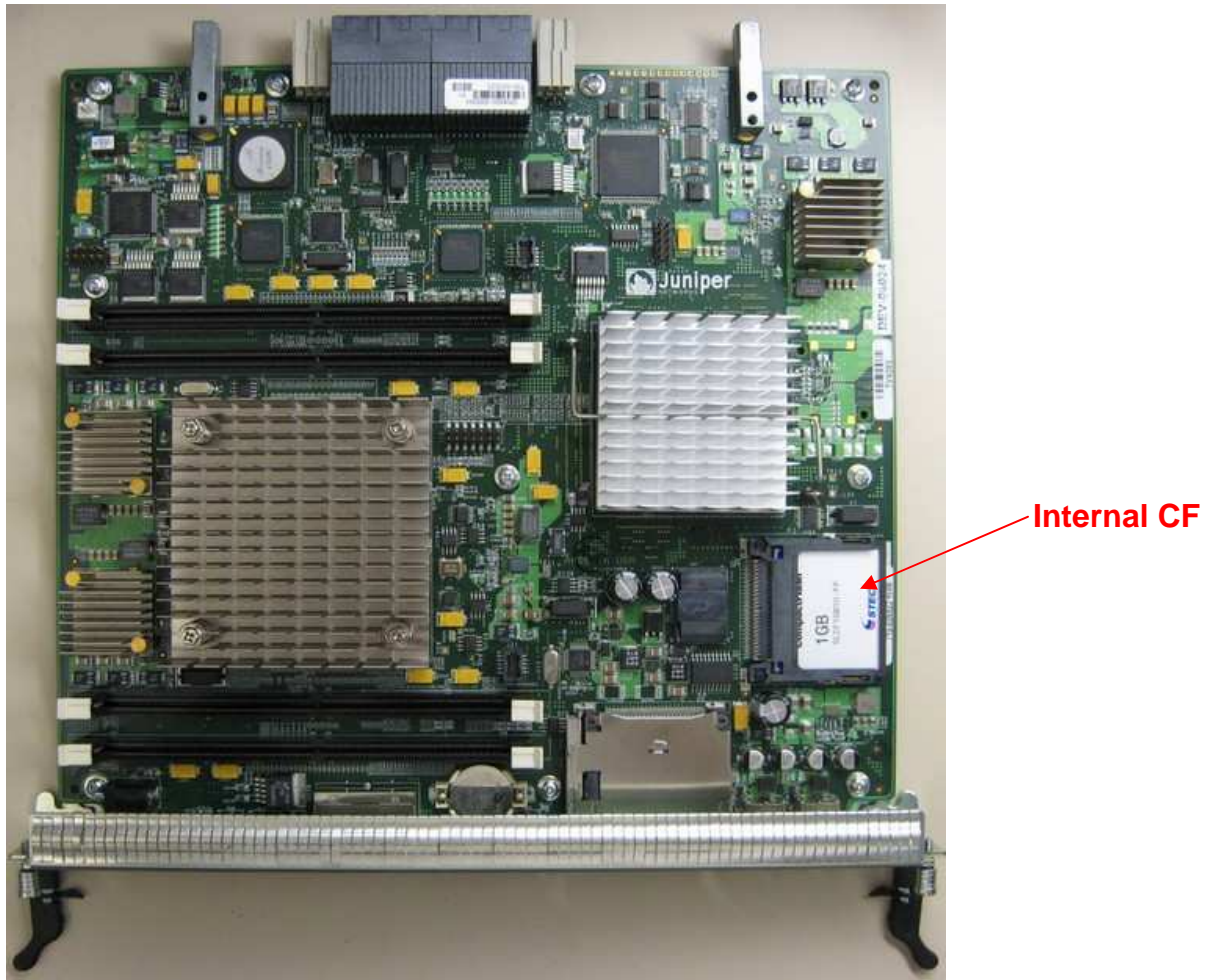


Figure 2-2: SRE Module Top View

6. Apply pressure downward on the Internal CF and slide the CF out to the right.
7. Place the CF on an anti-static mat.

3.3 Removal of USB Drives and external CF card from the SRE Module

There are two USB interfaces and one external CF slot on the front of the SRE module. With the unit powered off, gently pull any attached media devices away from the SRE module to remove them.

This completes the sanitization process for the SRX650