Devon IT Echo Management Console Dell Edition

Administration Guide

devon **IT** **ECHO Management Console**
Dell Edition

DELL

Notes, Cautions, and Warnings

NOTE: A NOTE indicates important information that helps you make better use of your computer.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contents

1

Virtual Appliance Installation and Setup

NOTE: Custom icons at this time only work with the Devon IT Terminal Operating System (DeTOS) terminals, not Windows-based terminals.

This administration manual outlines how to install, setup, and run Devon IT Echo Management Console Dell Edition. Required components include:

1 One or more thin clients

2 Echo enabled thin client

3 System running VMware Server, VMware player, or VMware vSphere.

4 System running DNS and DHCP servers

Download and Install vSphere, VMware Server, or Player

Download and install the vSphere Client, VMware Server, or VMware Player on a dedicated system. If you need assistance installing VMware, please visit **vmware.com**.

Download the Echo Software

In order to download the latest Devon IT Echo Management Console Dell Edition software to manage your Dell OptiPlex FX130 and FX170 systems, follow these steps:

1. From a web browser, navigate to http://support.dell.com/support/downloads/

2. Select **Choose from a list of all Dell products**.

3. Click **Desktops→Optiplex→FX170→Confirm**

4. Under **Operating System**, select **DeTOS** or **Windows Embedded**.

5. Under **Applications**, download the **Echo Management Console Dell Edition**.

If you have downloaded the **.ova** file version, continue on to the **Install Virtual Machine Setup with the vSphere Client** section.

Install Virtual Machine Setup with the vSphere Client

To start an Echo virtual machine with vSphere:

1　Launch the VMWare vSphere Client.

2　Enter the IP address of your ESX server and login credentials, then click **Login**.
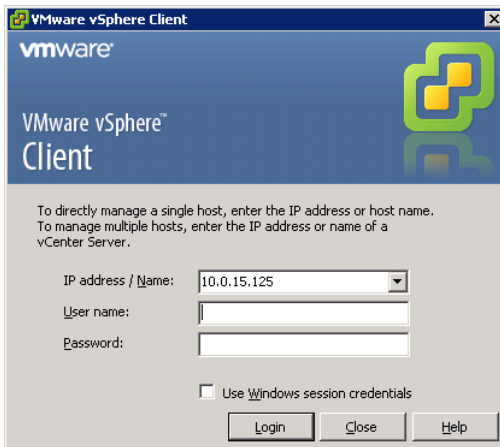
3　Select **Inventory** to display the inventory of your ESX server.

4　Select **File→Deploy OVF Template…**

5   Select **Browse** to navigate to the OVA that you have downloaded from the Dell website and click **Next**.
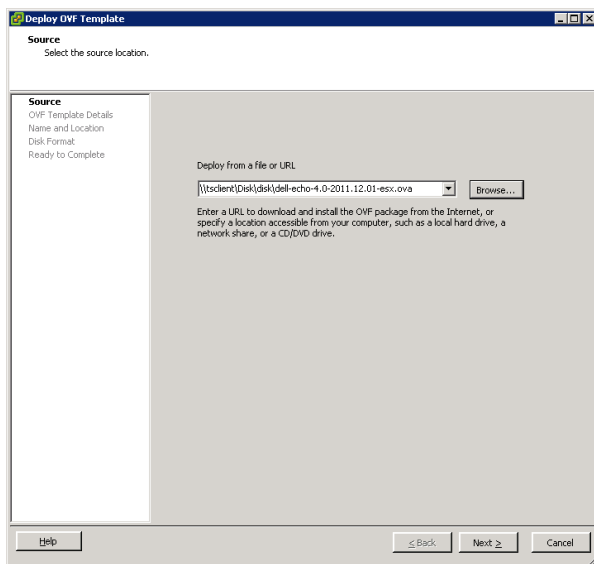
6   Select **Next** on the **OVF Template Details** screen

7   In the **Name and Location** screen, rename the template if needed. After doing so, click **Next**.

8   Select the preferred format for your appliance in the **Disk Format** screen and click **Next**.

9   Review the options on the **Ready to Complete** screen to ensure the settings are correct. Select the **Power on after deployment** box if you would like the machine to start after the installation. Click on **Finish**.

10 After the template has been installed, select it from the inventory list on the left hand side. If you did not select **Power on after deployment**, you must click the **Play** button above the inventory list.

11 Select **Console** tab in the vSphere Client main screen to continue the initial setup of the Echo Appliance Dell Edition.
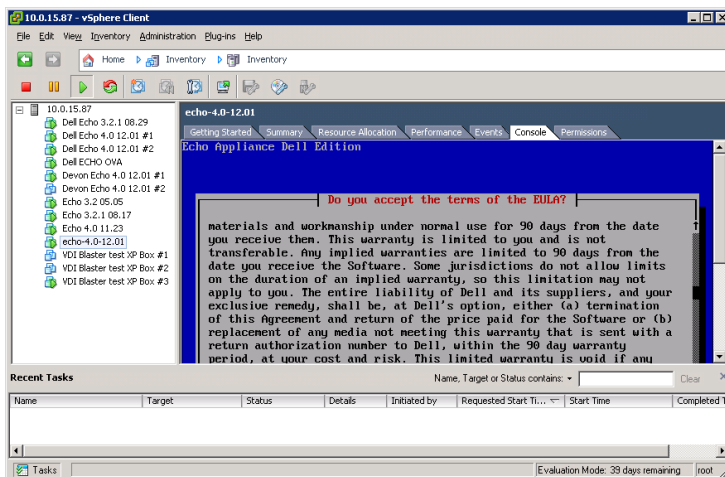
Install Virtual Machine Setup on VMware

In order to set up your virtual machine on either VMware Server version, you must first convert the .ova file into a .vmx file format that VMware Server can recognize. You can find a VMware file converter at http://www.vmware.com/products/converter . Once you have converted your .ova file to the .vmx format you can continue with the VMware Server instructions that pertain to you.

VMware Server 2.0

To set up the virtual machine on VMware Server version 2.0:

1 Open your **VMware Infrastructure Access Page**.
2 From the toolbar, select **Virtual Machine→Add Virtual Machine to Inventory**.
3 Expand the **Inventory** node to navigate to your Echo folder and double-click the file called **echo-x.xx.vmx.**
4 Click **OK**.
5 On the **VMware Infrastructure Web Access** page, under the **Inventory** panel, select **echo-x.xx.**
6 Depending on the amount of memory available on your host system, you may need to adjust the allocated `Memory` from the default 512 MB to a lower value.
7 Power on your virtual machine.

VMware Server 1.0.x

To set up the virtual machine on VMware Server versions 1.0.0 through 1.0.8:

1 Select **Open Existing Virtual Machine**.
2 Select **File→Open** and navigate to the **echo-x.xx.vmx** . The virtual machine default name is **echo-x.xx.** This is added to your **Inventory** column.
3 Depending on the version of VMware Server, to adjust the amount of memory given to your virtual appliance, you may need to select the

Adjust the Allocated Memory or **Edit virtual machine settings options**.

4   After selecting your Echo settings, click **Power On** next to the green triangle.

VMware Player

To start an Echo virtual machine on VMware Player:

1   Launch **VMware Player** on your system and click **Open a Virtual Machine**.

2   Select **All Image Files** from the dropdown menu.

3   Open the `.ova` file located in the Echo folder. Select **Import**.

4   Your virtual appliance will immediately begin booting.

Echo Password and Time Zone Configurations

1 Turn on the Virtual Machine.

2 After the bootup process is complete, the **Setting Password** window is displayed.

3 Enter a new password for the **bwadmin** account. This password is required to log on to Echo.
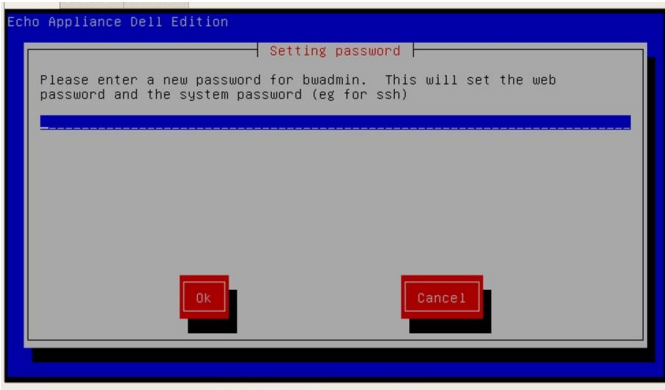
NOTE: There is no minimum character limit required when entering a new password, and the password is case sensitive.. However, it is recommended that the administrator creates a password of at least six characters using a combination of upper and lowercase alpha-numeric characters.

4 Once a password has been entered, use the arrow keys to navigate to the **OK** button and press <Enter> to continue. You will be prompted to re-enter the password a second time. Press the **OK** button again.

5 Set the time zone for the Echo Virtual Appliance in the **Geographic area** menu. Select your area from the list and press <Enter>.

6   A list of cities is displayed in the **Time zone** menu. Select a city located
     in your time zone and press <Enter>.

```
 Time zone:

                         Nassau                        ↑
                         New_York
                         Nipigon
                         Nome
```

Echo Network Configuration

DHCP Configuration (Default)

The next screen is the **Networking** configuration menu. By default, Echo will attempt to automatically acquire an IP Address from the Dynamic Host Configuration Protocol (DHCP) on your network. This means that your IP address will be automatically assigned every time you reboot the machine and restart your Echo virtual application. If DHCP assigned your Echo an IP address properly, the fourth option will read **Change eth0 inet dhcp <ip-address> <subnet mask>**. Otherwise the line will just show **Change eth0 inet dhcp** and you will need to assign a static IP address to the appliance.

```
┤ Networking ├
   No changes
   DNS view/edit resolv.conf
   View/Edit /etc/network/interfaces
   Change eth0 inet dhcp 10.0.5.138 255.255.255.0
```

Clicking the **Change eth0** option will allow you to make changes to your Echo's IP configuration. If no changes are necessary, and no further configuration is required, select **No Changes** and press <Enter> to continue.

Static IP Configuration

If DHCP is not available on your LAN, then you must manually set a static IP address for the Echo server.

1   Select the option **Change eth0...** from the **Networking** menu.

2   On the next screen named **Configuring eth0**... select the **Static** option and press the **OK** button.

```
┤ Configuring eth0 ├
   Static - You need to specify each parameter
   DHCP - Dynamically request from network
```

3   Enter the IP address to use as Echo's static IP and press **OK**.

4   Enter the subnet mask and then press **OK**.

5   Enter the gateway IP address and press **OK**.

6   Confirm the new static settings. Select **Yes** to apply the new settings or, select **No** to discard these changes.

7   After selecting **Yes**, the network interface will restart and you will be presented Echo's **Main Menu**.

Editing DNS for Static IP Configuration

When using a static address, you must edit the Echo server's **resolv.conf** file. This file contains the IP address to your DNS server(s) as well as domain search paths.

```
  GNU nano 2.0.7            File: /etc/resolv.conf

domain devonit.com
search devonit.com
nameserver 10.0.2.8
nameserver 10.0.1.6
nameserver 10.0.1.7




                          [ Read 5 lines ]
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page ^U UnCut Text^T To Spell
```

1   From the main menu, select **Reconfigure Networks**.

2   Select **DNS view/edit resolv.conf.**

3   Using the editor, make sure your file contains at least the following two lines: **search <domain>** and **namesever <ip address>**

   Where **<domain>** is your domain name and **<ip address>** is the IP address of your DNS server.

4   Add more **`nameserver <ip address>`** lines as needed for each
     additional DNS server you want to include.

5   Press <**Control><X>,** then **Y** to save changes, and then press **Enter** to
     save the file.

6   Select **No changes** to return to the **Main Menu**.

The Main Menu

Once you have completed the initial setup process, the **Main Menu** screen is
your starting point for all future Echo modifications.
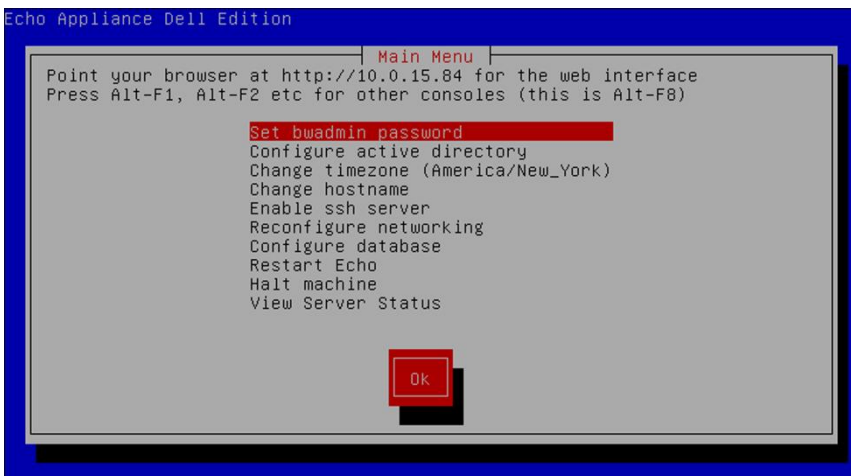
Main Menu Options: Reference Chart

Table 1-1.   Echo Main Menu Reference Chart

Main Menu Items	Description
Set bwadmin password	Select this to enter a new password for the **bwadmin** account
Configure active directory	Allows users to log into the web front end using Active Directory credentials via an LDAP query
Change time zone	Select this to change the server's current time zone
Change Hostname	Select this to change the hostname of the Echo server. The default hostname is `ws-broker`
Enable/disable ssh server	Select this to enable or disable the SSH server. **SSH** is disabled by default. You may wish to enable **SSH** if you plan on accessing the command line of the Echo server from another machine
Reconfigure networking	Select this to: • Modify Static Network settings • Enable/disable DHCP • Manually edit the local DNS file (**`resolv.conf`**) • Manually edit the **`/etc/network/interfaces`** file.
Configure Database	The default database is SQLite. You may choose to configure the external database to use MS-SQL instead
Restart Echo	Select this to reboot the Echo server
Halt machine	Select this to shutdown the entire Echo virtual machine
View Server Status	This option displays current status of the server and web interface

Final Configuration Steps

DNS Configuration

On your DNS server, create an entry for

`ws-broker.<mydomain*>.<mytld*>` that points to the IP address of the Echo virtual machine. This allows the terminals to find the Echo server automatically.

Where **`<mydomain>`** is your domain name and **`<mytld>`** is the top level domain. For example:

- `ws-broker.myXyzConsulting.com`

- `ws-broker.HiTechSolutions.net`
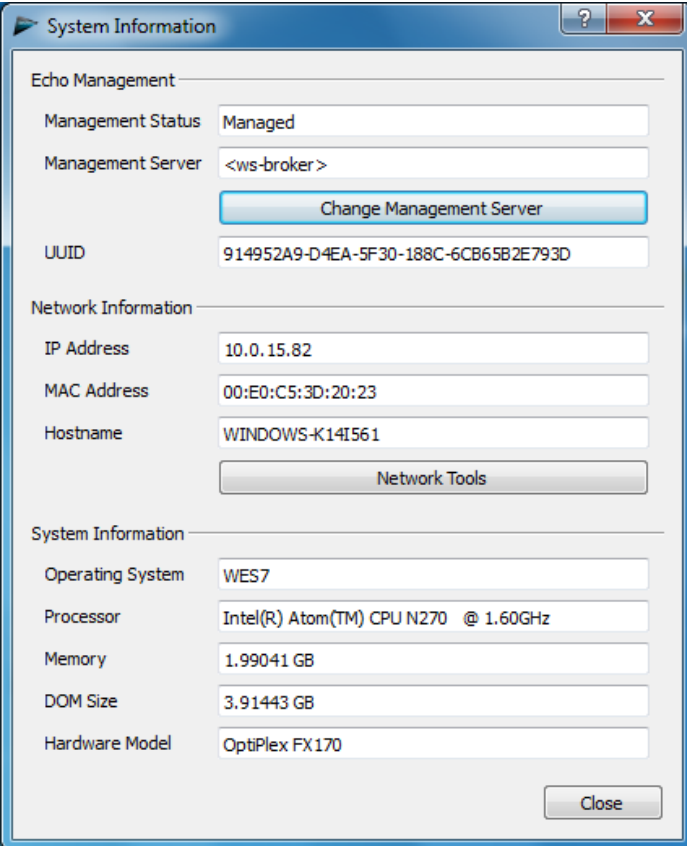
- `ws-broker.development.org`

Alternative Configuration for Environments Without DNS

If you do not have access to a DNS server, you can add the IP address of the server to your thin client by following these steps.

Follow these steps on each thin client you want to manage with Echo.

1 In the **System Tray**, double-click **Echo Agent**.
2 In the **System Information** window, click **Change Management Server**.

3 Enter the IP address instead of the domain name `ws-broker` and click **OK.**

System Information

Echo Management

Management Status	Managed
Management Server	<ws-broker>
	Change Management Server
UUID	914952A9-D4EA-5F30-188C-6CB65B2E793D

Network Information

IP Address	10.0.15.82
MAC Address	00:E0:C5:3D:20:23
Hostname	WINDOWS-K14I561
	Network Tools

System Information

Operating System	WES7
Processor	Intel(R) Atom(TM) CPU N270 @ 1.60GHz
Memory	1.99041 GB
DOM Size	3.91443 GB
Hardware Model	OptiPlex FX170

Close

Firewall Ports

Table 1-2. What Ports Need to be Open for Echo Functionality

Port	Protocol	Components	Purpose
80	TCP	Echo Server	HTTP – Standard web port for the Echo Web UI
443	TCP	Echo Server	HTTPS – Secure (SSL) communication over http protocol
50000	TCP	Echo Server, Hosts, and Terminals	Used by SOAP. This port needs to be open on ALL devices within the Echo environment.

Check Connectivity

Using a web browser, enter `http://<hostname or IP of your Echo Server>` into your web browser address bar. You may have to bypass some security warnings to access the login page. If the installation and setup was performed successfully, the **Echo Login** screen is displayed.
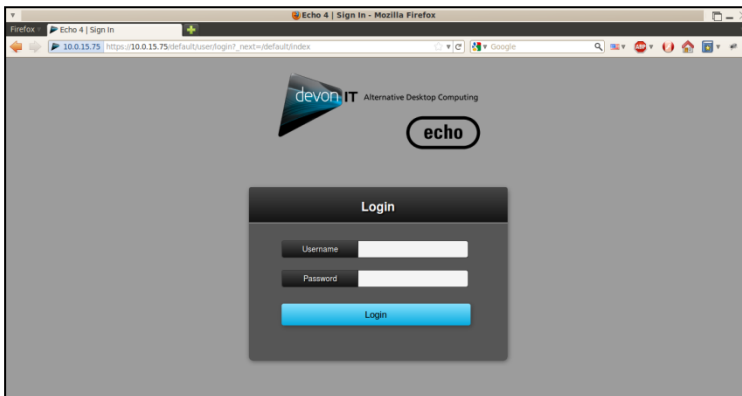
Additional Installation Steps for Advanced Configurations

📝 **NOTE:** Please read the next two sections only if you are deploying more than one Echo Thin Manage Virtual Appliance in the same environment. If this does not apply to your environment, skip to Chapter 2, "Learning Echo Basics."

Configure Devon IT Echo Management Console Dell Edition to Use MS-SQL Database

By default, Echo is configured to use a single SQLite database that is internal to the Echo virtual machine. Echo can also use an MS-SQL database, and must do so when more than one Echo virtual machine is used. For example, if you plan on deploying the Enterprise Architecture to take advantage of High Availability features, then you must follow these steps:

1   Visit **easysoft.com/member/login.phtml** to register for an Easysoft ODBC driver authorization code.

📝 **NOTE:** Be advised that Easysoft is not controlled by Devon IT or Dell. Any usage of Easysoft products are the responsibility of the administrator to implement and troubleshoot.

2   Select **Configure Database** from the Echo virtual machine's **Main Menu** screen.

3   Click **Select** and configure a different database from the **Database Configuration** menu.

4   Select **mssql** from the **Select a Database** menu.

5   Select **Install Easysoft ODBC Driver** from the **Easysoft ODBC Installation** menu. This will launch the driver installation script.

6   Press <Enter> to read the end-user license agreement. Type **Yes** at the first prompt to accept the license.

7   Keep pressing <Enter> until you see **Running the License Application**. Choose **option [2]** from the menu.

8   Enter your **Name**, **Company Name**, and **email address** at the appropriate prompts. The other questions can be left blank.

9   You will see **How would you like to obtain the license?** Select **option [1]**.

10 Select `[0] Exit` at the next menu.

11 Press <Enter> at each remaining prompt to use the default settings.

12 When you return to the **mssql/ODBC configuration** menu, configure the **database name**, **IP address**, **port**, and **username** for your mssql database.

13 When finished, choose **Keep Current Settings** to accept your settings and return to the **Main Menu**.

14 Select **Restart Echo** from the **Main Menu** to activate the database connection.

Configure Devon IT Echo Management Console Dell Edition to Use MySQL Database

You can choose to connect to a MySQL database. To configure your management server with your MySQL database:

1 Select **Configure Database** from the **Main Menu**.

2 Select **Select and Configure a Different Database**➔**MySQL**.

3 Enter the appropriate values for the **IP address**, **port**, **username**, **password**, and **database** fields that correlate to your MySQL server.

4 Select **Keep Current Settings** and select **OK**. Press <Enter>.

5 Select **Restart Echo** from the **Main Menu** to activate the database connection.

Troubleshooting a Bad Connection

Make sure that your Echo appliance has network connectivity and that data packets can flow to and from the appliance. You can switch to a different virtual terminal, or try in the appliance itself by hitting <ALT> and the right arrow key. Once at the terminal prompt you will see ws-broker login: _.

You can log in using the username **bwadmin** and the password which was set during the initial configuration of the Echo management server. Test network connectivity by pinging remote machines to ensure the appliance can see machines out on the network. Also ping your Echo server from a thin client to make sure the device can see the server.

If you are unable to ping to or from the server, double-check your network settings and make sure that port 50000 is open on the network.

2

Learning Echo Basics

Terminology

You should familiarize yourself with the following list of terms, as they are used throughout this document.

- **Terminal-**This is the device to which the screen, keyboard and mouse are attached.

- **Session-**This is a network connection between a thin client and a host, with the display and USB components connected.

- **CMS-**This is the Connection Management Server (CMS), which manages connections between thin clients and hosts. The Echo Thin Manage Virtual Application is a CMS.

- **Cloning**- This is a process of copying the profiles, settings, or images from one terminal in order to make them available for application on other terminals.

Accessing the Echo Web-Based Interface

1   Using a web browser, type the following URL into the address
    `http://<hostname or IP of your Echo server>` and
    press <Enter>.

> **NOTE:** There is a security certificate warning that may appear when connecting to the
> server. Click **Yes** to continue.

2   Enter `bwadmin` as the Username and Echo password set up during
    installation. Press <Enter>. If Echo is properly configured, and DNS
    settings are correct, you will see the **Echo Administration Screen**.

The Echo Administration Screen

The **Echo Administration Screen** is divided into three main sections. The left-
hand side displays the navigation bar with tabs. The central area of the screen is
where the various inventory tables are displayed, depending on which tab you
select. To the right of the screen is where specific information is displayed in
detail panes relevant to your selections in the table display.

The Terminals Table

The **Terminals** table is where you can view the individual terminals being
managed by the Echo software. Information such as the **Name**, **Location**,
Description, and many other details of each terminal can be viewed here.

Dell terminals and desktop access devices have a service called the Echo Agent
that communicates with the Echo managed server. The Echo Agent announces
its presence to the Echo server by continuously sending XML-based messages
known as "heartbeats," which occur every 60 seconds by default. As the agent
heartbeats into the server, information about that device is displayed in the
Terminals table.

Terminals

Add Terminals   Delete Selected

Show 10 entries   Search:

Name ⇕	Description ⇕	Location ⇕	IP Address ⌄	Last C
SIDESWIPE			10.0.15.122	2011
00abbd3188c616108b56ed5c7233e085	John Smith's FX170	HR	10.0.15.31	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-1			10.0.15.49	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-2			10.0.15.49	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-3			10.0.15.49	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-4			10.0.15.49	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-6			10.0.15.49	2011
2ed11075-2e7a-48b2-b269-2ce6a0145948-1-7			10.0.15.49	2011

Showing 1 to 10 of 1,490 entries   First | Previous | 1 | 2 | 3 | 4 | 5 | Next | Last

The Connections Table

Terminals have the ability to connect to remote servers utilizing various types of protocols. The **Connections** table is where you can go to create, manage, and edit the RDP, ICA, VDI, and other connections you have available.

The Profiles Table

A key function of the Echo software is the creation and application of **Profiles** in order to effectively manage the settings applied to individual terminals remotely. A profile can contain a wide variety of settings that can then be applied to individual terminals as the user sees fit. The **Profiles** table is where you can create, manage, and edit the profiles that are at your disposal.

The Disk Images Table

A **Disk Image** is a file that can be created in order to combine many different settings and profiles into one complete package. While creating **Profiles** and editing **Terminal Settings** provide ways to customize terminals, creating a **Disk Image** allows the user to combine multiple profiles and settings packages, as well as an operating system, into a single resource. Utilizing disk images can greatly simplify the management process.

The Terminal Settings Table

Terminal Settings are the display, sound, keyboard, mouse, and password configurations for that particular terminal. Administrators can use Echo to clone these settings from one terminal, store them within the Echo Thin Client Settings database, and then apply them to other terminals.

> **NOTE:** For more information on how to configure display, sound, keyboard, mouse, and password configurations, please refer to your DeTOS, WES 2009, or WES7 guide. Details on how to alter these settings, install MUI packs, and select languages can be found there.
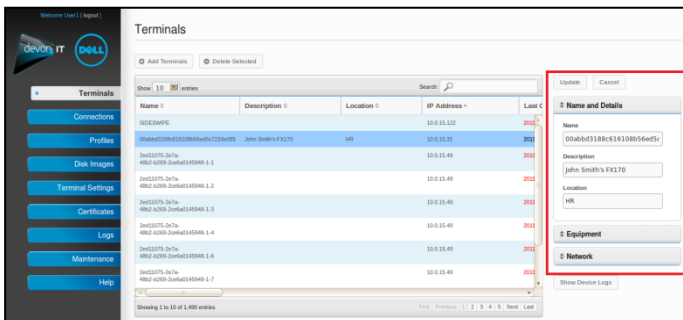
The Certificates Table

Certificates can be added into the Echo Management software and seen in the Certificates table. These certificates can then be pushed down to terminals through the Terminals table.

> **NOTE:** Certificates can only be used in this manner on thin clients that are running the DeTOS operating system.

The Details Pane

Additionally, certificates can be incorporated into Profiles or Disk Images. When a selection is made in any of the inventory tables, panes will open up on the right hand side of the screen. Depending on what has been selected, these panes allow you to make changes to different aspects of the selection. The available options will be explained in more depth in their individual sections. The **Name and Details** pane is the most common and is highlighted below.

The Context Menu

Right-clicking a highlighted selection the **Terminals** table displays a **Context Menu** with various actions that can be performed on that selection. A context menu item that has an arrow beside it indicates that sub-menu options are available for this action. The context menu is the main menu where Echo Administrators will be applying changes to terminals.
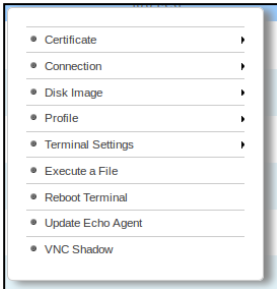
Searches

The **Search** bar, located on the upper right-hand side of each inventory table, allows you to search that table for specific information. A search scans all possible fields in each inventory table, so it is possible to narrow the visible items based on the specified criteria. Finding terminals that share a common IP address, have the same model type, or use the same profile are a few of the many uses of this function. For example, if an administrator has to perform an update on all terminals running DeTOS, typing "DeTOS" into the search field displays only those terminals in the inventory table. The administrator can then perform updates with a more focused view of the terminals being managed.

As information is entered into the **Search** field, the inventory table will automatically update and display the items that match your search criteria.

3

Terminal Management

Echo Agent Updates

The Echo Agent is a service that runs on terminal devices and communicates with the Echo server. Periodically, Dell releases new Agent setup programs that provide additional functionality. This section outlines the steps for updating a new Agent to your inventoried terminal using the Echo software.

Where to Download the Latest Echo Agent

Visit **support.dell.com** to locate and download the latest Devon IT Echo Agent software used for communicating your OptiPlex FX130 and FX170 thin clients with the Devon IT Echo Management Console Dell Edition software.
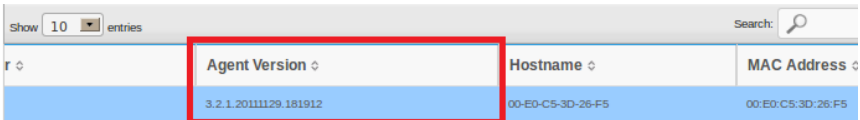
How to Update the Echo Agent on Your Terminals

1   From the **Terminals** table, select the terminal or terminals that need to be updated and right-click on a selected terminal to view the **Context Menu**.

2   Select **Update Echo Agent** in the context menu.

3   The **Name and Details** pane on the right-hand side displays the terminal name(s) you are about to update. Click the **Choose File** button and navigate to the new Echo Agent Setup executable downloaded on your local system.
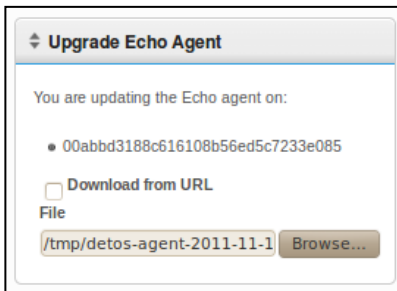
4   Click **Submit** to enter your changes.

The message `Echo agent request sent is` displayed. The new agent begins installing itself on the actual device. This may take 30-60 seconds. Once this installation has finished and the new agent heartbeats back to the Echo server, the **Agent Version** column for that terminal displays the new version number. The image below shows the Agent Version column.

r ⬦	Agent Version ⬦	Hostname ⬦	MAC Address ⬦
	3.2.1.20111129.181912	00-E0-C5-3D-26-F5	00:E0:C5:3D:26:F5

Show 10 ▾ entries   Search: 🔍

Custom Icons

Administrators can use customized icons for individual connections. Using DeTOS-based operating systems and the Echo software, administrators can upload their own pictures through their web browsers. The uploaded image can then be used as the desktop icon for all of the various connections on the DeTOS Desktop. This section describes how to use your own images locally as Desktop icons.
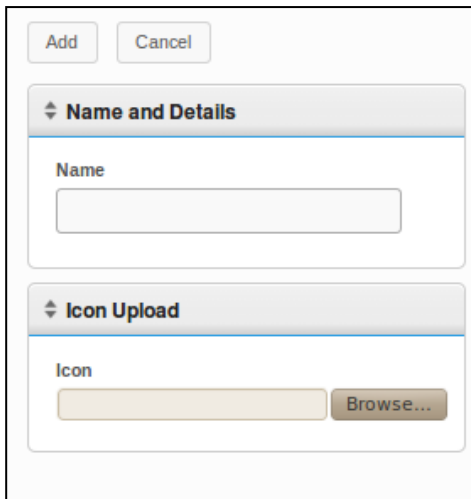
NOTE: Custom icons at this time only work with DeTOS terminals, not Windows-based terminals.

How to Upload an Image

1   Under the **Maintenance** tab, select **Icons**.

2   Above the **Icons** inventory table, select **Add Icon**.

3   Type a name in the **Name** field in the **Name and Details** pane. This is the alias that Echo will give the image you are uploading. This can later be attached to different connections.

4   Use the **Choose File** button to launch a window that will allow you to explore your local machine to find an image to upload. Highlight the image and select **Open**.
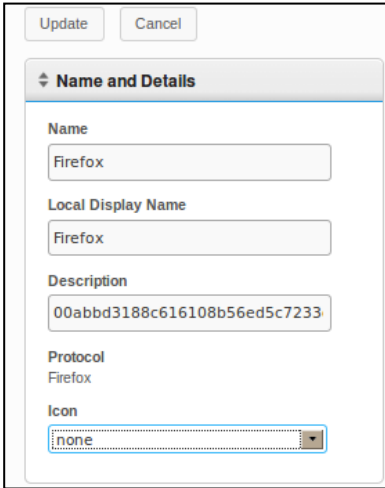

5   Click the **Add** button at the top of the **Name and Details** pane. An "Icon Added" message is displayed, and the new icon is immediately displayed in the **Icons** inventory table.

How to Customize a Desktop Icon

Uploading the image into Echo is the first step to customizing your desktop icons. Now we have to add the icon to connections. This can be done by selecting the **Connections** tab in the navigation bar. To edit current connections, follow this procedure:

1   From the table of inventoried connections, select the desired connection to select it.

2   In the **Name and Details** pane, there is a dropdown menu labeled **Icon**. Click on this to view the list of available options.

3   Choose the icon from the dropdown menu. It has the same alias as the one given by the administrator during upload.

4   After selecting the custom image, click **Update** above the pane to save
     your changes.

5   In the **Connections** table a new icon is displayed on the left side of the
     connection in the **Icon** column. All of the custom icons applied to
     connections are listed in that column.

Echo Cloning Overview

The following types of clones can be created using Echo:

- **Connections-**Terminals have the ability to connect to remote servers utilizing various types of protocols. The RDP protocol is used to connect to Microsoft Windows Terminal Servers. The ICA protocol is used to establish connections to Citrix servers. The VDI protocol, used by the VMware View Client, allows a user to connect to a VMware View Server. Administrators can use the Echo software to clone these types of connections from one terminal, store them within their Echo Connections database, and then apply them to other terminals.

- **Terminal Settings-**Terminal settings are the display, sound, keyboard, mouse, and password configurations for that particular terminal. Administrators can use Echo to clone these settings from one terminal, store them within the Echo Thin Client Settings database, and then apply them to other terminals.

- **Profiles**- Profiles are a way to combine multiple choices from both the **Terminal Settings** and **Connections** configurations to create an arrangement of options tailored to the needs of the user. Administrators can use Echo to clone specific profiles to be applied to whichever terminals require these combined settings.

- **Disk Images-**The fourth cloning option that Echo offers is the ability to clone the entire disk image of a terminal. A disk image includes everything that is stored on the DOM on that terminal, including the operating system itself. This does not include BIOS settings that have been saved elsewhere. Disk image clones are inventoried and managed by name within the Echo Disk Images database, but are physically stored on an NFS share, CFIS, or FTP server on your local area network.
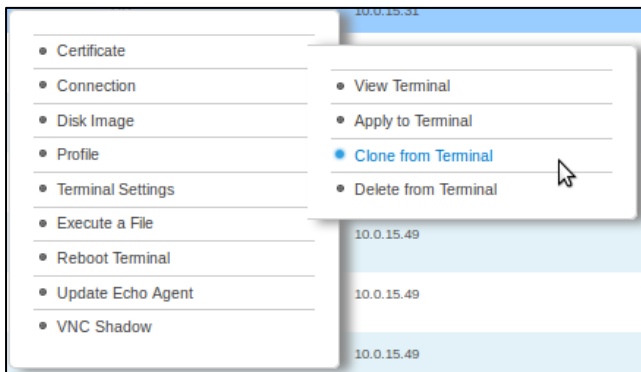
Cloning Connections

Echo allows administrators to clone individual connections from a thin client and save them in the Echo database. Administrators can easily create a connection like VMware View or Citrix on a terminal and then propagate it to all of their other terminals via a profile. All connections can be cloned, and the most common are listed below:

- **RDP**- One or more **.rdp** configuration files used for connecting to Microsoft Terminal Servers.

- **ICA-** One or more **.ica** configuration files used for connecting to Citrix servers.

- **VMware**- The connection settings and configurations for the VMware View client.

- **Firefox-** The local web browser and its starting URL.
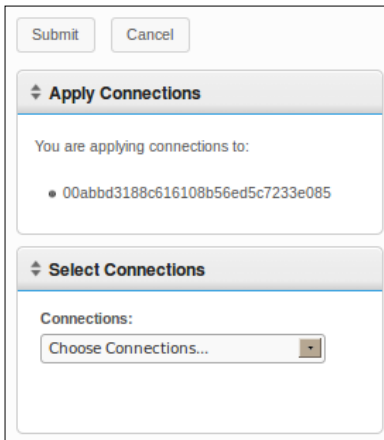
How to Clone Connections

1   From the table of inventoried terminals, select the terminal you want to clone connections from and then right-click the selection to open the **Context Menu**.

2   In the **Context Menu**, go to **Connection→Clone from Terminal**.

3   The details pane on the right-hand side displays the available connections
     you can clone from this terminal.

4   Under **Connections**, select one of the connections listed. To select
     multiple connections, choose another from the dropdown menu and it will
     be added to the list.

5   Click the **Submit** button. You receive a success message when the clone
     is complete.

6   In the **Connections** tab, you can see your recently cloned connection
   entry now in the inventory table.

Applying Connections to a Terminal

1   From the table of inventoried **Terminals**, left-click on a terminal and
     then right-click on it to view the **Context Menu**.

2   In the **Context** Menu, go to **Connection →Apply to Terminal .**

3   In the **Select Connections** pane, select which connections you want to
     apply from the dropdown menu. To select multiple connections, simply
   choose another from the dropdown menu and it will be added to the list.

4   Click the **Submit** button. You will receive a success message when the connection is applied.
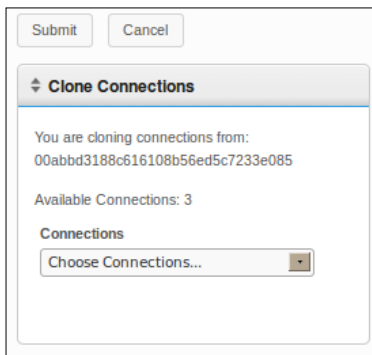
When you apply connections to terminals, the actual ICA and RDP files are saved under `C:\Devon IT\Citrix` and `C:\Devon IT\rDesktop,` respectively. Shortcuts to these files are automatically created on the User and Administrator desktops. The end-user can simply double-click these shortcuts to initiate the connection.
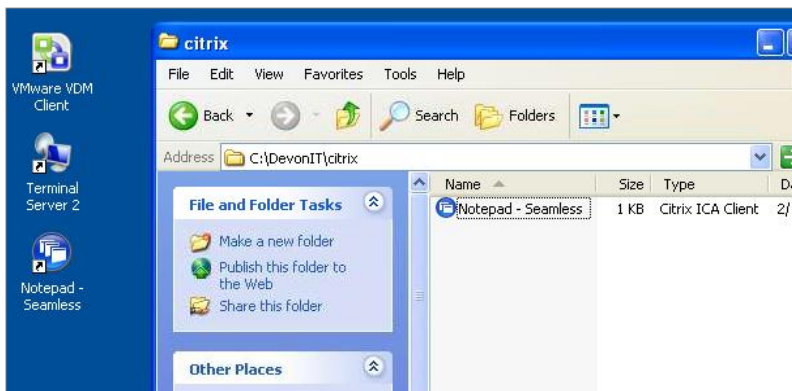
Cloning Terminal Settings

Echo allows you to clone the following terminal settings:

- **Display**-The screen resolution, color depth, and refresh rate of the primary display device.

- **Input-**The keyboard and mouse settings.

- **Password**-Configuration settings for the DeTOS Control Panel password (DeTOS-only).

- **Sound-**Settings for the master volume and mute control.

- **Time-**Settings for the time zone.

- **Agent Password**-The password that has been set to access the DeTOS control panel on that terminal.

- **Persistence**-The settings for persistence that have been chosen for that terminal.

NOTE: The **Agent Password** and **Persistence** settings are only available to be cloned from terminals running DeTOS and do not apply to WES units.

How to Clone Terminal Settings

1   From the **Terminals** inventory table, left-click to select the terminal and then right-click to bring up the **Context Menu.** Select **Terminal Settings➔Clone from Terminal** .

2   The details pane on the right-hand side will display a form with two sections: **Name and Details** and **Select Modules to Clone** .

- **Name-**Enter a name for this clone. This name will be the name that Echo refers to for these settings in the future.

- **Description-**Enter a short description for this clone.

- **Terminal Settings Modules-**Select the type of settings you would like to clone. You can select as many options as there are in the dropdown menu and the selected modules will appear in a list below.

3   Click the **Submit** button. After a few seconds you will receive a success message.

4   Open the **Terminal Settings** tab on the left-hand side. The settings you just cloned should be listed in the inventory table now.

Applying Settings to a Terminal

1   From the **Terminals** inventory table, left-click to select the terminal and then right-click to bring up the **Context Menu.** Select **Terminal Settings→Apply to Terminal**.

2   From the **Terminal Settings** dropdown list in the **Select Terminal Settings** pane, select the saved settings clone you want to apply.

3   Optionally, if you would like to reboot the terminal after the settings have been applied, then select the checkbox called **Reboot after Applying**. If your new settings include network changes, then you may want to consider enabling this checkbox. Otherwise, you may leave this box unchecked.

4   In the list of modules, select which settings module you want to apply. You can select as many options as there are in the dropdown menu and the selected modules will appear in a list below. You must select at least one module – even if it is the only one available.

5   Click the **Submit** button to apply these settings to your terminal. You will receive a success message once they have been applied.

Profiles

The profile feature in Echo allows you to assign terminal connections and settings with one or more terminal. Profiles are useful for administrators that wish to effect updates on many terminals at once. For instance, sometimes it becomes necessary to change the details of a connection that is used for multiple terminals. If a profile has already been applied to those terminals that contains the connection details, simply updating the connection details in Echo will automatically adjust the terminals to use these new settings. The next two sections describe the necessary steps for creating and applying Echo profiles.

How to Create a Profile

1   Open the **Profiles** tab to be taken to the profile inventory table.

2   Left-click on **Add Profile** above the inventory table. Five detail panes will open on the right-hand side.

- **Name-**Enter a name for this profile.

- **Description**- A description assigned to the profile.

- **Mode-**Select between the following profile application options:

  - Default Profile – Apply to ALL terminals on the Echo server.

  - Terminal Details – Apply to terminals by a specific detail such as model, name, IP Address, or Operating System. This mode overrides a Default profile. Opens the **Terminal Details** pane.

  - Select Terminals – Manually select terminals by name. This mode will override both Default and Terminal Detail profiles. Opens the **Terminals** pane.

- **Terminal Details**-Specify which details to narrow down the profile application by in the available fields.

- **Terminals-**Choosing **Select Terminals** as the **Mode** allows the Echo Admin to manually choose terminals in this box.

- **Connections-**Assign cloned connections to this profile by selecting one or more entries in the list. You may also choose to select none at all.

- **Terminal Settings-**Assign cloned settings to this profile by selecting one or more entries in the list. You may also choose to select none at all.

- **Certificates-**A Firefox certificate (to bypass Certificate download warnings) can be exported from your Mozilla Firefox settings and imported into a profile to bypass the warning. In Firefox, select **Options➜Options➜Advanced➜Encryption➜View Certificates➜Authorities**.

- **Disk Image:** In the drop-down menu, if the Echo Administrator adds an image to the profile, Echo will re-image the terminal every time it boots if it doesn't already have the specific image listed here.

3   Click the **Submit** button to create this profile. You will receive a success message once it finished.

4   You will see your new profile entry now listed in the **Profiles** inventory table.

Applying a Profile

Once you finish creating a profile as described in the section above, it will automatically apply the associated connections and settings the next time the terminals included in the **Mode** are rebooted. However, if you would like the changes to take effect immediately, then you may manually apply the profile by following the steps below.

1   From the table of inventoried **Terminals**, left-click to select a terminal and then right-click to open the **Context Menu,** and then select **Profile➔Apply to Terminal** .

2   From the dropdown list of Profiles, select which profile you want to apply.

3   Click the **Submit** button. You will receive a success message when it is finished.

4   Connection shortcuts are automatically created on the terminal's desktop. The end-user can simply double-click these icons to initiate the connection.
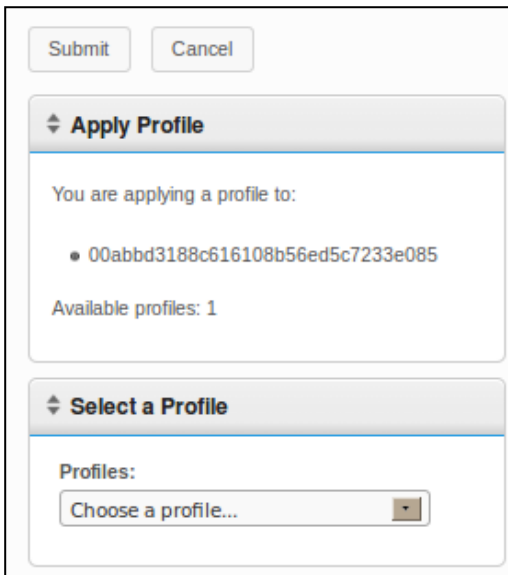
Disk Image Cloning

Echo allows you to perform full disk image cloning of your terminals, utilizing FTP, CIFS, or NFS protocols.

> **NOTE**: To create a disk image clone from a WES 2009 or WES7 terminal, FBWF must be disabled. See the WES 2009 or WES7 Administration Guide for instructions on how to do so.
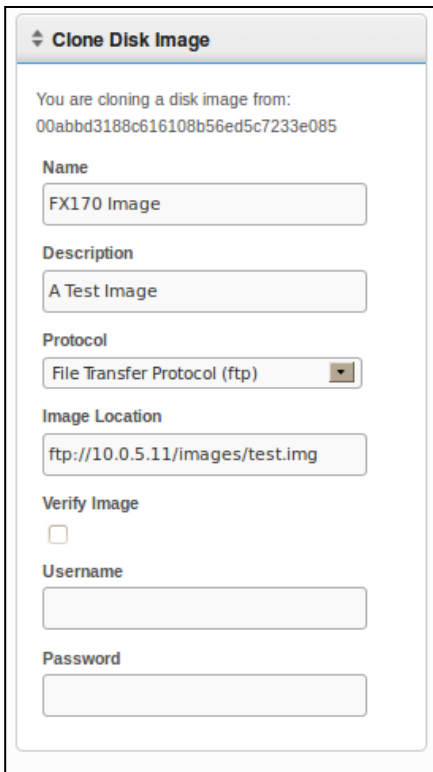
How to Clone the Entire Disk Image

1 From the **Terminals** inventory table, left-click a terminal and then right-click to open the **Context Menu**. Select **Disk Image→Clone from Terminal**.

2 The details pane on the right-hand side will display a **Clone Disk Image** pane that contains a list of seven fields:

- **Name-**Enter a name for this disk image.

- **Description-**Enter a short description for this disk image.

- **Protocol:** From the dropdown list, select either "`FTP,`" "`CIFS,`" or "`FTP`"

  - **FTP-**Select this option if you will be using an internal FTP server to store and retrieve Echo Thin Manage disk images.

  - **CIFS-**Select this option if you have a Local Area Network (LAN) file-sharing CIFS server to store and retrieve Echo disk images

  - **NFS-**Select this option if you have an available NFS share on a Linux/Unix server to store and Echo retrieve disk images.

- **Image Location-**Enter the protocol and location you will be using to store your disk images.

> **NOTE**: You may use a hostname or IP address. Examples include: `ftp://myServerName/path/to/my/image/myImageName.img` and `nfs://192.168.1.123/path/to/my/image/myXpeClone.img`. These above examples use **.img** extensions, but you may give it any extension you want or none at all. Also, be sure to include the protocol prefix in the location URL **(ftp:// or nfs://)**.

- **Verify Image-**Select this checkbox if you want to perform an md5 checksum upon completion of the clone. Please be aware that the cloning process will take much longer to complete when this checkbox is selected.
- **Username-**If required, enter the username of an account that has permissions to read and write to the image repository you specified in the **Image Location** field above.
- **Password-**If required, enter the password needed for the Username specified above.

3 Click the **Submit** button to begin the cloning process. This process may take 20-40 minutes, depending on the size of the terminal's flash disk and network traffic.

⇕ Clone Disk Image

You are cloning a disk image from:
00abbd3188c616108b56ed5c7233e085

Name

FX170 Image

Description

A Test Image

Protocol

File Transfer Protocol (ftp) ▾

Image Location

ftp://10.0.5.11/images/test.img

Verify Image

☐

Username

Password

4   After completion, the newly cloned disk image can be seen in the
     inventory table of the **Disk Images** tab.

Applying a Disk Image to a Terminal

📝 **NOTE:** When applying disk images to your terminals, be sure you are using the correct
image for that particular model, otherwise you may render that terminal unbootable.
Should a terminal become unbootable, a re-imaging guide can be found at
support.dell.com/support.

1   From the **Terminals** inventory table, left-click to select a terminal and
    then right-click to open the **Context Menu**. Select **Disk Image→Apply
    to Terminal**. To re-image more than one terminal at a time, hold down
    the <Ctrl> key while selecting other terminals, or use the <Shift> key to
    select a range of terminals.

2   From the **Disk Image Name** dropdown list on the **Select Disk Images**
    pane, select the image file you want to apply.

📝 **NOTE:** Using the search function while performing disk image applications is advised.
For example, by searching for "FX170 DeTOS" will cause only FX170 terminals running
DeTOS to be displayed. By utilizing the search function, administrators can avoid
accidentally applying a disk image to a terminal of the wrong type or that is running a
different OS.

3   Click the **Submit** button to begin the re-imaging process.

The terminal will reboot and begin re-imaging its flash media with the selected image. This re-imaging process may take 20-40 minutes, depending on the size of the image and network traffic. During this time, there is no agent to heartbeat into the Echo server, and therefore the timestamp in the **Last Contact** field will remain unchanged. Once the re-image is complete and the terminal does its final reboot, the agent will heartbeat into the server, which in turn will update the **Last Contact** field. This update to the current time in the **Last Contact** field is your cue that the re-imaging process is complete.

Supplied Disk Images

New OS images can be added to your Devon IT Echo Management Console Dell Edition inventory.

Visit **support.dell.com** to locate and download the latest DeTOS operating system image for re-imaging your OptiPlex FX130 and FX170 thin clients.

📝 **NOTE:** Only the OptiPlex FX170 has the option to download and re-image the Windows Embedded Standard (WES) operating system image, which is also located at **support.dell.com**.

📝 **NOTE:** Make sure you download the proper image from **support.dell.com**. When updating a disk image you will need to use partial disk images that contain only the operating system portion instead of the full disk image that contains both the operating system partition as well as the Update partition. These partial disk images will be recognizable by the **part1** found in the file name.

How to Add a Disk Image

1   Once you have downloaded the disk image from **support.dell.com**, copy that image over to your FTP server or NFS shared directory.

2   From the **Disk Images** tab, left click on the **Add Disk Image** button above the inventory table.

3   The detail panes on the right-hand side will display various fields used to add the disk image.

- **Name-**Enter a name for this disk image.

- **Description-**Enter a short description for this disk image.

- **Protocol:** From the dropdown list, choose your server:

    - **FTP:** Select this option if you will be using an internal FTP server to store and retrieve Echo disk images.

    - **CIFS:** Select this option if you have a Local Area Network (LAN) file-sharing CIFS server to store and retrieve Echo disk images.

    - **NFS:** Select this option if you have an available NFS share on a Linux/Unix server.

- **Image Location-**Enter the location to where your disk image resides.

> **NOTE:** You may use a hostname or IP address. Examples:
> `ftp://myServerName/path/to/my/image/<name of dell disk image>` and `nfs://192.168.1.123/path/to/my/image/<name of dell disk image>`.

- **Username-** If required, enter the username of an account that has permissions to read & write to the image repository you specified in the **Image Location** field above.

- **Password-** If required, enter the password needed for the Username specified above.

- **Configuration File-** If **Toggle Import** is on, click **Browse** to select a Config file on your local machine. If **Toggle Import** is not on, fill the following fields:

  - Model-Enter the model name associated with this image*.

  - Operating System-Select the desired OS from the dropdown menu.

4 Click the **Submit** button to add this disk image.

5 You will receive a success message. In the **Disk Images** tab, the inventory table will now contain your recently added disk image. See section titled, "Applying a Disk Image to a Terminal," for instructions on how to apply the disk image to your terminals.

4

Maintenance

Backing Up Your Server

You can backup your server from the main **Maintenance** tab. The method used is referred to as a 'Hotcopy' since the backup is created while the system is running. There is no need to stop or suspend the Echo server for the backup. To execute a Hotcopy, perform the following procedure:

1   In the **Maintenance** tab, open the **Save/Restore Server Config** subsection.

2   Click on **Save Server Configuration**.

3   After selecting this option, the panel on the right-hand side of the web interface displays the **Save Hotcopy** pane (pictured below) and lists several checkbox options, along with **OK** and **Cancel** buttons. Select the checkbox next to all of the **Items, Logs, and Appliances** you wish to save in the configuration file and then click **Save** to start the backup process.
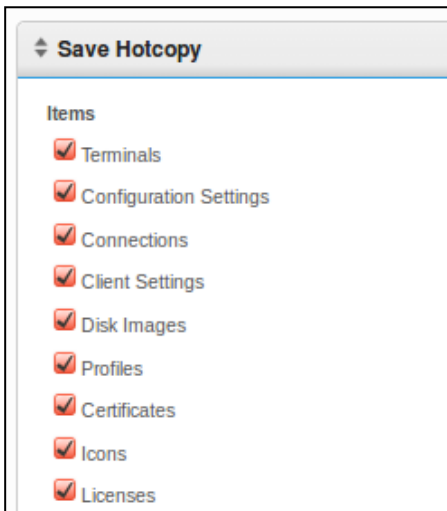
4   The result of the Hotcopy will create a binary (**.BIN**) backup file that will be downloaded to your local machine. Click **Save File** and make a note of where you save this file, as you will need it in the future to perform a restore.
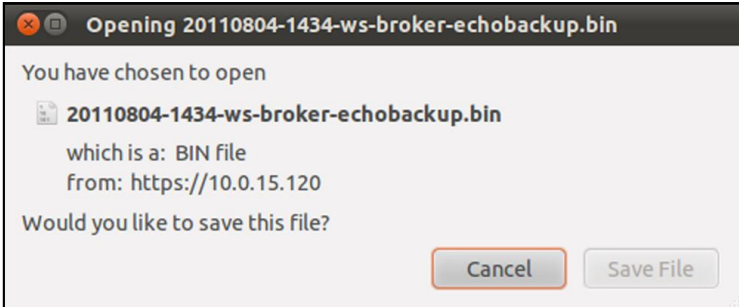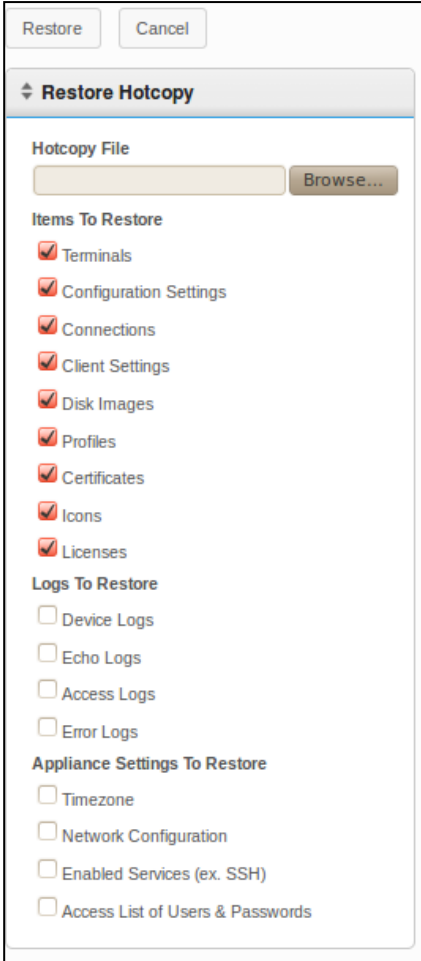

Server Restore

A restore deletes all existing configuration and data on your Echo Server and overwrite it with the information contained in a previously created Hotcopy backup file. To perform a restore, follow these steps:

1   In the **Maintenance** tab, open the **Save/Restore Server Config** subsection.

2   Click on **Restore Server Configuration**.

3   After selecting this option, the **Restore Hotcopy** pane on the right-hand side of the web interface displays will open. Under the **Choose File** button, take notice of the **Items to Restore**, **Logs to Restore**, and **Appliance Settings to Restore** categories and their respective options.

4   Click the **Choose File** button to search for the Hotcopy backup file on your local machine. Double click the Hotcopy **.BIN** file to bring the file path to the text box.

5   At this time, the administrator restoring the configuration file can choose which settings (by category) to restore and which settings can be ignored. Any settings that are not selected to be restored will remain as they are on the current system setup.

6   After the path to the backup file has been entered, click the **Restore** button to begin the restore. Once the restore process is finished, you will receive a **Complete** message in the information pane.

Appliance Upgrades

The following is the recommended procedure for upgrading your Echo Appliance to a newer version.

1 **Backup-**Backup your server's current configuration and data prior to performing an upgrade using the Hotcopy procedure. Refer to section "Backing up your Server" for details on this step.

2 **Upgrade-**

   a.   Shutdown the Echo Appliance Server (Select option 9, **Halt Machine**, from the **Main Menu**).

   b.   Visit **support.dell.com** to locate and download the latest Devon IT Echo Management Console Dell Edition appliance.

   c.   Extract the contents and point your VMware Server to the new **.ova** file.

   d.   Restart the virtual appliance.

3 **Restore-**Once the upgrade is finished and the new appliance is back online, restore your Echo Server. Refer to section "Server Restore" for details on the restore process.

5

Getting Help

Contacting Dell

For customers in the United States, call 800-WWW-DELL (800-999-3355).

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1   Visit **support.dell.com**.

> **NOTE:** If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, or Dell product catalog.

2   Click your country/region at the bottom of the page. For a full listing of countries/regions click **All**.

3   Click **All Support** from **Support** menu.

4   Select the appropriate service or support link based on your need.

5   Choose the method of contacting Dell that is convenient for you.