



# Quick Start Guide

## NFX150-C-S1 Network Services Platform Quick Start

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## NFX150-C-S1 Network Services Platform Overview

The Juniper Networks NFX150 Network Services Platform is a secure, automated, software-driven customer premises equipment (CPE) that delivers virtualized network and security services on demand. The NFX150 integrates routing, switching, and security functions on a single platform. The NFX150 is suited for small to medium-sized enterprises and can be used as a secure router or Universal CPE (uCPE).

For more information on NFX150 Hardware, see the *NFX150 Hardware Guide* available at:

[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)



## Package Contents

The NFX150-C-S1 device is shipped with the following parts:

- Four rubber feet to stabilize the chassis on a desk or other level surface
- RJ-45 cable and RJ-45 to DB-9 serial port adapter
- Power supply adapter of 75W and an AC power cord with plugs appropriate for your geographical location

## Register the Product

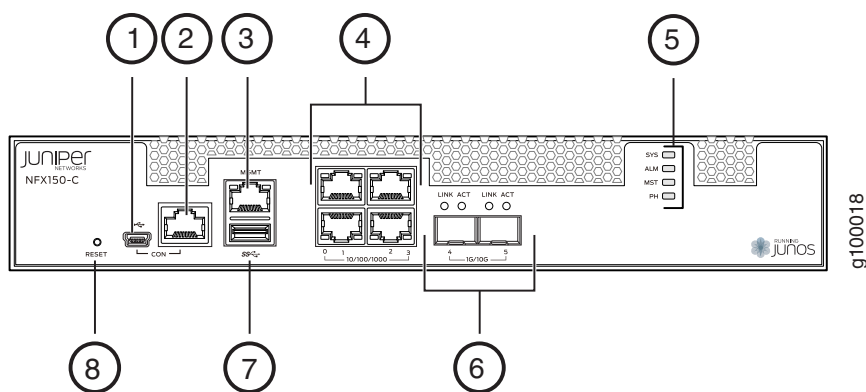
Register product serial numbers on the Juniper Networks website and update the installation base data if there is any addition or change to the installation base or if the installation base is moved. Juniper Networks will not be held accountable for not meeting the hardware replacement service-level agreement for products that do not have registered serial numbers or accurate installation base data.

Register your product at <https://tools.juniper.net/svcreg/SRegSerialNum.jsp>.

Update your installation base at <https://www.juniper.net/customers/csc/management/updateinstallbase.jsp>.

## NFX150-C-S1 Front Panel and Rear Panel

Figure 1: Front Panel Components of NFX150-C-S1



1—Mini-USB console port

2—RJ-45 console port

3—One 10/100/ 1000BASE-T RJ-45 management port

4—Four 10/100/ 1000BASE-T RJ-45 LAN ports

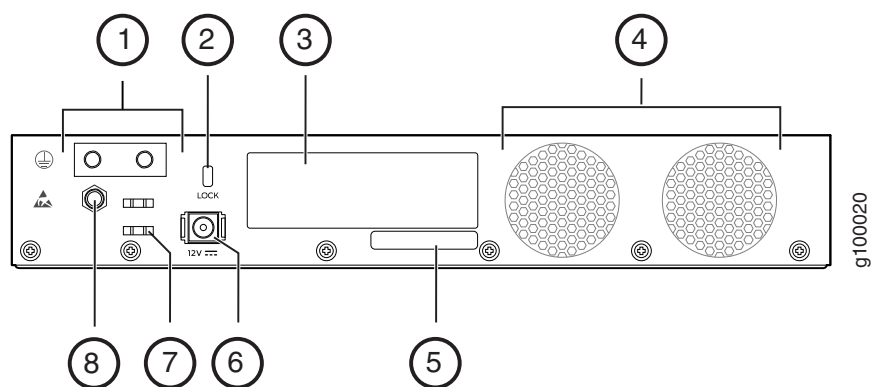
5—System status LEDs

6—Two 1-Gigabit Ethernet/10-Gigabit Ethernet SFP+ WAN ports

7—USB 3.0 port

8—Reset button

Figure 2: Rear Panel Components of NFX150-C-S1



1–Grounding point	5–CLEI code
2–Lock	6–Power supply input
3–Serial number	7–Cable tie holder
4–Fans	8–Electrostatic discharge (ESD) point

## Mount an NFX150-C-S1 Device on a Wall

**NOTE:** You can mount an NFX150-C-S1 device on a desk or other level surface by using the four rubber feet that are shipped with the device. The rubber feet stabilize the chassis.

**NOTE:** The wall mounting kits are not shipped with the device and must be ordered separately.

To mount an NFX150-C-S1 device on a wall, you require the parts that are shipped with the device along with the following additional parts and equipment. These are not shipped with the device.

- Electrostatic discharge (ESD) grounding strap
- Four mounting screws (8-32 x 1.25 in. or M4 x 30 mm)
- Phillips (+) screwdriver, number 2
- Management host, such as a PC or laptop, with a serial port
- Two wall-mount brackets
- Eight wall-mount bracket screws

- Hollow wall anchors capable of supporting the weight of a fully loaded NFX150 device, up to 20 lb (9 kg)—if you are mounting the device in sheetrock (wall board with a gypsum plaster core) or in wall board not backed by wall studs
- Grounding cable (minimum 14 AWG (2 mm<sup>2</sup>), minimum 90°C wire), grounding lug (Panduit LCC10-14BWL or equivalent), a pair of 10-32x.25-in. screws, and a pair of flat washers

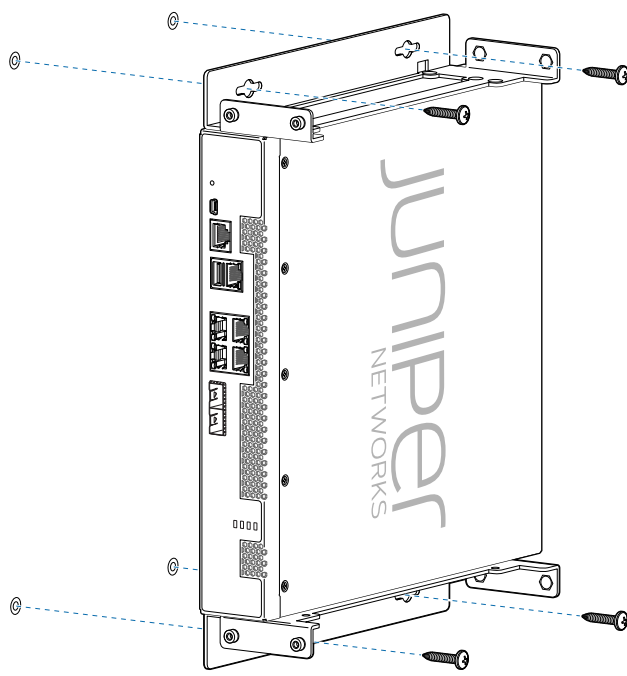
For information about installing the grounding cable, see the *NFX150 Hardware Guide* available at:

[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)

To mount the device on a wall:

1. Attach the wall-mount brackets to the sides of the chassis using the four wall-mount bracket screws on each side.

**Figure 3: Mounting the NFX150-C-S1 Device on a Wall**



g100033

2. Install four mounting screws on the wall.
  - a. Drill a hole A and install a mounting screw.
  - b. Drill a hole B at a distance of 5.98 in. (15.19 cm.) on a level line to the right from hole A and install a mounting screw.

- c. Drill two holes at a distance of 11.95 in. (30.35 cm) on a plumb line from hole A and B, install the mounting screws.
  - d. Insert the mounting screws only part way in, leaving about 1/4 in. (6 mm) distance between the head of the screw and the wall.
3. If the mounting screws are inserted in wall board with no stud behind it, you must use dry wall anchors rated to support 20 lb (9 kg). Insert the screws into wall studs wherever possible to provide added support for the chassis.
  4. Grasp each side of the device, lift the device, and hang the brackets from the mounting screws such that the front panel of the device faces to your right or left side.
  5. Tighten the mounting screws.

## Connect Power to the Device



**CAUTION:** Wrap and fasten one end of the ESD grounding strap around your wrist and connect the other end to a site ESD point.

To connect the device to the power supply:

1. Plug the DC connector end of the power cable into the power connector on the back of the device.
2. Plug the AC adapter end of the power cable into an AC power outlet.

### Power Cable Warning (Japanese)



**WARNING:** The attached power cable is only for this product. Do not use this cable for another product.

## 注意

付属の電源コードセットはこの製品専用です。  
他の電気機器には使用しないでください。

# Factory-Default Settings

The NFX150 device is shipped with the following factory-default settings:

**Table 1: Security Policies**

Source Zone	Destination Zone	Policy Action
trust	trust	permit
trust	untrust	permit

**Table 2: Interface Mapping (for Junos OS Releases 18.1, 18.2 R1, and 18.3 R1)**

Port Label	Interface	Virtual Interface	Security Zone	DHCP State	IP Address
0/0 to 0/3	heth-0-0 to heth-0-3	ge-0/0/0 to ge-0/0/3	trust	Server	192.168.2.1/24
0/4	heth-0-4	ge-1/0/1	untrust	Client	ISP assigned
0/5	heth-0-5	ge-1/0/2	untrust	Client	ISP assigned
MGMT	fxp0	N/A	N/A	N/A	192.168.1.1/24

**Table 3: Interface Mapping (for Junos OS Releases 18.2 R2 and 18.4R1)**

Port Label	Interface	Virtual Interface	Security Zone	DHCP State	IP Address
0/0 to 0/2	heth-0-0 to heth-0-2	ge-0/0/0 to ge-0/0/2	trust	Server	192.168.2.1/24
0/3	heth-0-3	ge-1/0/1	untrust	Client	ISP assigned
0/4	heth-0-4	ge-0/0/3	trust	Server	192.168.2.1/24
0/5	heth-0-5	ge-1/0/2	untrust	Client	ISP assigned
MGMT	fxp0	N/A	N/A	N/A	192.168.1.1/24

**Table 4: LTE Interfaces**

Interface	Security Zone	IP Address
cl-1/1/0	N/A	N/A
dI0 (logical)	untrust	ISP assigned

The NFX150 device is shipped with the following services enabled by default: DHCP, HTTPS, and TFTP.

To provide secure traffic, a basic set of screens are configured on the untrust zone.

## Access the Device

1. Ensure that the NFX150 device is powered on.
2. Connect to the console port:
  - a. Plug one end of the Ethernet cable into the console port on your NFX150 device.
  - b. Connect the other end of the Ethernet cable to the RJ-45-to-DB-9 serial port adapter shipped with your device.
  - c. Connect the RJ-45-to-DB-9 serial port adapter to the serial port on the management device. Use the following values to configure the serial port:

Baud rate—9600; Parity—N; Data bits—8; Stop bits—1; Flow control—None.

**NOTE:** Alternately, you can use the USB cable to connect to the mini-USB console port on the device. To use the mini-USB console port, you must download the USB driver from the following page and install it on the management device:

<https://www.juniper.net/support/downloads/junos.html>

3. Use any terminal emulation program, such as HyperTerminal, to connect to the device console. The CLI displays a login prompt.
4. Log in as **root** and enter the password **juniper123**. If the software completes booting before you connect to the console, you might need to press the **Enter** key for the prompt to appear:

```
login: root
password: juniper123
```

5. Start the CLI:

```
root@:~ # cli
root@>
```

6. Enter configuration mode:

```
root@> configure
```

```
[edit]  
root@#
```

7. Change the password for the root administration user account:

```
[edit]  
root@# set system root-authentication plain-text-password  
New password: password  
Retype new password: password
```

8. Enable SSH service for the root user:

```
[edit]  
root@# set system services ssh root-login allow
```

9. (Optional) Enable WAN connection for devices connected on LAN:

```
[edit]  
root@# set access address-assignment pool junosDHCPPool family inet dhcp-attributes name-server dns-server-ip
```

10. Commit the configuration:

```
[edit]  
root@# commit
```

## Establish the Connection

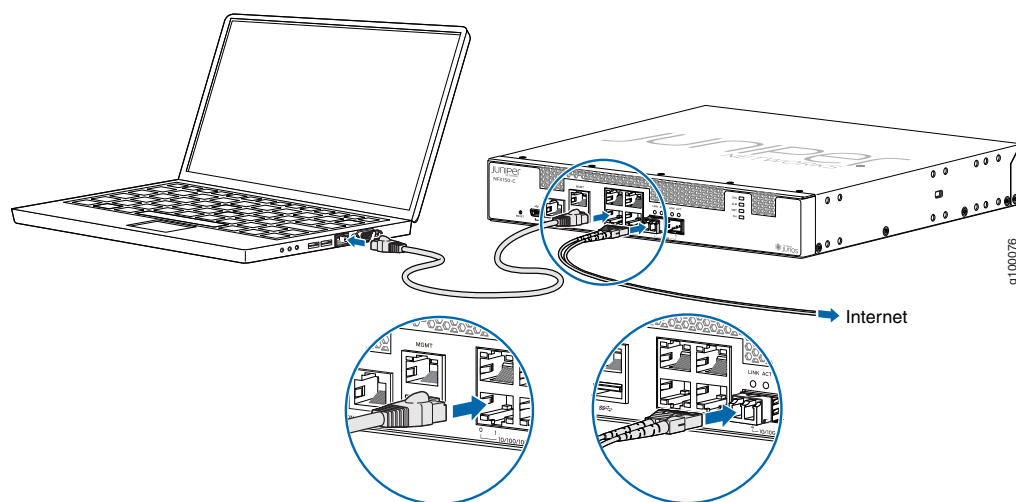
1. Connect the device to the Internet Service Provider (ISP) by using the following step:

**NOTE:** For information on interface mapping, see [Table 2](#) and [Table 4](#).

Connect one of the WAN ports such as **heth-0-4** or **heth-0-5** to the ISP. The device is assigned an IP address by the ISP through DHCP.



Figure 4: Connecting the Interfaces on an NFX150-C-S1 Device



Optionally, you can obtain a SIM card from the ISP and connect the device through LTE. For more information about SIM card activation, see the *Getting Started with NFX150* available at:

[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)

2. Connect the laptop to one of the front panel LAN ports such as **heth-0-0**, **heth-0-1**, **heth-0-2**, or **heth-0-3**. The laptop is assigned an IP address by the DHCP server running on the interface.
3. Open a browser on your laptop, navigate to <https://www.juniper.net>, and verify your connectivity.

## Next Steps

For information on downloading the image, provisioning virtual network functions (VNFs), and performing initial configuration using the CLI, see the *Getting Started with NFX150* available at:

[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)

## Safety Warnings Summary

This is a summary of safety warnings. For a complete list of warnings, including translations, see the NFX150 documentation at

[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/).



**WARNING:** Failure to observe the following safety warnings can result in personal injury or death:

- Permit only trained and qualified personnel to install or replace device components.
- Perform only the procedures described in this Quick Start Guide and the NFX150 documentation. Other services must be performed only by authorized service personnel.
- Before installing the device, read the planning instructions in the NFX150 documentation to make sure that the site meets power, environmental, and clearance requirements for the device.
- Before connecting the device to a power source, read the installation instructions in the NFX150 documentation.
- Before installing or after removing an electrical component, always place it component-side up on an antistatic mat placed on a flat, stable surface or in an antistatic bag.
- Do not work on the device or connect or disconnect cables during electrical storms.
- Before working on equipment that is connected to power lines, remove jewelry, including rings, necklaces, and watches. Metal objects heat up when connected to power and ground and can cause serious burns or become welded to the terminals.

## Reference

- Technical Support  
<https://www.juniper.net/support/requesting-support.html>
- Getting Started with NFX150  
[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)
- NFX150 Hardware Guide  
[https://www.juniper.net/documentation/en\\_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/](https://www.juniper.net/documentation/en_US/release-independent/junos/information-products/pathway-pages/nfx-series/product/)
- Supported Transceivers  
<https://apps.juniper.net/hct/product/#prd=NFX150>