
Chapter 5. Installing your Token-Ring Network

Once you have planned your network, you should schedule the installation of each ring and its attaching devices carefully to ensure a smooth transition to the new network. If your establishment has several rings, they should be installed one ring at a time to avoid confusion.

The purpose of this chapter is to help you plan for installation. The installation procedures themselves are contained in the *IBM Token-Ring Network Installation Guide*.

The basic steps in the network installation process are:

1. Installing IBM 8230s, 8228s, 8218s, 8219s, and 8220s
2. Installing adapters in attaching devices
3. Checking the operation of each ring
4. Installing bridges
5. Checking the operation of multiple-ring networks.

Installing IBM 8230 Controlled Access Units

To perform this task you will need:

- All of the 8230s specified for the ring, including Lobe Attachment Modules (LAMs) and Optical Fiber Converter Modules, if needed
- All of the patch cables specified for 8230 lobe-to-distribution panel connections and 8230-to-8230 connections
- Filled-out Rack Inventory Charts
- Filled-out IBM 8230 Cabling Charts
- *IBM Token-Ring Network Installation Guide*
- Labels for 8230 unit numbers and 8230 lobes.

This task consists of the following steps:

1. Install the 8230s, including Lobe Attachment Modules, in racks as indicated on the IBM 8230 Cabling Charts and the Rack Inventory Charts.
2. Connect patch cables to the lobe and ring in (RI) and ring out (RO) receptacles as indicated on the IBM 8230 Cabling Chart.
3. Label each connection and each 8230.
4. Check to make sure that each 8230 has been installed in the rack as shown on the Rack Inventory chart and that all cable connections have been made as shown on the IBM 8230 Cabling Chart. Check the accuracy of all 8230 labeling.

Installing IBM 8228 Multistation Access Units

To perform this task you will need:

- All of the 8228s specified for the ring
- All of the patch cables specified for 8228 lobe-to-distribution panel connections and 8228-to-8228 connections

- Filled-out Rack Inventory Charts
- Filled-out IBM 8228 Cabling Charts
- *IBM Token-Ring Network Installation Guide*
- Labels for 8228 unit numbers and 8228 lobes.

This task consists of the following steps:

1. Install the 8228s in racks or component housings as indicated on the IBM 8228 Cabling Charts and the Rack Inventory Charts.
2. Set the receptacles of all 8228s with the IBM 8228 Setup Aid (supplied with each 8228).
3. Connect patch cables to the lobe and RI and RO receptacles as indicated on the IBM 8228 Cabling Chart.
4. Label each connection and each 8228.
5. Check to make sure that each 8228 has been installed in the rack as shown on the Rack Inventory Chart and that all cable connections have been made as shown on the IBM 8228 Cabling Chart. Check the accuracy of all 8228 labeling.

Installing IBM 8218 Copper Repeaters

To perform this task you will need:

- All of the 8218s specified for the ring
- All of the patch cables and crossover patch cables specified for 8218 connections
- Filled-out Rack Inventory Charts
- Filled-out IBM 8218 Cabling Charts
- *IBM Token-Ring Network Installation Guide*
- Labels for 8218 unit numbers and 8218 cable connections.

This task consists of the following steps:

1. Install the 8218s in racks or component housings as indicated on the IBM 8218 Cabling Charts and the Rack Inventory Charts.
2. Test the operation of the 8218s as described in the *IBM Token-Ring Network Installation Guide*.
3. Connect crossover patch cables and patch cables to the ring in (RI) and ring out (RO) receptacles of each of the 8218s shown on a chart as indicated on the IBM 8218 Cabling Chart.
4. Label each connection and each 8218.
5. Check to make sure that each 8218 has been installed in the rack as shown on the Rack Inventory Chart and that all cable connections have been made as shown on the IBM 8218 Cabling Chart. Check the accuracy of all 8218 labeling.

Installing IBM 8219 Optical Fiber Repeaters

To perform this task you will need:

- All of the 8219s specified for the ring
- All of the patch cables specified for 8219 connections
- Filled-out Rack Inventory Charts
- Filled-out IBM 8219 Cabling Charts
- *IBM Token-Ring Network Installation Guide*
- Labels for 8219 unit numbers and 8219 cable connections.

This task consists of the following steps:

1. Install the 8219s in racks or component housings as indicated on the IBM 8219 Cabling Charts and the Rack Inventory Charts.
2. Check the operation of each 8219 as described in the *IBM Token-Ring Network Installation Guide*.
3. Connect patch cables to the three connectors on the 8219 as indicated on the IBM 8219 Cabling Chart.
4. Label each connection and each 8219.
5. Check to make sure that each 8219 has been installed in the rack as shown on the Rack Inventory Chart and that all cable connections have been made as shown on the IBM 8219 Cabling Chart. Check the accuracy of all 8219 labeling.

Installing IBM 8220 Optical Fiber Converters

To perform this task you will need:

- All of the 8220s specified for the ring
- All of the patch cables specified for 8220 connections
- Filled-out Rack Inventory Charts
- Filled-out IBM 8220 Cabling Charts
- *IBM Token-Ring Network Installation Guide*
- Labels for 8220 unit numbers and 8220 cable connections.

This task consists of the following steps:

1. Install the 8220s in racks or component housings as indicated on the IBM 8220 Cabling Charts and the Rack Inventory Charts.
2. Check the operation of each 8220 as described in the *IBM Token-Ring Network Installation Guide*.
3. Connect patch cables to the three connectors on the 8220 as indicated on the IBM 8220 Cabling Chart according to the instructions in the *IBM Token-Ring Network Installation Guide*.
4. Label each connection and each 8220.
5. Check to make sure that each 8220 has been installed in the rack as shown on the Rack Inventory Chart and that all cable connections have been made as shown on the IBM 8220 Cabling Chart. Check the accuracy of all 8220 labeling.

Installing Adapters in Attaching Devices

To perform this task you will need:

- Attaching devices
- Adapter cards, adapter cables, associated software, and documentation.

Follow the instructions in your adapter guide to operations to install the adapter and its associated software in your attaching device. Use the built-in diagnostics to ensure that the adapter is operating properly.

Checking the Operation of Each Ring

To perform this task you will need:

- For rings using IBM 8228s, attaching devices with network adapters and a network application program installed
- For rings using IBM 8230s, a single attaching device with the IBM 8230 Controlled Access Unit Maintenance Facility installed.

When all of the previous tasks have been completed, to ensure that the ring is operable, we recommend that you follow the procedures for checking a newly installed network as described in the *IBM Token-Ring Network Installation Guide*.

Installing Bridges

Follow the instructions in your bridge's guide to operations to install the bridge.

Checking the Operation of Multiple-Segment Networks

To perform this task you will need

at least one attaching device with a network adapter and a network application program installed on each segment of the network.

When all of the previous tasks have been completed, we recommend that you follow the procedures for checking a newly installed multiple-segment network as described in the *IBM Token-Ring Network Installation Guide* to ensure that the ring will operate. A LAN segment is any portion of a LAN (for example, a single ring or bus) that can operate independently but is connected to the establishment network via bridges.