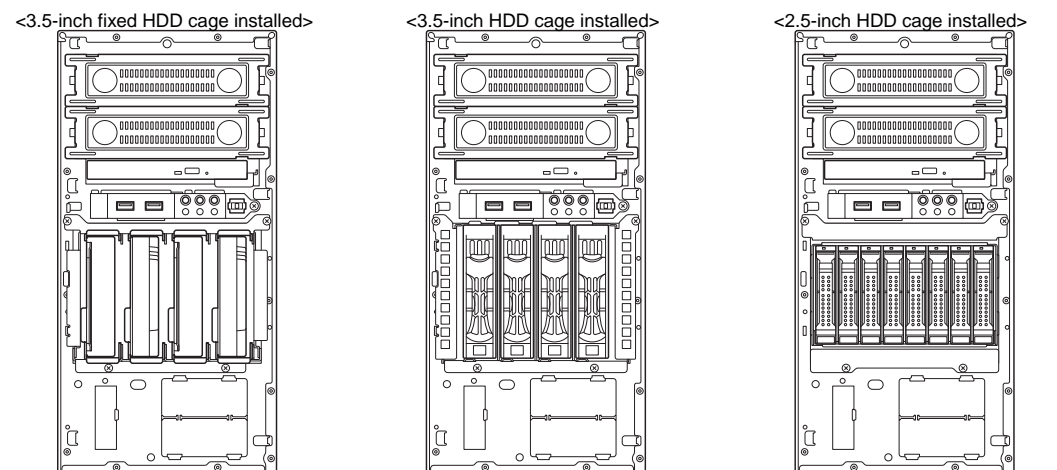


## 1.12 HDD Cages

N8154-53F 3.5-inch fixed HDD cage, N8154-54F 3.5-inch HDD cage, or N8154-55F 2.5-inch HDD cage can be installed in the HDD bay in this server.

**Important** Use hard disk drives provided by NEC.

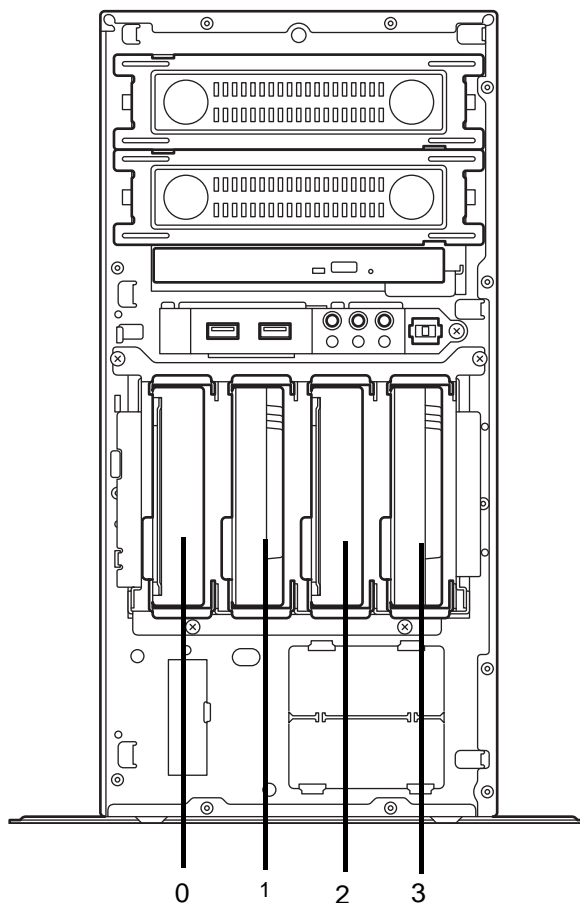


**Important** Install the hard disk drives sequentially starting from slot 0.

### 1.12.1 Installing a 3.5-inch fixed HDD cage and hard disk drives

By installing a 3.5-inch fixed HDD cage, up to four 3.5-inch SATA fixed hard disk drives can be mounted.

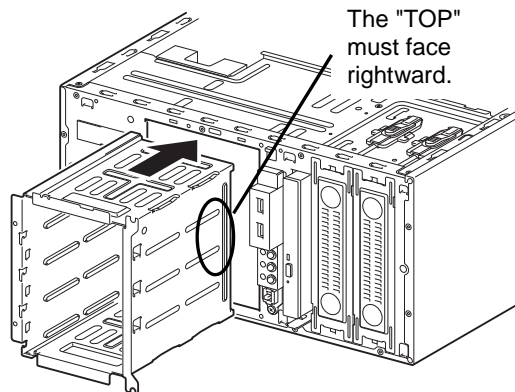
**Important** Use hard disk drives provided by NEC.



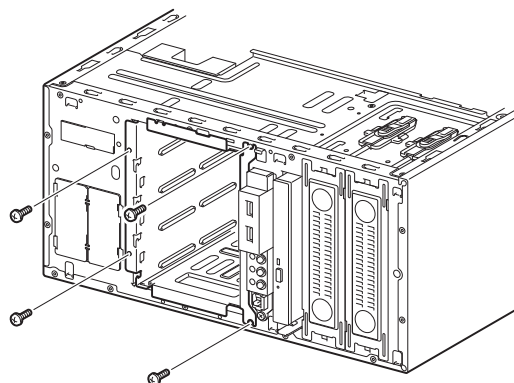
**Important** Install the hard disk drives sequentially starting from slot 0.

Install a 3.5-inch fixed HDD cage and hard disk drives in the server by using the following procedure.

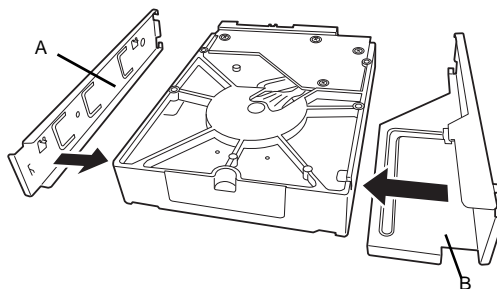
1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see Chapter 2 (*1.4 Removing the Side Cover and 1.5 Removing the Front Bezel*).
3. Insert the HDD cage into the HDD bay. The "TOP" must face rightward.



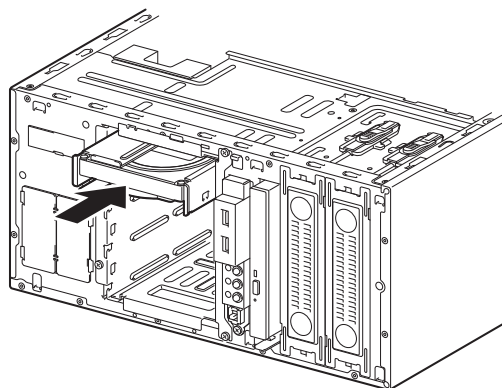
4. Attach the HDD cage by using the four screws.



5. Place the unit so that the flat face of the hard disk drive faces downward. Mount the HDD trays that come with the HDD cage from both sides of the 3.5-inch hard disk drive. Mount the tray marked "A" on the left side, and the tray marked "B" on the right side.



6. Insert the hard disk drive attached to the tray with HDD tray "A" facing the right side into the slot of the HDD cage until it clicks, indicating that it is locked.



7. Connect the interface cables and power cable to the hard disk drive. Use the interface cables that come with the HDD cage. For details about cable connection, see 1.16 *Connecting Cables*.

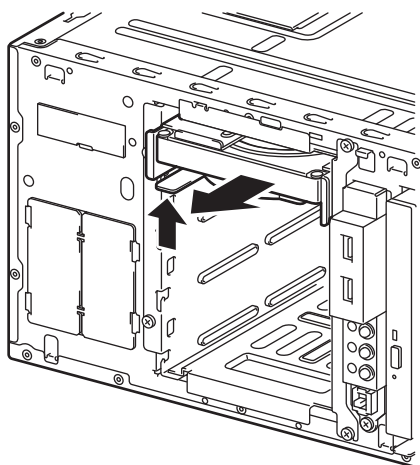
### 1.12.2 Removing the 3.5-inch fixed hard disk drives

Remove the 3.5-inch fixed hard disk drives from the HDD cage by using the following procedure.

**Important**

When disposing of the hard disk drives, follow the instructions described in Chapter 1 (1.2 *Disposal of consumables and servers*) in the Maintenance Guide.

1. See steps 1 to 3 in Chapter 2 (1.3 *Overview of Installation and Removal*) for preparations.
2. To remove the side cover and front bezel, see Chapter 2 (1.4 *Removing the Side Cover* and 1.5 *Removing the Front Bezel*).
3. Disconnect the power cable and interface cable from the hard disk drives.
4. Press the part shown in the figure to unlock the HDD tray, and then remove the hard disk drive out from the HDD cage.

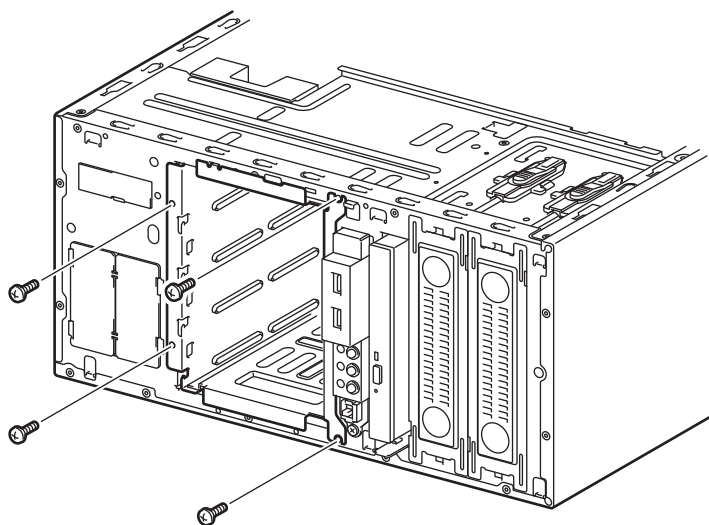


### 1.12.3 Removing the 3.5-inch fixed HDD cage

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Remove the 3.5-inch fixed HDD cage from the server by using the following procedure.

1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see *Chapter 2 (1.4 Removing the Side Cover and 1.5 Removing the Front Bezel)*.
3. To remove the hard disk drives installed in the HDD cage, see *Chapter 2 (1.12.2 Removing the 3.5-inch fixed hard disk drives.)*.
4. Disconnect the interface cable from the motherboard or RAID controller.
5. Remove four screws that attach the HDD cage.

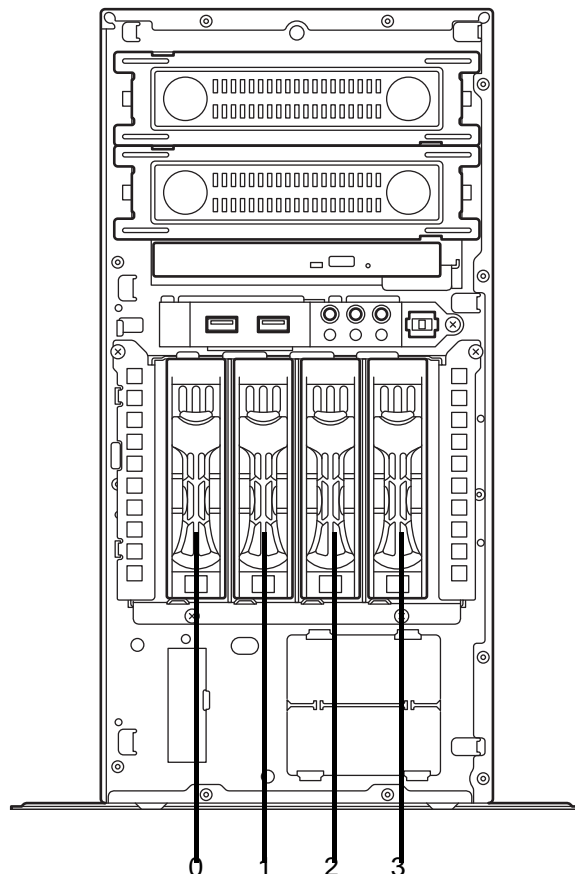


6. Remove the HDD cage from the server.

### 1.12.4 Installing the 3.5-inch HDD cage and hard disk drives

By installing a 3.5-inch HDD cage, up to four 3.5-inch SATA fixed hard disk drives can be mounted.

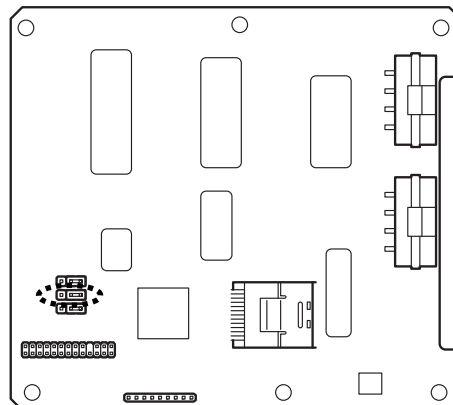
**Important** Use hard disk drives provided by NEC.



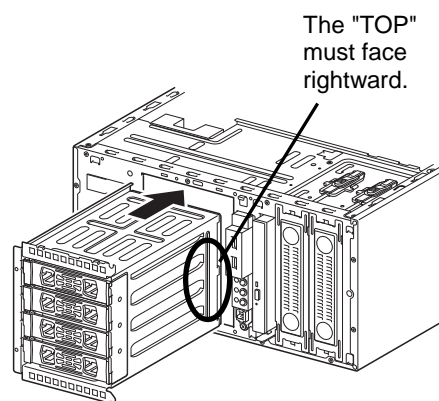
**Important** Install the hard disk drives sequentially starting from slot 0.

Install a 3.5-inch HDD cage and hard disk drives in the server by using the following procedure.

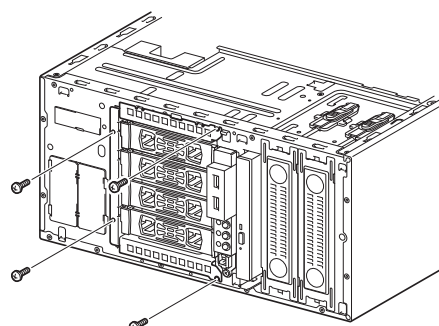
1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see *Chapter 2 (1.4 Removing the Side Cover and 1.5 Removing the Front Bezel)*.
3. Set the jumper for the backplane installed in the HDD cage. The jumper setting when the onboard SATA controller (LSI Embedded MegaRAID) is used differs from that when the optional RAID controller is used. For details, see *1.9 Use of Internal Hard Disk Drives in the RAID System*.



4. Insert the HDD cage into the HDD bay. The "TOP" must face rightward.

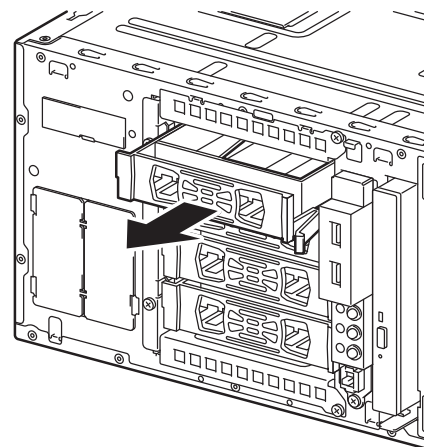


5. Attach the HDD cage by using the four screws.



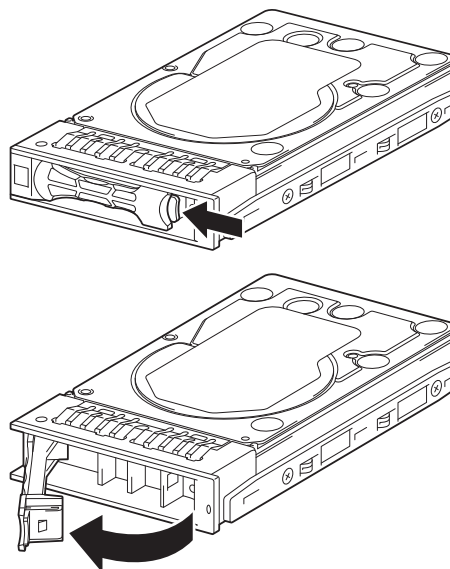
6. Connect the interface cables and power cable to the backplane board installed in the HDD cage. Use the interface cables that come with the HDD cage. For details about cable connection, see *1.16 Connecting Cables*.
7. Reassemble the server.

8. Remove the dummy tray from the HDD cage.

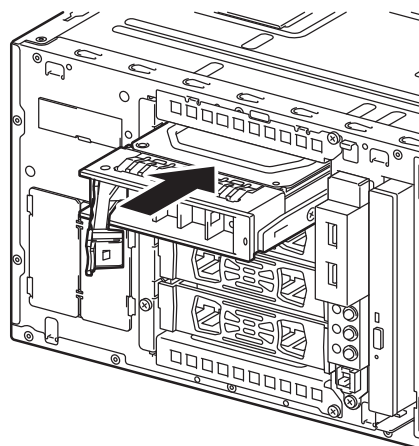
**Important**

- Keep the dummy trays for future use.
- Keep the dummy trays installed in slots where hard disk drives are not installed.

9. Unlock the handle in the tray.



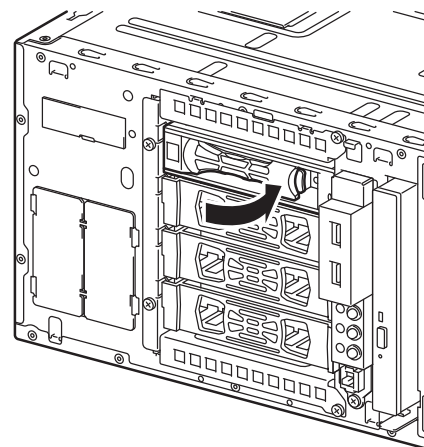
10. Hold the tray firmly and insert it in the slot.

**Note**

- Push it all the way until the handle's lock touches the frame.
- Hold the drive carrier firmly with both hands.



11. Gently close the handle until it clicks, indicating that it is locked.

**Note**

When you push the drive into the slot, confirm the handle got hooked on the frame.

### 1.12.5 Removing the 3.5-inch hard disk drives

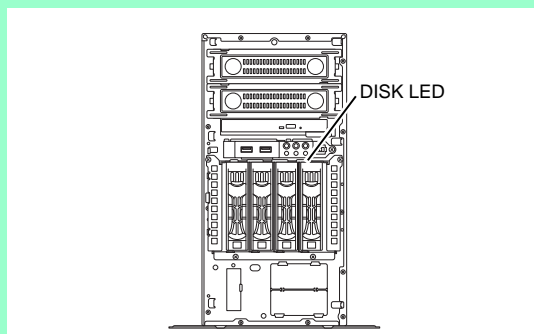
Remove the 3.5-inch hard disk drives from the HDD cage by using the following procedure.

**Important**

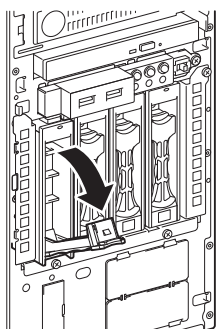
When disposing of the hard disk drives, follow the instructions described in *Chapter 1 (1.2 Disposal of consumables and servers)* in the Maintenance Guide.

**Note**

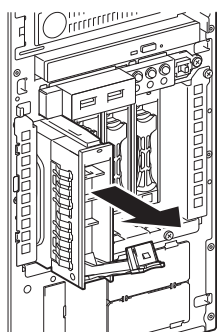
If you remove a disk due to a hard disk drive failure, check the slot with its DISK LED lit in amber.



1. To remove the front bezel, see *Chapter 2 (1.5 Removing the Front Bezel)*.
2. Release the lock lever and open the handle.



3. Hold the tray firmly and pull it toward the front.

**Note**

Do not pull the handle to remove the hard disk drive.  
Doing so may damage the handle.

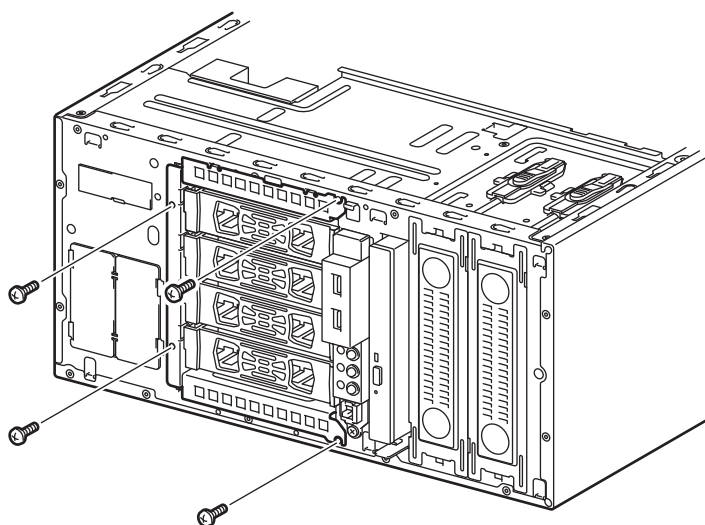
**Important**

Do not use this server while removing the hard disk drive.

### 1.12.6 Removing the 3.5-inch HDD cage

Remove the 3.5-inch HDD cage from the server by using the following procedure.

1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see *Chapter 2 (1.4 Removing the Side Cover and 1.5 Removing the Front Bezel)*.
3. To remove the hard disk drives installed in the HDD cage, see *Chapter 2 (1.12.5 Removing the 3.5-inch hard disk drives)*.
4. Disconnect the interface cable and power cable from the backplane installed in the HDD cage.
5. Disconnect the interface cable from the motherboard or RAID controller.
6. Remove four screws that attach the HDD cage.



7. Remove the HDD cage from the server.

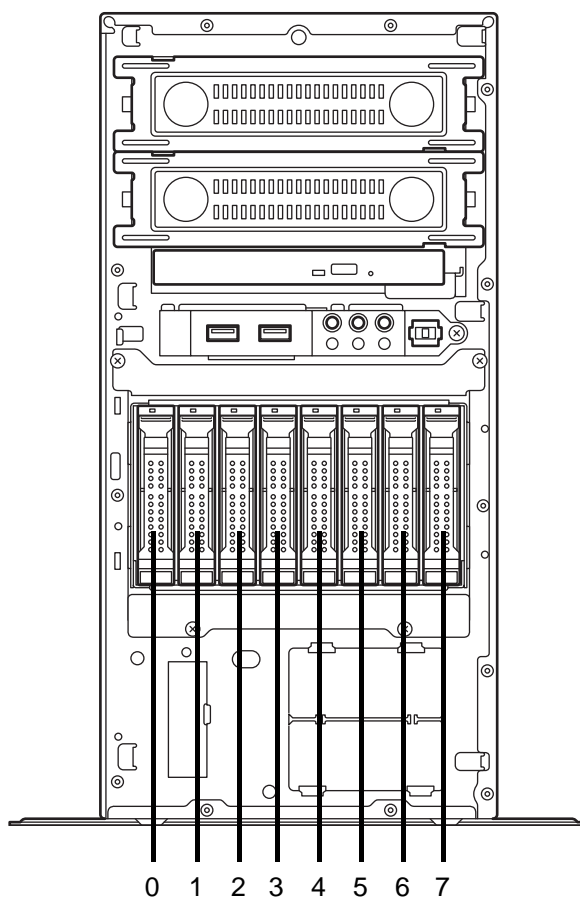
### 1.12.7 Installing the 2.5-inch HDD cage and hard disk drives

By installing a 2.5-inch HDD cage, up to eight 2.5-inch SAS/SATA hard disk drives or solid state drives (SSD) can be mounted.

#### Combining SATA/SAS hard disk drives and SSDs

- An optional RAID controller is required to use SAS hard disk drives together with SSDs.
- An optional RAID controller is required to install five or more hard disk drives.
- You cannot mix them within the same RAID array.
- You cannot use SAS hard disk drives that have different rotation speeds.
- Mount SATA/SAS hard disk drives in order from slot 0, and mount the SSDs to the remaining slots.

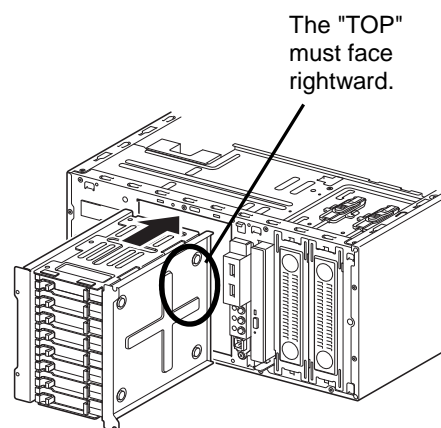
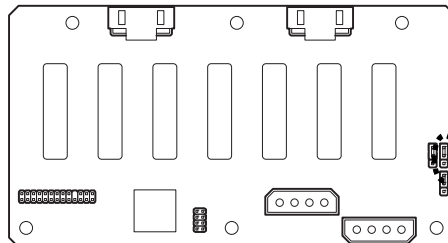
**Important** Use hard disk drives provided by NEC.



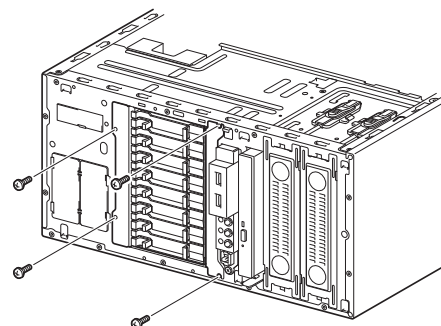
**Important** Install the hard disk drives sequentially starting from slot 0.

Install a 2.5-inch HDD cage and hard disk drives in the server by using the following procedure.

1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see *Chapter 2 (1.4 Removing the Side Cover and 1.5 Removing the Front Bezel)*.
3. Set the jumper for the backplane installed in the HDD cage. The jumper setting when the onboard SATA controller (LSI Embedded MegaRAID) is used differs from that when the optional RAID controller is used. For details, see *1.9 Use of Internal Hard Disk Drives in the RAID System*.
4. Insert the HDD cage into the HDD bay. The "TOP" must face rightward.

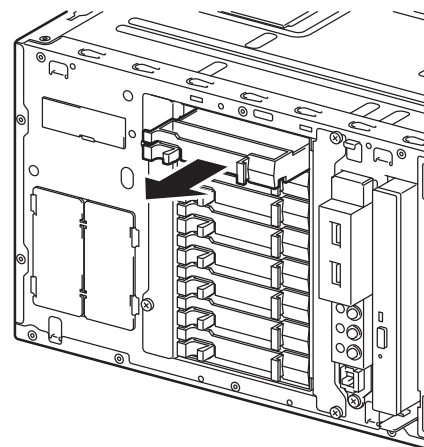


5. Attach the HDD cage by using the four screws.



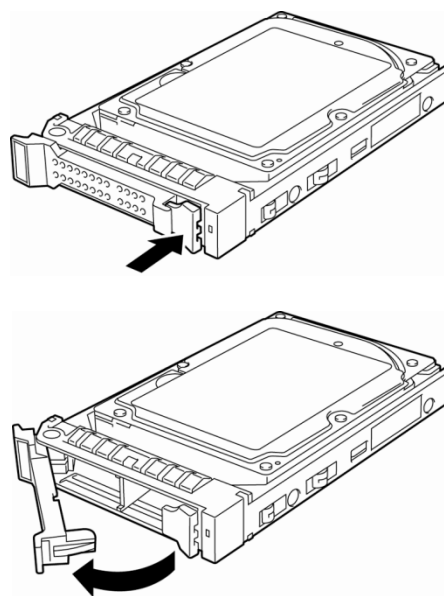
6. Connect the interface cables and power cable to the backplane board installed in the HDD cage. Use the interface cables that come with the HDD cage. For details about cable connection, see *1.16 Connecting Cables*.
7. Reassemble the server.

8. Remove the dummy tray from the HDD cage.

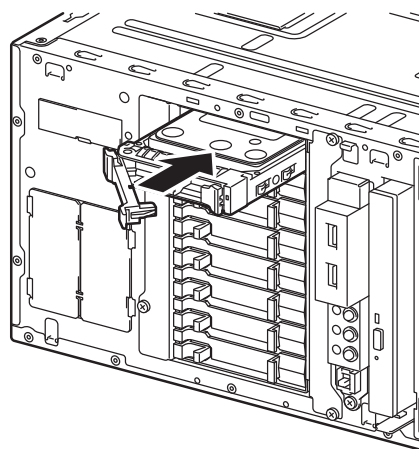
**Important**

- Keep the dummy trays for future use.
- Keep the dummy trays installed in slots where hard disk drives are not installed.

9. Unlock the handle in the tray.

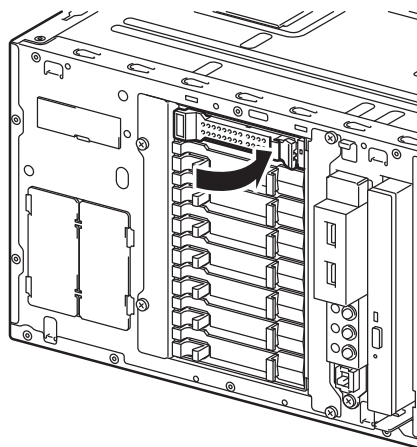


10. Hold the tray firmly and insert it in the slot.

**Note**

- Push it all the way until the handle's lock touches the frame.
- Hold the drive carrier firmly with both hands.

11. Gently close the handle until it clicks, indicating that it is locked.

**Note**

When you push the drive into the slot, confirm the handle got hooked on the frame.

### 1.12.8 Removing the 2.5-inch hard disk drives

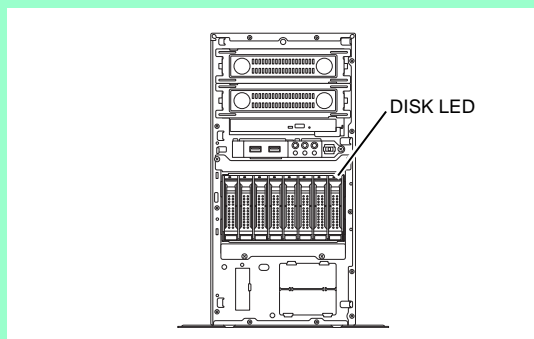
Remove the 2.5-inch hard disk drives from the HDD cage by using the following procedure.

**Important**

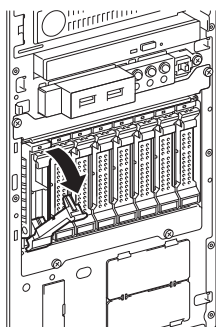
When disposing of the hard disk drives, follow the instructions described in *Chapter 1 (1.2 Disposal of consumables and servers)* in the Maintenance Guide.

**Note**

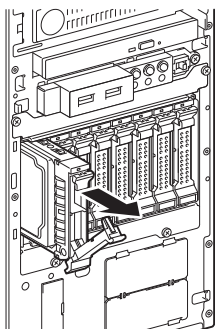
If you remove a disk due to a hard disk drive failure, check the slot with its DISK LED lit in amber.



1. To remove the front bezel, see *Chapter 2 (1.5 Removing the Front Bezel)*.
2. Release the lock lever and open the handle.



3. Hold the tray firmly and pull it toward the front.

**Note**

Do not pull the handle to remove the hard disk drive.  
Doing so may damage the handle.

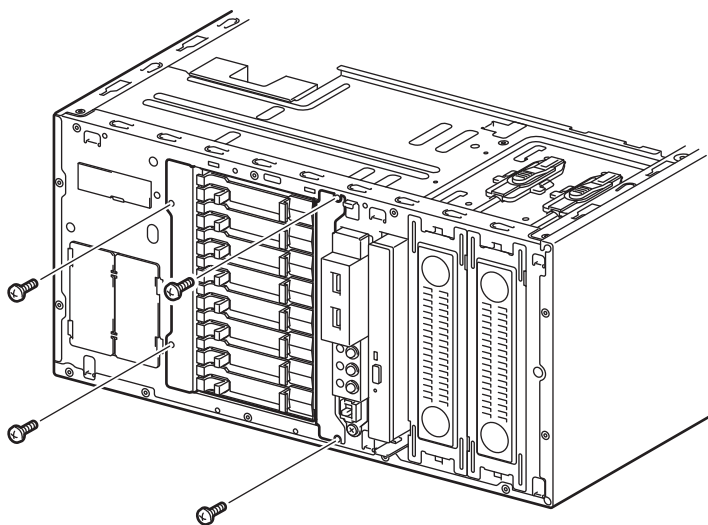
**Important**

Do not use this server while removing the hard disk drive.

### 1.12.9 Removing the 2.5-inch HDD cage

Remove the 2.5-inch HDD cage from the server by using the following procedure.

1. See steps 1 to 3 in *Chapter 2 (1.3 Overview of Installation and Removal)* for preparations.
2. To remove the side cover and front bezel, see *Chapter 2 (1.4 Removing the Side Cover and 1.5 Removing the Front Bezel)*.
3. To remove the hard disk drives installed in the HDD cage, see *Chapter 2 (1.12.8 Removing the 2.5-inch hard disk drives)*.
4. Disconnect the interface cable and power cable from the backplane installed in the HDD cage.
5. Disconnect the interface cable from the motherboard or RAID controller.
6. Remove four screws that attach the HDD cage.



7. Remove the HDD cage from the server.