esXpress 3.6

Installing esXpress without the GUI Appliance

esXpress v3.6 Install Without GUI Guide

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www.esxpress.com www.phdvirtual.com

Legal Notices

Documentation Changes

Table 1 Document Changes

Chapter	Version	Changes
All	3.6	Updated guide: formatting and editing.
2	3.6	Removed information about RPMS being included in the esXpress zip.

Support Sales, Renewals, and Licensing

For information on new sales, licensing and support renewals you can email sales@phdvirtual.com or info@phdvirtual.com.

For additional information about PHD products and services, go to:

http://www.phdvirtual.com

To license and register this product, go to: http://www.phdvirtual.com

For customers and partners with an active support agreement, you can use the esXpress support web board or http://phdvirtual.com or email support@phdvirtual.com for information about software patches, technical documentation, and support programs.

Note: A valid support agreement is necessary to receive new esXpress release and software updates.

Contents

1 Introduction

With esXpress 3.5 and 3.6, you can choose to install the product without using the Configuration and Deployment GUI appliance. For installations with a small number of ESX hosts that will run esXpress, this may be an option. If you choose to install the product without using the GUI appliance, you will need to install and configure esXpress directly on each of your hosts (ESX 3.x or vSphere).

The purpose of this guide is to provide a Quick Start for installing and configuring the basic minimum esXpress configuration to enable backups to start running on your host. For additional detailed information on all of the esXpress options see the Reference Manual.

2 Installing esXpress

Installing esXpress 3.6 directly on your ESX host should take only a few minutes. The **RPMs** needed to install esXpress can be downloaded directly from PHD Virtual's web site

http://www.phdvirtual.com/download?task=viewcategory&catid=5

The two RPMs required to install esXpress are:

- esXpress VBA - esxpressVBA-3.x-x.esx.i386.rpm.
- esXpress code - esxpress-3.6-x.esx.i386.rpm

Prerequisites

Before installing esXpress, consider the following:

- What type of backups will you run—Fulls and Delta backups or DeDup backups?
- What frequency will you run your backups—daily or weekly?
- What will be the retention time for the backups?
- What mode of transport you will use?

With Delta/Full backups esXpress can perform network-less backups (VMFS LUN to VMFS LUN), network backups (VMFS LUN to FTP, SSH or SMB), or both simultaneously. DeDup backups are run over the network to the esXpress 3.6 DeDup appliance. In either case, you will need to plan and configure your target storage and supporting options.

For Delta/Full network-less, or VMFS LUN to VMFS LUN backups you will need do the following:

- Select a VMFS LUN to store the esXpress archives. Preferably its own LUN, not one shared with running or production VMs.
- It is recommended that the LUN be local SAN, iSCSI or other high performance systems. VMFS across NFS is not recommended. This protocol is too slow and unreliable.
- If you use shared storage make sure the VMFS LUN is visible by all ESX hosts in the backup farm
- For VMFS backups you need to initially for the space of each VMDK to be backed up. With VMFS backups, esXpress pre-creates the entire VMDK and then compresses it at the backup completion.

For Delta/Full network or FTP/SSH backups you will need to do the following:

- Have access to a running FTP/SSH server. FTP/SSH server can be Windows, Linux, or any other operating system that support large files (>4GB).
- Create or use a valid account and password. Make sure you have read, write, delete and make directory rights.
- Do not use anonymous FTP account.

- Have a directory on the FTP server established for your backups (e.g. ***/phd/backups/***) and the proper permissions set. Make at least one subdirectory on the FTP server; do not use the server root as the backup repository.
- The backup folder entered in esXpress needs to be the absolute path, not a relative path.
- Note for Windows host servers: The FTP server included with Microsoft IIS can have issues with files larger than 28GB. It is recommended you instead use a commercial quality FTP server program, our recommendation is FileZilla.
- Note for Windows FTP servers: Only use Microsoft Server products (2000/2003 Server) as FTP/SSH target servers. Workstation products (XP, 2000 Pro) have limited large file transfer capabilities and absolutely will cause your backups to be un-restorable
- Test you FTP/SSH connection. Make sure you can log on to the FTP server and have read, write, delete and directory create permissions.
- For network backups esXpress does the compression in the same pass as the backup.

If you plan to run DeDup backups you will need to do the following:

- Install and configure the esXpress DeDup appliance Virtual Machine, which is provided as an OVF file in the esXpress 3.6 zip file download.
- Determine the type of storage you will attach to the DeDup appliance, either a NFS share or a VMDK.
- For complete information on installing and configuring the DeDup appliance see the esXpress v3.6 DeDup Guide.

If you are going to enable email reporting, you will need to make sure of the following:

- Determine if email should be sent via the console network or from a VMNET.
- IP address, subnet mask, default gateway, DNS setting for the email virtual appliance, unless using DHCP.
- SMTP server DNS name or IP address as well as port
- If sending via console network, make sure the specified port is opened for out-going packets in the ESX firewall.

For the Virtual Backup Helpers or VBAs, you will need to plan network and storage locations:

- IP address, subnet mask, default gateway, DNS setting for the email virtual appliance, unless using DHCP
- VMFS space for the ***esXpress_helpers*** folder. esXpress requires 3GB of free VMFS space to install
- It is recommended to put the esXpress helpers on a local VMFS partition (especially for ESX 3.6 hosts), if possible. While the helpers can be run from shared storage esXpress will perform much better from a local VMFS.
- Each VBA, while running, will need at least 3GB of free space.

Note *esXpress supports vSphere hosts beginning with version 3.5-9.*

Installing the esXpress RPMs

The esXpress RPMs must be installed on each host that you plan to run esXpress backups on.

To install the RPMs

1. Copy the RPM files to the /tmp directory of the target ESX server using an SCP utility.
2. Log on to your ESX Server from the console via SSH and change to the /tmp directory.
3. Install the esXpress VBA. From the command line enter:

   ```
   rpm –i esxpressVBA-3.1-1.esx.i386.rpm
   ```

   If you are installing the VBA on a vSphere host, use the following command:

   ```
   rpm –i esxpressVBA-3.1-1.esx.i386.rpm --nodeps
   ```

4. Next, install the esXpress code base by running the following command:

   ```
   rpm –i esxpress-3.6-*.esx.i386.rpm
   ```

Note *By Default, after installation, esXpress will turn on Automatic Backups and start backing up all the VMs on your host. If you do not want this to occur you must turn Automatic Backups Off.*

3 Configuration

To configure esXpress, open a command prompt on your ESX server and type:

phd

As this is your first time running esXpress, you will need to read through and agree to the End User License Agreement (EULA).

Press **Enter** to continue.

After you have thoroughly read the EULA, type **yes** to accept all of its terms. It is only after you have accepted the terms of the EULA that you will be shown the esXpress Backup Menu.

esXpress phd Main Menu

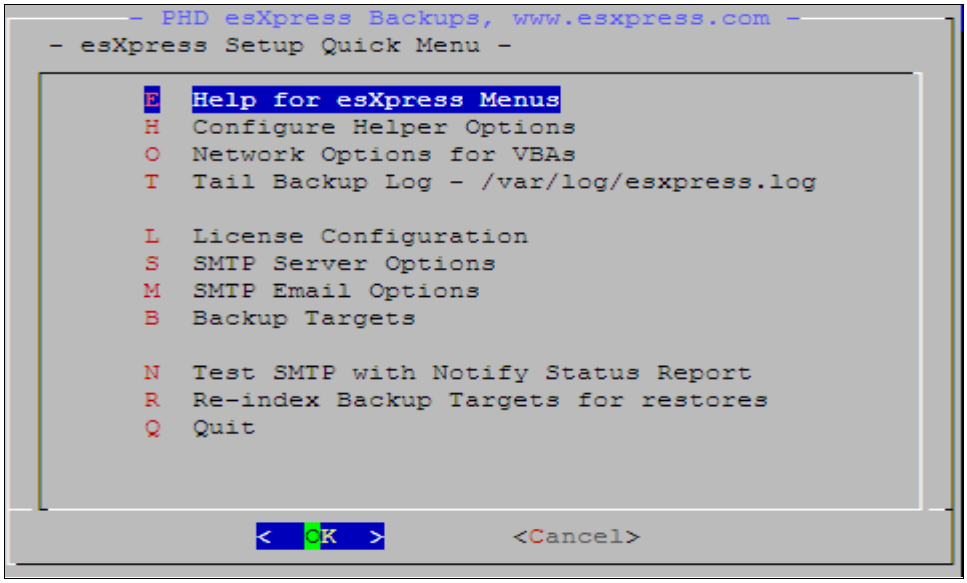
When you launch the esXpress 3.5 menu by running ***phd*** you are presented with a text menu. The esXpress menu can be navigated easily with either the arrow keys or with the mouse.

At the top of the menu you will see the name of the ESX host, the esXpress version number, license type and the expiration of your support contract if you have one.

To begin with the Quick Start Install, select **U Setup Quick Menu**.

The esXpress Setup Quick Menu

The esXpress Setup Quick Menu provides a shortcut method for the initial configuration and setup needed to get esXpress up and running.



Key areas of the Quick Menu are:

- Configure Helper Options to set the VMFS for the VBAs.
- Setting the Default Network for the VBAs.
- Configuring the VBA helpers to use DHCP or assign static IPs.
- Configuring your esXpress licensing.
- Backup Targets to setup your initial backup target for esXpress backups.
- Tailing the esXpress backup log.
- Setting up and testing SMTP for esXpress backup reporting.
- Re-indexing your backup targets to provide current backup information for restores.

Assign a VMFS for the VBA Helpers

The first component to configure is the VMFS where the esXpress VBAs will exist on.

1 Select **H - Configure Helper Options**.

The **Configuration Options for ALL VBA Helpers** screen allows you to configure most of the minimum requirements needed in order to install, register and power on the esXpress VBAs.

2 By default, the **VMFS_For_Helpers** parameter is highlighted. To select a VMFS ensure that **Edit** is also highlighted and press **Enter**. In edit mode, press **Enter** again to see a list of available VMFS file systems.

3 Use the arrow keys or mouse to select the VMFS volume on which to create the **esXpress_backups** folder and press **Enter**.

4 The **VMFS_For_Helpers** field should show the entry you selected.

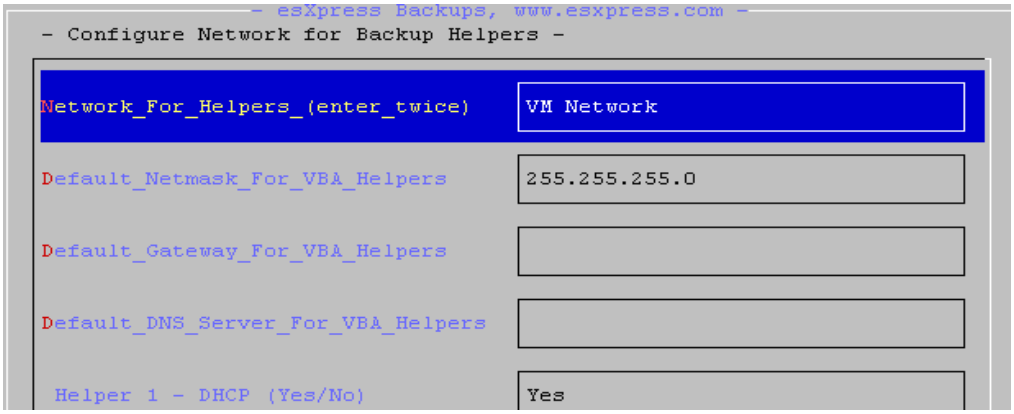
5 When finished, select **OK** and press **Enter.** You will be prompted to save the Virtual Helper Options. Select **Yes** and press **Enter.** You are returned to the **esXpress Quick Start** menu**.**

Assign a Network to the VBAs

You now need to configure a **valid network** on your host. Without a valid network, the esXpress VBAs and the GUI will not start properly.

1 Select **O Network Options for VBAs.**

2 Select **Network_for_Helpers_(enter_twice)**.



3 Select a valid Network from your host that you want the esXpress VBAs to use.

4 After selecting the Network, hit **OK** to confirm and save the changes.

5 At this point, you need to decide if you are going to run the VBA helpers using DHCP or with static IPs. If you are using DHCP, that is default, so no action is required. If you plan to use static IPs you would also configure that here. Assign the static IP to each VBA helper to be used along with the overall network, default gateway and DNS server to use.

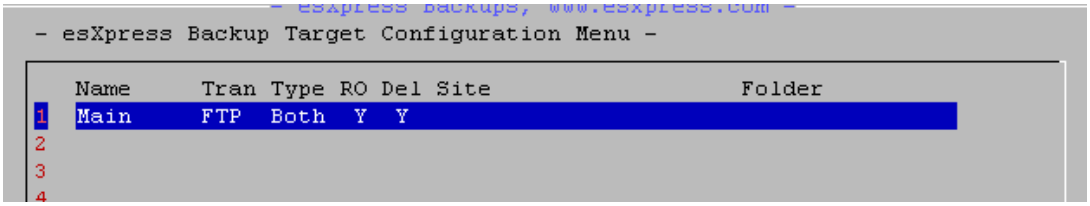
6 Next, select **Q Quit** to return to the **esXpress Quick Start Menu**.

Create a Backup Target

The third required step before you can run an esXpress backup is to decide where to send the backups to. If you are going to send to a network target for Delta/Fulls (FTP/SSH/SMB) or you will be using DeDup (PHDD) you will need to configure a backup target.

1 Select **B Backup Targets**.

2 Select the first backup target (the default target) and select OK.



This will open up the configuration screen for the first target.

3 Here you will assign a Name to the Target, define the target IP or Fully Qualified name, assign a user and password to use as well as a backup folder to use on the target. It is recommended to set the Target Type to **Both** so the new backup target can be used for backups and restore.

For the Transport Type the options are:

- **FTP** – Delta/Full backups to a FTP server
- **SSH** – Delta/Full backups to a server via a SSH connection
- **SMB** – Delta/Full backups to a CIFS/samba share
- **PHDD** – DeDup backups to the esXpress 3.6 DeDup appliance

For full detail on each field refer to the ***3.5/3.6 Reference Manual***.

The other option would be to backup to VMFS. For details on configuring esXpress to backup to VMFS see the 3.5/3.6 Reference Manual. Backups to VMFS are only supported for Delta/Full backups.

Note *For Data Deduplication backups (DeDup) set your transport type to PHDD. Also the username, password, port and backup folder options are not needed for DeDup.*

License Configuration

In order to run esXpress 3.6 you will need to enter an esXpress valid license. To entire your licensing information, use the option:

L License Configuration

Email Configuration

If you wish to setup esXpress for email notification you will need to define an SMTP server and will as set various SMTP email options, for example which email addresses to send the notifications to.

To Configure an email server, select and define the email addresses to receive the notifications.

- Select **S SMTP Server Options**.

  For complete information on the various SMTP options, refer to the esXpress v.3.5/3.6 Reference Manual.

Other Configuration Options

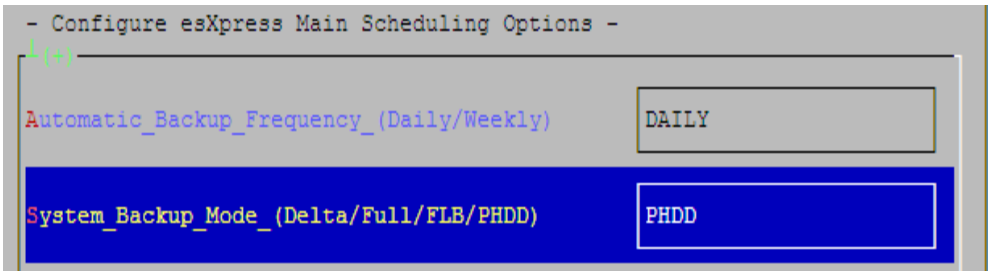
Setting your Backup Mode

One other important esXpress configuration option you should review after installing esXpress is the Backup Mode.

This option determines what type of esXpress backups you wish to run, either Delta/Full backups or DeDup (PHDD) backups.

This option is not found from the Quick Start menu; it is under the Configuration Options.

phd menu > **C Configuration Options** > **O Main Scheduling Options**



The options for the System Backup Mode are:

- **Delta** – run Delta backups on schedule and also run Fulls as per the scheduling rules.
- **Full** – only run Full backups, no deltas.
- **FLB** – only run file level backups.
- **PHDD** – esXpress will run data deduplication backups. You must configure the esXpress DeDup appliance and define it as your backup target to run PHDD backups.

Note *the esXpress 3.6 default system backup mode is DeDup (PHDD).*

Advanced Configuration

At this point, you have configured the basic information needed to start running esXpress backups every day. With the esXpress advanced configuration options, you can refine your configuration in a number of areas:

- Setting the backup frequency and scheduling
- Backup Target retention and auto delete policies
- Notification reporting
- Compression and throttling options
- File Level Backups
- Encryption
- Special and Template Backups
- Replication and Restore Options