# PROMISE TECHNOLOGY

# VTrak E5000 Series *Quick Start Guide*

*VTrak E5600fD*    *VTrak E5300fD*
*VTrak E5800fD*    *VTrak E5320fD*

## 1: UNPACKING

The VTrak E5000 Series box contains the following items:

- One of the following VTrak E5000 Series enclosures:

  - **VTrak E5600fD**    • **VTrak E5300fD**
  - **VTrak E5800fD**    • **VTrak E5320fD**

- This Quick Start Guide
- 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; also for instructions on how to attach and remove the front bezel.
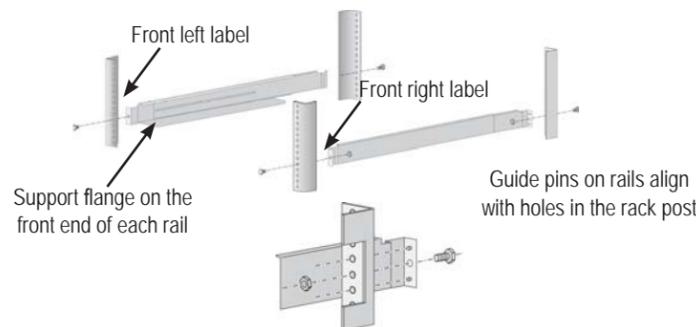
## 2: INSTALL IN RACK

Before installing the VTrak E5000 Series enclosure in the rack, first remove the drive carriers with the hard disks installed to reduce the weight of the enclosure.
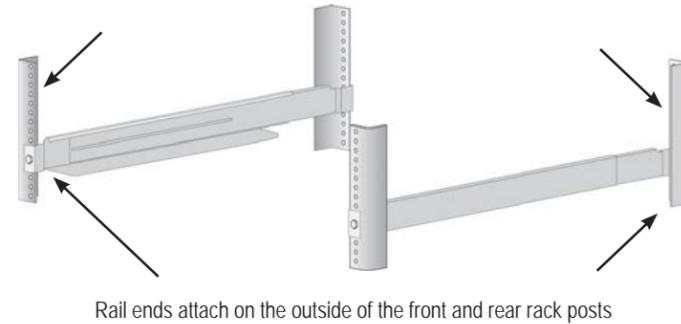
> **Caution**
>
> To lighten the enclosure, remove all hard drive carriers. Replace the drive carriers after the unit is mounted in your rack.

To install the VTrak E5000 Series subsystem into a rack with the supplied mounting rails:

1. Check the fit of the mounting rails in your rack system.
2. Adjust the length of the mounting rails as needed.
- The rear rail slides inside the front rail. The rail halves are riveted together and use no adjustment screws.
- The front-left and front-right mounting rail ends are labeled.
- Be sure the front rail support is on the bottom facing inward.
- All rail ends, front and rear, attach at the outside of the rack posts.

Front left label
Front right label
Support flange on the front end of each rail
Guide pins on rails align with holes in the rack post

- The guide pins at the rail ends align with the holes in the rack posts.
- Use the attaching screws and flange nuts from your rack system. Tighten the screws and nuts according to instructions for your rack system. Place the empty VTrak E5000 Series enclosure onto the rails.
- At least two persons are required to safely lift the subsystem.
- Lift the enclosure itself. Do not lift the subsystem by its handles.

Rail ends attach on the outside of the front and rear rack posts

> **Caution**
>
> Two persons are needed to safely place the unit onto the rails.
> DO NOT lift the unit by the handles

Handles
Rails installed and tightened
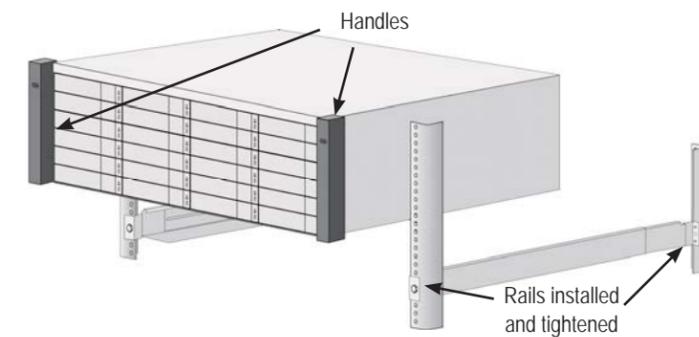
3. Secure the enclosure to the rack.
- The unit attaches to the rack posts using the included screws and flange nuts. One screw each side, in the upper hole only.
- Use the attaching screws and flange nuts that came with the enclosure

Screws and flange nuts attach the VTrak subsystem to the rack posts
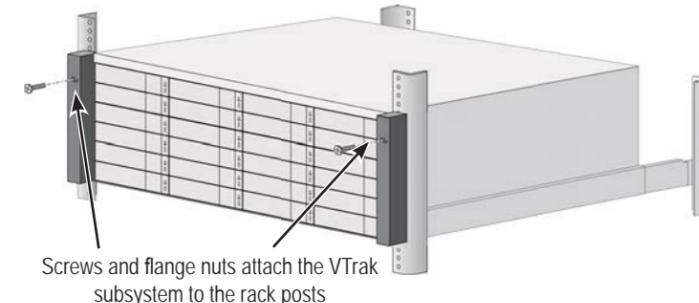
## 3: MANAGEMENT CONNECTIONS

This section describes how to establish a management connection to the VTrak E5000 Series 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 E5000 Series 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 E5000 Series controller RJ-45 and Fibre Channel ports*

Network management (two RJ-45 ports)
Serial (RJ-11) management
Fibre Channel
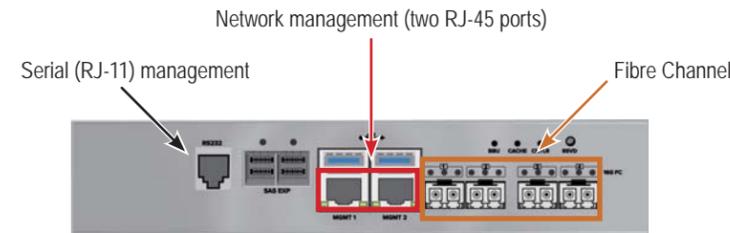
### MANAGEMENT PATH NETWORK CONNECTION

Each VTrak E5000 Series 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 E5000 Series 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 E5000 Series 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.
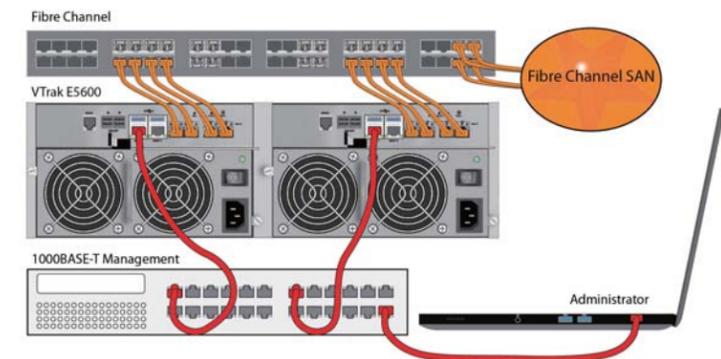
## 4: FIBRE CHANNEL CONNECTIONS

### FIBRE CHANNEL SAN DATA PATH

The Fibre Channel data network for the VTrak E5000 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*

Fibre Channel
VTrak E5600
Fibre Channel SAN
1000BASE-T Management
Administrator

> **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 VTrak E5000 controllers and a Fibre Channel port on a Fibre Channel switch or Fibre Channel capable switch (SFP). If you have multiple VTrak E5000 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 VTrak E5000 controllers.

#### Direct Attached Storage (DAS) Fibre Channel connection
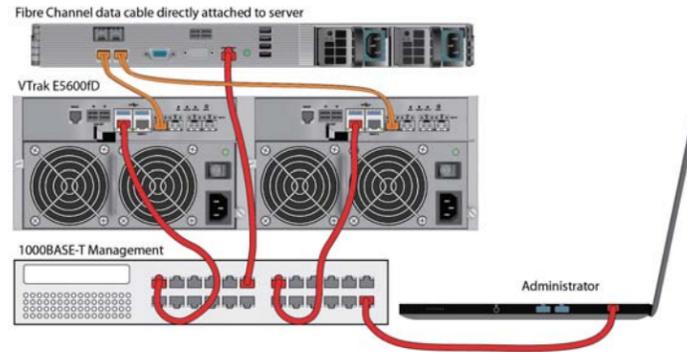


### Fiber Channel DAS data path

The Fibre Channel data network for the VTrak E5000 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 E5000 Series enclosures are equipped with two power supplies for each unit. All VTrak models feature an ON/OFF switch on the power supply unit (PSU). Connect both power supplies to a suitable power source.

The 2U VTrak E5300fD/E5320fD will power on when the power is connected and the switch on the power supply is switched on.

The 3U VTrak E5600fD and 4U VTrak E5800fD have a power button on the front. (See next section)

#### Power supplies on VTrak E5600fD and VTrak E5800fD



Power cable receptacles

#### Power supplies on VTrak E5320fD and VTrak E5320fD



Power cable receptacles

## 6: Power on

With the power supplies connected, the system can now be powered 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. Note that this will power on the VTrak E5320fD and VTrak E5320fD.

To power on the VTrak E5600fD or VTrak E5800fD subsystem, press the Power button on the front left bracket facing (see illustration below). Observe the LEDs on the right front bracket facing.
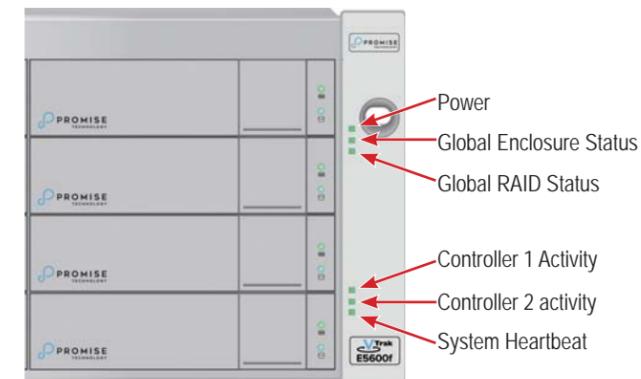
> **Important**
>
> If you have a SAN, DAS, or Cascade with JBOD Expansion, always power on the JBOD subsystems first.

#### Power button on front left of VTrak E5600fD/E5800fD



Power button
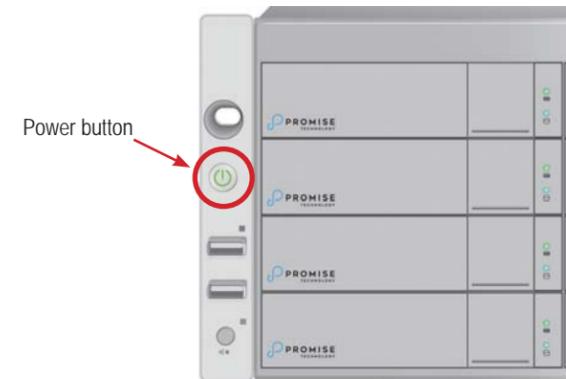
#### LED indicators on front right of enclosure



Power
Global Enclosure Status
Global RAID Status

Controller 1 Activity
Controller 2 activity
System Heartbeat

### 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 repeat turn on Green one second and goes dark for one second for dual controller enclosure; repeat turn on green one second and goes dark for three seconds for single controller enclosure.

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.

## 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 E5000 Series 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 E5000 Series subsystem. Change the network settings on the administrator computer to allow for compatible IP settings with the default IP settings of the VTrak E5000 Series subsystem.

The default Virtual IP address of the VTrak E5000 Series 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 E5000 Series 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 VTrak E5000 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.
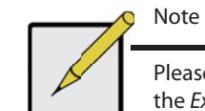
#### Advanced

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**.