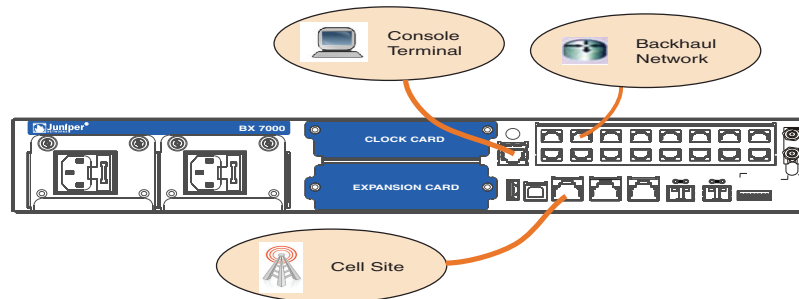


BX7000 Multi-Access Gateway Getting Started Guide

This guide provides instructions on connecting the Juniper Networks BX Series 7000 Multi-Access Gateway to a network. For more information, see the *BX7000 Multi-Access Gateway Hardware Guide*.



Step 1: Install the BX7000 Multi-Access Gateway

The gateway can be installed in a rack or on a wall. Each installation is site-specific. For more information, see the *BX7000 Multi-Access Gateway Hardware Guide*.

Step 2: Connect the BX7000 Multi-Access Gateway to External Devices

Connect the gateway to external devices using the console ports, Ethernet ports, and T1/E1 ports.

Connect to a Management Console

Use either the RJ-45 serial console port or the USB console port to connect to a management console.



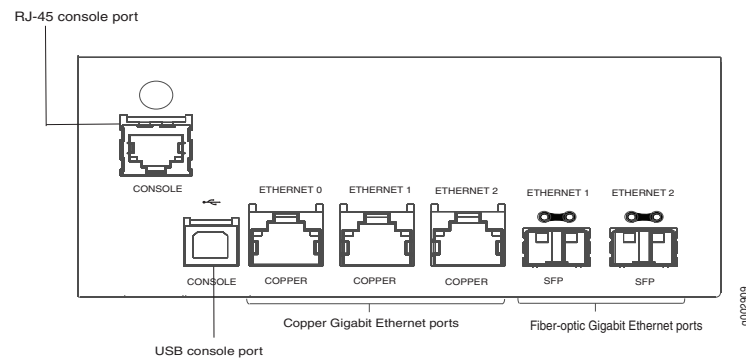
NOTE: Although cables can be connected to both the RJ-45 serial console port and the USB console port, only one of the console ports can be active at a time. If both ports are connected, only the USB port will be active. For more information regarding the console ports, see the *BX7000 Multi-Access Gateway Hardware Guide*.

Connect to the RJ-45 Serial Console Port

Connect the RJ-45 end of the crossover twisted pair cable to the RJ-45 serial console port of the gateway. Connect the other end of the cable to the serial port of the management console.

Connect to the USB Console Port

Connect the Type B end of the USB cable to the USB console port of the gateway. Connect the Type A end of the USB cable to the USB port of the management console.



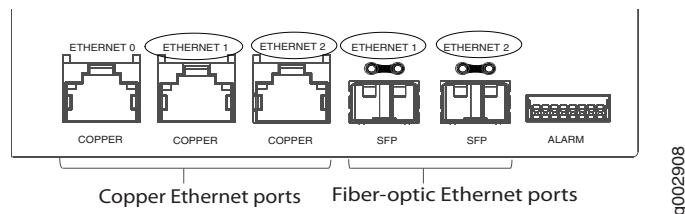
Connect to Ethernet Ports

The Ethernet ports provide connections to external devices and can be used either as data ports or as management ports.



NOTE: Although cables can be connected to both the copper Ethernet port and the fiber-optic Ethernet port, in the case of both the Ethernet 1 port and the Ethernet 2 port, the copper port and the fiber-optic port cannot be active at the same time. If both ports are connected, only the fiber-optic port will be active. For more information regarding use of the Ethernet ports, see the *BX7000 Multi-Access Gateway Hardware Guide*.

There are three copper Ethernet ports and two fiber-optic Gigabit Ethernet ports, as shown in the following illustration:



Connect to T1/E1 Ports

The T1/E1 ports provide connections to T1 or E1 networks. Use an RJ45-to-RJ45 interface cable to connect the gateway to networking devices.

Step 3: Connect the Grounding Cable



NOTE: Always ground the gateway before connecting power supplies.

The gateway has two grounding studs located on the right side of the front panel, as well as a grounding screw located on the left side at the back of the gateway for connecting to the ground when the gateway is wall mounted.

To connect the grounding cable :

1. Before making grounding connections, ensure that the grounding surfaces are clean and that they are brought to a bright finish.
2. Connect one end of the grounding wire to the ground.
3. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and then connect the strap to one of the ESD points on the chassis.
4. Connect the other end of the grounding cable to either the grounding studs or the grounding screw.

For more information on grounding the gateway, see the *BX7000 Multi-Access Gateway Hardware Guide*.

Step 4: Connect to a Power Source

After grounding, connect the gateway to a power source.

Connect to an AC power source

Use a power cord that has a plug appropriate to your geographical location. For more information on AC power cord specifications, see the *BX7000 Multi-Access Gateway Hardware Guide*.

Connect to a DC power source

To connect the DC power cables:

1. Before connecting to the power supply, verify that the DC power cables are correctly labeled; and that the customer site power circuit breakers are switched to the off position.
2. Attach an electrostatic discharge (ESD) grounding strap to your bare wrist and then connect the strap to one of the ESD points on the chassis.
3. Secure each power cable lug to the terminal studs. Attach the negative wire lug to the negative (-) terminal stud and the positive wire lug to the positive (+) terminal stud.



CAUTION: Ensure that the power connections maintain proper polarity.

Step 5: Power the Gateway On

To power the gateway on:

1. Verify that an external management device is connected to a console port on the gateway.
2. Power the external management device on.
3. Verify that the power supply is fully inserted in the chassis.
4. Verify that the source AC power cord or DC power cables are securely connected.
5. Switch on the customer site circuit breakers to provide voltage to the power supply. When the gateway is powered on successfully and diagnostic tests are complete, the system LED will light green, indicating that the gateway and the power supplies are functioning normally.
6. Monitor the startup process on the external management device to verify that the system boots properly. The following messages will be displayed upon proper boot :

```
Completed Successfully.  
.  
BX7000 login:
```

Step 5: Log In to the Gateway

To log in to the gateway:

1. At the login prompt, log in to the gateway either as the CLI user or as the root user and enter the password.
2. To configure the gateway, enter the configure command at the operational mode prompt.

```
cli@BX7000> configure
```

The symbol # indicates that the gateway is in configuration mode.

```
cli@BX7000#
```

For more information on configuration and on using the BXOS software, see the *BXOS Configuration Guide* and the *BXOS CLI Users Guide and Command Reference*.

Step 6: Configure an Ethernet Management Port

Before you can use an Ethernet port for management, you must assign an IP address and run an SSH client from a host. For more information, see the *BX7000 Multi-Access Gateway Hardware Guide*.

Safety Warnings



WARNING: See installation instructions before connecting the routing node. This is a summary of safety warnings; for a complete list, including translations, see the *BX7000 Multi-Access Gateway Hardware Guide* at <http://www.juniper.net/techpubs/hardware/>.



WARNING: Certain ports on the gateway are designed for use as intrabuilding (within-the-building) interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE, Issue 4) and require isolation from exposed outside plant (OSP) cabling. To comply with NEBS requirements and to protect against lightning surges and commercial power disturbances, the intrabuilding ports *must not* be metallically connected to interfaces that connect to the OSP or its wiring. The intrabuilding ports on the gateway are suitable for connection to intrabuilding or unexposed wiring/cables only. The addition of primary protectors does not provide sufficient protection to metallically connect these interfaces to OSP wiring.



CAUTION: Before removing or installing components of a gateway, attach an ESD strap to an ESD point and place the other end of the strap around your bare wrist. Failure to use an ESD strap could result in damage to the gateway.

- Only trained and qualified personnel should install or replace the gateway.
- Perform only the procedures described in this guide or the *BX7000 Multi-Access Gateway Hardware Guide*. Other services should be performed by authorized service personnel only.
- Before installing the gateway, read the guidelines for site preparation in the *BX7000 Multi-Access Gateway Hardware Guide* to make sure that the site meets power, environmental, and clearance requirements for the gateway.
- Read the installation instructions before you connect the gateway to a power source.
- When mounting the gateway in a partially filled rack, load the rack from the bottom to the top, with the heaviest components at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the gateway in the rack.
- When removing or installing an electrical component, always place it component-side up on a flat antistatic surface or in an electrostatic bag.
- When installing the gateway, always make the ground connection first and disconnect it last.

- Wire the DC power supply using the appropriate lugs. When connecting power, the proper wiring sequence is ground to ground, + RTN to + RTN, then -48 V to -48 V. When disconnecting power, the proper wiring sequence is -48 V to -48 V, + RTN to + RTN, then ground to ground.
- Do not work on the system or connect / 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.
- Failure to observe these safety warnings can result in serious physical injury.

Part Number: 530-027716-01
Revision 1

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Revision History
November 2008