PROMISE TECHNOLOGY VTrak Flash Array EFA5310 *Quick Start Guide*

1: Unpacking

The VTrak Flash Array EFA5310 box contains the following items:

- This Quick Start Guide
- One VTrak Flash Array EFA5310
- Two 1.5m (4.9 ft) Power cords
- DB9-to-RJ11 serial data cable
- Sliding rail assembly for rack mounting

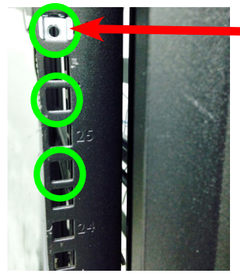
Note

Additional hardware installation instructions are provided in the Product Manual. Please refer to the Product Manual for instructions on how to install hard disk drives into the drive carriers and insert the carriers into the enclosure.

2: Install in Rack

To install the 2U VTrak enclosure into a rack with the supplied mounting rails:

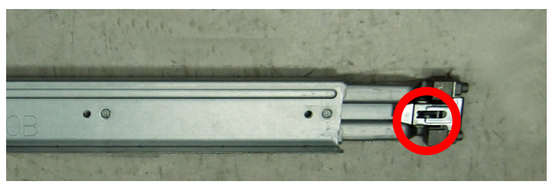
1. Determine what height to place the 2U enclosure in the rack, then place the right and left rack rails at the same height on in the right and left rack position. Choose the mounting holes accordingly for your rack system. Consult the documentation for your rack if you are unsure which holes to use. Note that three holes are required on each front post, the uppermost of the three to be used for the flange nuts to anchor the enclosure to the rack posts.



Insert flange nut in each front post

Notice that each end of the sliding rails have a lever to operate the lock mechanism that grips the rack post.

Lock release lever (back left)

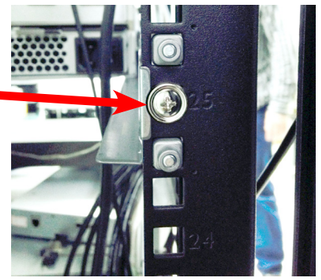


2. Secure the rails to the rack posts. Make sure the rack rails are properly oriented in the rack.
   To set the rails into the rack posts and secure the rails:
   a. Press the spring lock then insert the studs into the selected square holes on the rack post.

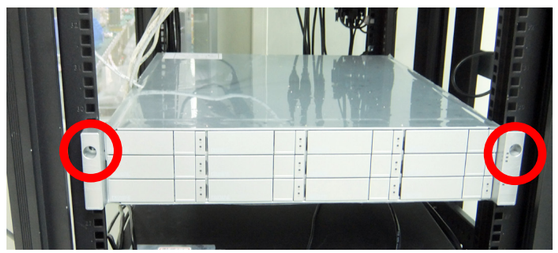
Press lever to release lock (front right)

   b. Press the spring lock on the other end of the rail and insert the studs into the selected mounting hole on the rack post. If necessary, extend the rail to reach the post.
   c. Use the rail screws to anchor the rack rail to the post.
   d. Make sure the rack rail is aligned, secure, stable and in the correct place.
   e. Perform steps a through c above for the other rail.
   f. Make sure the rack rails are aligned, secure, stable and in place. See figure below.

Back left rail secured to post



3. Secure the enclosure to the rack.
   - Use the included screws and flange nuts to lock the unit in to place in the rack.
   - Use the attaching screws and flange nuts that came with the mounting hardware.



Insert screws on each side of the front of the enclosure to secure it to the rack posts

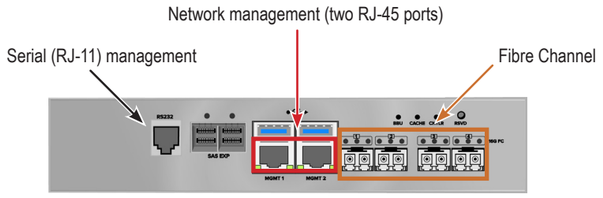
3: Management Connections

This section describes how to establish a management connection to the VTrak Flash Array EFA5310 subsystem. There are two methods to establish a management connection, Ethernet and Serial connection. For the initial setup, it is necessary to establish the Ethernet management connection via at least one of the four RJ-45 network ports.

The VTrak Flash Array EFA5310 also features a Command Line Interface (CLI) for system management via a terminal emulation program (such as Microsoft HyperTerminal).

Please refer to the *Product Manual* for instructions on how to manage the system using the CLI.

VTrak Flash Array EFA5310 controller RJ-45 and Fibre Channel ports



Management Path Network Connection

Each VTrak Flash Array EFA5310 controller has two 1000BASE-T Ethernet ports for management over the network. Connect at least one of the management ports for initial setup.

To establish the management path network connection:

1. Attach one end of an Ethernet cable to the network connector or standard NIC in the Host PC. Attach the other end of the Ethernet cable to a port on a standard network switch.
2. Attach one end of an Ethernet cable to a port on the same network switch. Attach the other end of the Ethernet cable to one of the Management Ports on a controller. Use another Ethernet cable to connect one of the Management Ports on the remaining controller.

   If you have multiple VTrak Flash Array EFA5310 subsystems, repeat steps 1 and 2 as needed.

   See the illustration “Management and Fiber Channel data connections” in the next column for a cabling example.

Note

All RJ-45 network management ports on a VTrak Flash Array EFA5310 subsystem share the same Virtual IP address. The default Virtual IP address, 10.0.0.1, applies to all RJ-45 network ports. If you change the Virtual IP address, the change applies to all RJ-45 ports.

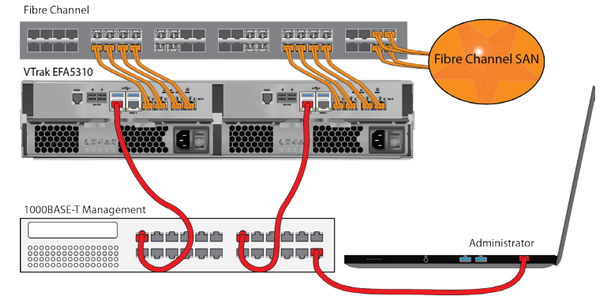
4: Fibre Channel Connections

Fibre Channel SAN data path

The Fibre Channel data network for the controllers requires the following items:

- A Fibre Channel connection in each host PC or server
- A Fibre Channel transceiver for each connected port on the subsystem
- A Fiber Channel switch
- Fiber Optic cabling

Management and Fiber Channel SAN data connections



Note

In the illustration above, the network management path is represented by the red colored cables. The Fibre Channel SAN data path is represented by the orange colored cables

Fibre Channel SAN connections

For the Fibre Channel storage area network (SAN):

1. For servers equipped with Fibre Channel HBA cards, connect Fiber Optic cables between the Fibre Channel ports in both host PCs or servers and the ports on a Fibre Channel network switch.
2. Connect Fiber Optic cables between the Fibre Channel port on the controllers and a Fibre Channel port on a Fibre Channel switch or Fibre Channel capable switch (SFP). If you have multiple VTrak EFA5310 subsystems, host PCs or servers, repeat the steps as required.

Important

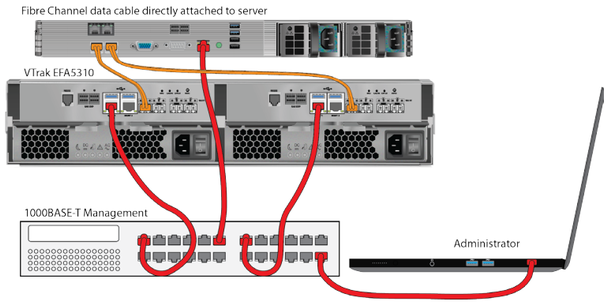
For a list of supported HBAs, switches, and SFP transceivers, download the latest compatibility list from PROMISE support: http://www.promise.com/support/.

Fibre Channel DAS connections

For Fibre Channel direct attached storage (DAS):

1. For each attached server or host PC, connect Fiber Optic cable to the Fibre Channel port on the host PC or server.
2. Connect the other end of the Fiber Optic cable to a Fibre Channel port on one of the controllers.

Direct Attached Storage (DAS) Fibre Channel connection



Fiber Channel DAS data path

The Fibre Channel data network for the controllers requires the following items:

- A Fibre Channel connection in each host PC or server
- An Fibre Channel transceiver for each connected port on the subsystem
- Fiber Optic cabling (LC/LC 62.5/125µm MMF)

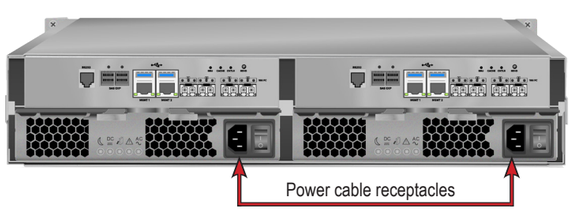
5: Connecting the Power

VTrak Flash Array EFA5310 enclosures are equipped with two power supplies for each unit. The VTrak Flash Array EFA5310 will power on when the power is connected and the switch on the power supplies are switched on.

Important

If you have a SAN, DAS, or Cascade with JBOD Expansion, always power on the JBOD subsystems first.

Power supplies on VTrak Flash Array EFA5310



6: Power on

The power supply modules include the cooling fans that cool the enclosure. Both power supplies should be powered up when starting the system. Make sure the power switch on each power supply is in the *On* position.

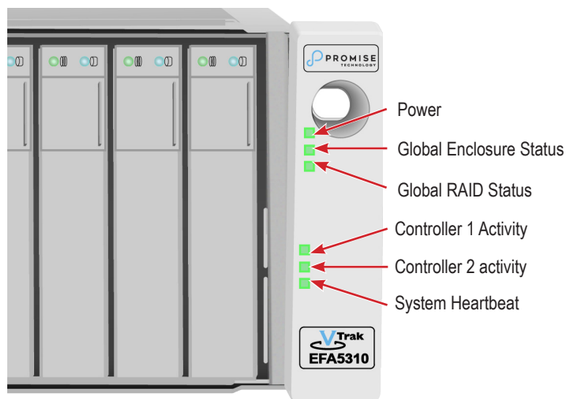
Front LED Behavior

When boot-up is finished and the subsystem is functioning normally:

- Power, FRU and Logical Drive LEDs display Green continuously
- Controller Activity LED flashes Green when there is controller activity.
- System Heartbeat LED repeats the following pattern depending on the number of controllers present:
  - Dual Controller: Green light on for one second, then off for one second.
  - Single Controller: Green light on for one second, then off for three seconds.

Also on the front panel, there are two LEDs on each drive carrier. These report the presence of power and a physical drive, and the current condition of the drive.

LED indicators on front right of enclosure



7: Setup

This final section of the Quick Start Guide provides an introduction to using the Setup Wizard for basic RAID configuration setup. The Setup Wizard is part of WebPAM PROe web-based management system. For manual RAID configuration or if you prefer to setup the system via a serial connection, using a keyboard and monitor directly connected to the VTrak EFA5310 subsystem, please read the *Product Manual* for instructions.

Connect the computer used for system configuration to the switch used for the network management connection of the VTrak Flash Array EFA5310 subsystem. Change the network settings on the administrator computer to allow for compatible IP settings with the default IP settings of the VTrak Flash Array EFA5310 subsystem.

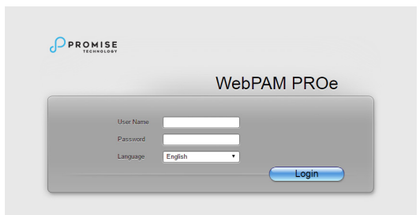
The default Virtual IP address of the VTrak Flash Array EFA5310 subsystem is 10.0.0.1, so make sure the computer IP settings are in the 10.x.x.x subnet. You can use a compatible web browser and standard HTTP (http://) or secure HTTP (https://) connection to access WebPAM PROe. Later you can change the IP settings of the VTrak Flash Array EFA5310 device to suit the IP address scheme of your network.

Important

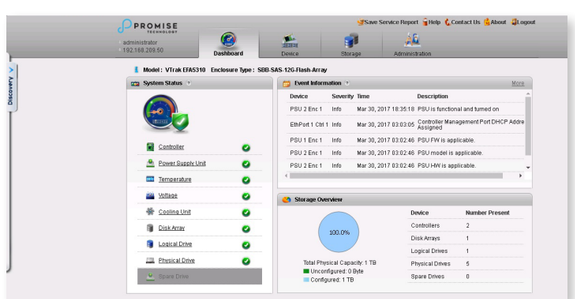
Later, if you choose to enable DHCP for management and data networks, have your Network Administrator dedicate an IP address for the Management port so that is does not change.

Logging in to WebPAM PROe

1. Launch your Browser.
2. In the Browser address field, type the default IP address of the subsystem, 10.0.0.1.
3. The initial HTTP connection is automatically redirected to a secure HTTPS connection. Using the default IP address, the complete address looks like **https://10.0.0.1**



4. Type the default user name: **`administrator`** in the **User Name** entry field and the default password: **`password`** in the **Password** entry field. Click on the **Login** button.
   The Dashboard menu appears.



Creating Logical Drives with the Wizard

To create a logical drive for SAN operation:

1. After logging in, make sure the menu is displaying in **System** configuration menu (displayed by default), click on the **Storage** tab, then the **Wizard** icon. The Wizard menu appears.
2. Click to choose one of the configuration options (see below):
3. Click the **Next** button. Follow the directions below according to which menu option you chose.

Optimal Configuration

Choose a script designed to set up the disk arrays, logical drives, and spare drives for a specific target application.

Each script requires a specific model of RAID subsystem. And most scripts require a specific model and number of JBOD expansion units. These scripts cannot be modified.

Automatic

Specify all parameters for a new disk array. This option makes one logical drive automatically. You can create additional logical drives at a later time, if additional configurable capacity is available. It does not make a hot spare drive.

When you choose the Automatic option, the following parameters appear on the screen:

- **Disk Arrays** – The number of physical drives in the disk array, their ID numbers, configurable capacity, and the number of logical drives to be created
- **Logical Drives** – The ID number of the logical drive(s), their RAID level, capacity, and stripe size
- **Spare Drives** – The physical drive slot number of the dedicated hot spare assigned to this disk array. A hot spare drive is created for all RAID levels except RAID 0, when five or more unconfigured physical drives are available

If you accept these parameters, click the **Submit** button.

The new disk array appears in the Disk Array List on the Information tab.

If you do NOT accept these parameters, use the Express or Advanced option to create your logical drive.

Advanced

When you choose the Advanced option, the *Step 1 – Disk Array Creation* screen displays.

Please refer to the *Product Manual* for instructions on using the **Advanced** option in the Setup Wizard.

Express Configuration

When you choose the Express option, a set of characteristics and options appears on the screen. Choose a configuration according to the most important goal for the system use such as redundancy, performance, or application type.

Please refer to the *Product Manual* for instructions on using the **Express** option in the Setup Wizard.

Note

Please read the *Product Manual* for instructions to use the *Express* and *Advanced* configuration options of the **Setup Wizard**.