A PS5500 array includes 48 hot-swappable disk drives.

**Disk Drive Numbering**

Disk drives are numbered from 0 to 47 in a PS5500 array. Starting from the left side of the array, disk drives 0 to 3 comprise the first column of disk drives (numbered from the front to the rear of the array), disk drives 4 to 7 comprise the second column of disk drives, and so on. See Figure 1.

![Figure 1: PS5500 Disk Drive Numbering](image)

When you remove the bezel, you will see a row of 48 LEDs at the bottom of the front panel. Each LED corresponds to a disk drive and shows disk activity. The disk drive LEDs are organized in 12 sets of four LEDs. From left to right, the first set corresponds to disk drives 0 to 3 (the first column of disk drives), the second set of LEDs corresponds to disk drives 4 to 7 (the second column of disk drives), and so on.

**Disk Drive Status**

You can identify a failed disk drive failure by:

- **LEDs.** The disk drive hardware status LED (top right LED on the front of the array) is flashing yellow, and the LED on the disk drive is lit (yellow). See Figure 2 and Table 1.
- **Messages.** A message on the LCD panel (located behind the bezel), on the console, in the event log, or in the Group Manager GUI Alarms panel describes a disk drive failure.

- **Group Manager GUI and CLI output.** The Member Controllers window or the `member select name show disks` command output shows a failure.

![Figure 2: LED on Disk Drive](image)

### Table 1: Disk Drive LED Descriptions

<table>
<thead>
<tr>
<th>LED Location</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front of array</td>
<td>Off</td>
<td>Normal operation or no power.</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>Array is in standby mode.</td>
</tr>
<tr>
<td></td>
<td>Flashing yellow</td>
<td>One or more drive failures.</td>
</tr>
<tr>
<td>Array front panel (behind bezel)</td>
<td>Off</td>
<td>No power.</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Normal operation.</td>
</tr>
<tr>
<td></td>
<td>Flashing green</td>
<td>Disk activity.</td>
</tr>
<tr>
<td>On disk drive</td>
<td>Off</td>
<td>Normal condition or no power.</td>
</tr>
<tr>
<td></td>
<td>Yellow</td>
<td>Failed disk drive.</td>
</tr>
</tbody>
</table>

### Disk Drive Handling Requirements

Handle the disk drives as follows:

- Protect disk drives from electrostatic discharge. When handling a disk drive, always wear an electrostatic wrist strap or a similar protective device.

- Hold a disk drive only by the plastic part of the carrier. Do not pick it up by the release lever.

- Insert a disk drive in the correct position, with the latch toward the rear of the array (where the power supplies and control modules are). Do not force a disk drive into a slot.
• Let disk drives warm to room temperature before installation. For example, let a disk drive sit overnight before installing it in an array.

• Do not remove a disk drive from its carrier. This action will void your warranty and support contract.

• Maintain array cooling. Minimize the time that the chassis cover is open.

• Install only disk drives of the same capacity, speed, and spin rate in an array. If an array contains disk drives with different sizes, in some cases, the smallest disk drive in the array will determine how much space can be used on each disk. For example, if the smallest disk drive is 400GB, only 400GB of space will be available for use on each disk.

• Do not remove a functioning disk drive from an array. If you remove a spare disk drive, replace it as soon as possible.

• Store replacement disk drives in the packaging in which they were shipped.

**Replacing a Disk Drive**

Do not remove a failed disk drive until you are ready to replace it.

To replace a failed disk drive:

1. Use an electrostatic wrist strap or a similar protective device.

2. Remove the bezel:
   a. Insert the bezel key and turn it clockwise to unlock the bezel.
   b. Push the bezel release latch up to disengage the bezel from the chassis.
   c. Hold the bezel and pull the bezel away from the chassis.

3. Unlock and open the chassis cover:
   a. Facing the front of the array, use a flathead screwdriver to turn the cam screws on the right side and left side of the front panel counter-clockwise.
   b. Hold the chassis handles on the right side and the left side of the front panel and pull the chassis toward you, exposing the disk drives.

4. Confirm the disk drive you want to remove. The LED on a failed disk drive will be lit (yellow).
5. Remove the failed drive:
   
   a. Open the disk drive release lever by sliding the latch in the direction of the arrow on the disk drive and lifting up the lever. This will disengage the disk drive from the slot.
   
   b. Wait 30 seconds to allow the disk drive to stop spinning and the heads to land.
   
   c. Holding the sides of the disk drive, pull up and remove the drive from the slot.

   **Caution:** Do not pull the drive up by its lever.
6. Install the replacement drive:

   a. Open the disk drive release lever on the replacement disk by sliding the latch in the direction of the arrow on the disk drive and pulling up the latch.

   b. Hold the replacement disk drive by the plastic carrier and position the disk drive so that the latch is toward the rear of the array (where the power supplies and control modules are). Start to insert the drive (1).

   c. Slide the replacement disk drive gently into the slot until you feel resistance (2).
d. Push the disk drive the rest of the way into place. The lever should still be open. Do not force the lever closed (3).

Caution: Forcing the lever closed can break the latch and make the drive unusable.

e. Pull back the latch (4).
f. Holding the latch open, lower the lever until the drive is fully seated and flush with the other drives (5). Keep holding the latch open.

![Diagram](image5.png)

```
5
```

g. Push the latch forward and make sure it engages with the slot in the drive carrier (6).

![Diagram](image6.png)

```
6
```

h. Let the latch slide forward and make sure it is firmly closed (7).

![Diagram](image7.png)

```
7
```
7. Close and lock the chassis cover:
   a. Slide the chassis completely into the rack. If the cover does not close completely, make sure the cam screws are turned counter-clockwise before you slide the chassis into the rack.
   b. Use a flathead screwdriver to turn the cam screws on the right side and left side of the front panel clockwise.

8. Reinstall the bezel:
   a. Facing the front of the rack, fit the right side of the bezel into the right side of the chassis.
   b. Push the bezel toward the chassis until the left side of the bezel engages with the chassis.
   c. Insert the bezel key and turn it counter-clockwise to lock the bezel to the chassis.

Make sure the new disk drive is operational. See Disk Drive Status.

When you replace a failed disk drive, return the drive in the packaging in which the replacement card was shipped. Contact your PS Series support provider for information about returning hardware.

**Contacting Dell**

You can access Dell Support through the following websites:

- support.dell.com
- support.dell.com/EqualLogic
- support.jp.dell.com (Japan only)
- support.euro.dell.com (Europe only)