

Apple Pro Training Series

OS X Server Essentials

Using and Supporting OS X Server on Mountain Lion

Arek Dreyer and Ben Greisler



Certification exam preparation for:
Apple Certified Technical Coordinator 10.8

Apple Pro Training Series

OS X Server Essentials

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Apple Pro Training Series: OS X Server Essentials
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Lesson 4

Exploring the Server App

Once you've completed your initial installation and configuration of OS X Server and you click Finish at the Congratulations pane, the Server app opens its main configuration pane and you can continue configuring it. In this lesson you'll learn about the various panes available in the Server app. You will learn how to enable remote access to the Server app and how to move the location your server uses to store much of its service data.

Reference 4.1 Allowing Remote Access

You can certainly administer your server on your server computer, however, even though OS X Server is now an application, rather than an entire operating system, it's still not recommended to use your server for your daily productivity applications. Additionally, your server computer might be located in an inconvenient physical location.

You can use the Server app on a Mac with Mountain Lion to manage OS X Server running on a remote Mac, but only if the checkbox "Allow remote administration using Server" is selected. It is recommended that you do not simultaneously use the Server app on more than one Mac to administer a given server.

MORE INFO ► When you select the "Allow remote administration using Server" checkbox, you enable other Macs to use the Server app to configure your server using TCP port 311.

GOALS

- Understand how to use the Server app
- Use the Server app to administer a remote computer with OS X Server
- Move service data to a different volume



Unlike previous versions of OS X Server, you cannot perform a remote initial installation and configuration of OS X Server with the Server app; you have to use the Server app on the Mac on which you want to install OS X Server, at least for the initial installation and configuration.

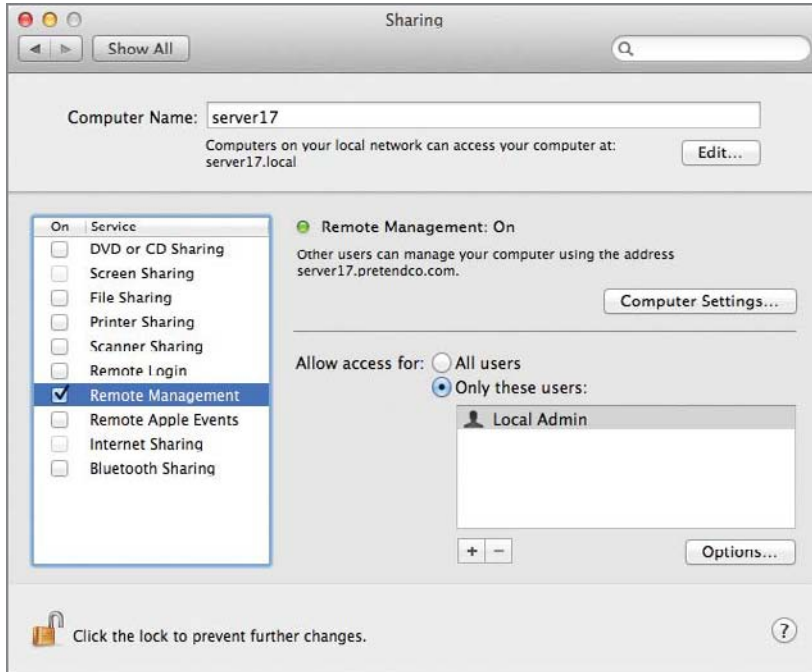
However, sometimes you need direct control of your server computer; for example, to perform a series of file or folder copy operations using the Finder. If you select the checkbox “Enable screen sharing and remote management,” you can use tools like Screen Sharing (available from the Tools menu in the Server app, and located in /System/Library/CoreServices), and Apple Remote Desktop (available from the Mac App Store) to take control of the Mac running OS X Server.



When you select the “Enable screen sharing and remote management” option, this allows access for any local accounts on the server computer that you configure as an administrator. If you want to allow access for other accounts, or specify a password for software that uses the VNC protocol, configure this in the Sharing preferences on the server computer.

NOTE ► If you have the Sharing preferences open when you use the Server app to configure a user account as an administrator, you need to quit System Preferences and reopen the Sharing pane to see the updated list of accounts.

The following figure illustrates the checkbox in the Sharing preferences that is enabled when you enable the checkbox for “Enable screen sharing and remote management.”



The “Allow remote login using SSH” checkbox in the Server app has the same effect as the Remote Login checkbox in the OS X Sharing preferences; selecting or deselecting either checkbox has the same effect on the checkbox in the other tool.



When you run the Server app on a remote administrator computer, if the “Allow remote login using SSH” option is selected, an arrow appears next to it. If you click this arrow, the

Server app opens Terminal and attempts to connect to your server using the SSH protocol, with the username of the administrator account that you provided to the Server app to connect to your remote server computer. You must provide the password to successfully open an SSH connection.

Similarly, there is also a shortcut to open a Screen Sharing session with your server. This opens the Screen Sharing application, which allows remote observation and control of the remote server computer.

Of course, the checkbox for “Allow remote administration using Server” is not available for you to configure unless you use the Server app directly at the server.

The following figure illustrates the arrows that are shortcuts to open a connection to the server.

NOTE ► At the time of this writing, a reinstallation of OS X Mountain Lion from the Recovery HD results in the Sharing preferences with Screen Sharing enabled for local administrator user accounts, and Remote Login (SSH shell access) enabled for all local user accounts. If you upgrade from OS X v10.6.8 or any version of OS X v10.7, your Mac with OS X Mountain Lion inherits the Sharing settings from the system you upgraded.



Reference 4.2

Using the Next Steps Drawer

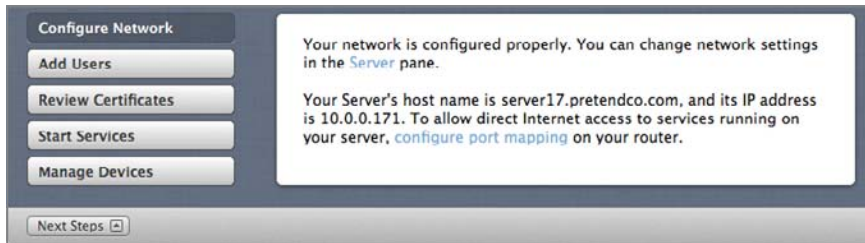
The Next Steps drawer is at the bottom of the Server app window, and is a great introduction to the Server app. Once you are more familiar with the Server app, you can click the Next Steps button to close the Next Steps drawer. You can always click the Next Steps button to open the drawer again.

The five sections in the Next Steps drawer are pretty self-explanatory:

Configure Network

You should have already configured your network interfaces the way you want, but the Configure Network pane gives you a quick view of your current network configuration, as well as a shortcut to your server's Network pane in the Server app.

NOTE ► Changing your server's IP address can have significant unexpected consequences, depending on the services your server provides. Search for “Find or change your server's IP address” in the online “OS X Server: Advanced Administration” for more information.



Add Users

Lessons 8 and 10 delve into managing local users, as well managing local network users. The Add Users pane offers some advice and a shortcut to the Server app's Users pane.



Review Certificates

You will learn about using SSL certificates in the next lesson. One blue link opens Server Help, and the second is a shortcut to the Settings pane where you can configure SSL certificates.



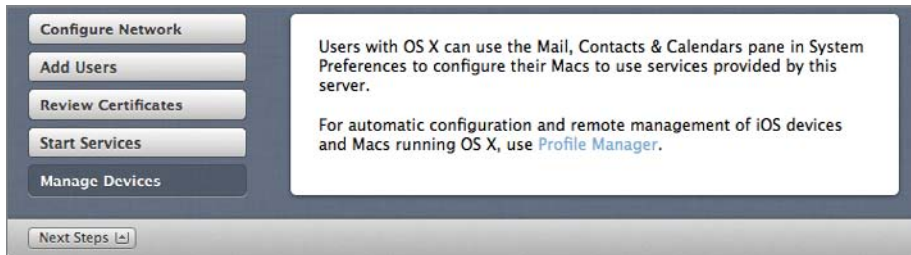
Start Services

This pane lists any currently running services. The Server app sidebar displays a green status indicator next to any service that's running.



Manage Devices

You will learn more about managing Macs and iOS devices in Lesson 11, “Configuring OS X Server to Provide Device Management,” and in Lesson 12, “Managing with Profile Manager.”



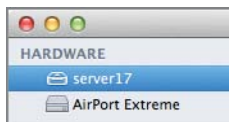
Reference 4.3

Using Server Sidebar Elements

The Server app's sidebar contains four sections, which you'll use over and over throughout this guide.

Hardware

The Hardware section displays your server, as well as an AirPort device if there is one on your subnet.



If you select the AirPort device, and provide authentication to manage the AirPort device, when you use the Server app to start some services for the first time, the Server app asks if you would like to modify the AirPort device's NAT rules to allow outside access to the service. This is convenient if an AirPort device sits between your internal network and your connection to the Internet.

Once you select your server in the Server app sidebar, you see four tabs:

- ▶ Overview
- ▶ Settings
- ▶ Network
- ▶ Storage



Overview

The Overview pane is the first thing you see after your initial installation and configuration of OS X Server. The arrow next to your Startup Disk is a shortcut to clicking the Storage tab and selecting the startup volume.



Settings

The Settings pane offers a number of options to configure remote access and administration.

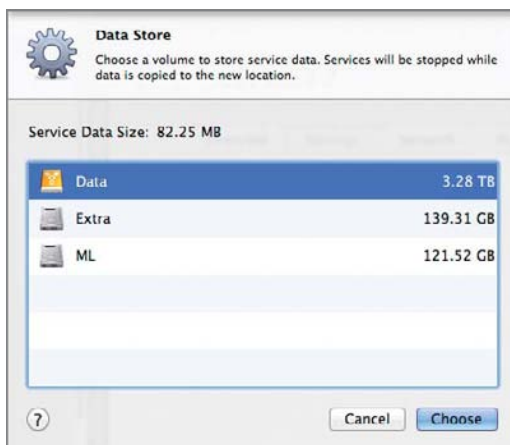
This is also where you edit your server's SSL certificates; remember that the Next Steps Review Certificates pane contains a link to this Settings pane.

The last option in the Settings pane allows you to configure your server to store data for various services on a volume other than the boot volume.



Moving Service Data Location

When you click Edit next to the Service Data field, you have the opportunity to change where your server stores some of its service data. Here's what the pane looks like for a server with two internal volumes and one external volume:



If you use the Server app to choose a different service data volume, it does the following:

- ▶ Automatically stops the appropriate services
- ▶ Creates a new folder on the volume you choose (`/Volumes/volume_name/Library/Server`)
- ▶ Copies the existing service data to the new folder
- ▶ Configures services to use the new location
- ▶ Starts the services again

The list of services whose data gets relocated includes:

- ▶ Calendar and Contacts
- ▶ Mail
- ▶ Messages
- ▶ PostgreSQL databases and backups that services like Profile Manager use
- ▶ Profile Manager
- ▶ Software Update
- ▶ Websites
- ▶ Wiki

Not all the server's service data is moved. For example, configuration and temporary files (like the Mail spool file) remain on the startup volume, and some services, like FTP, NetInstall, and Websites, offer separate interfaces to choose where to store data for those services.

Just as you should not change the name of your server's startup volume after you start offering services, you should not change the name of the service data storage volume after you designate it in the Server app.

MORE INFO ▶ If you choose to share the Websites root via FTP, it will share the `/Library/Server/Web/Data/Sites/` directory on your server's volume, even if you choose a different data volume for your server's service data.

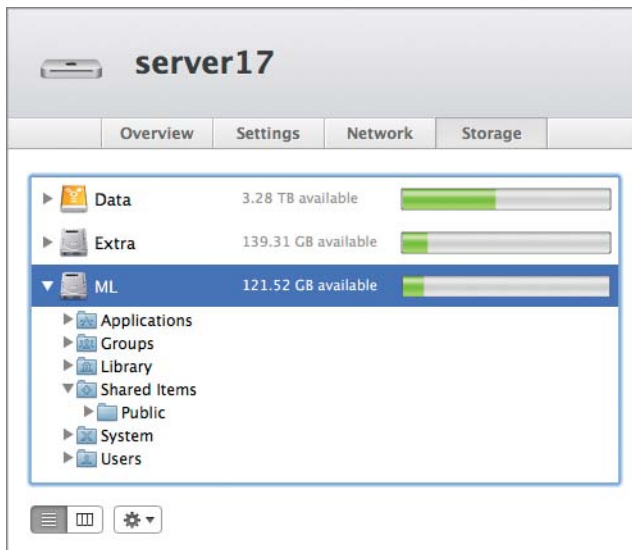
Network

The Network pane shows your current Computer Name and Host Name, as well as the status of your server's network interfaces.



Storage

This Storage pane displays an alphabetical list of the disks connected to your server computer; you can also drill down and edit file ownership, permissions, and access control lists (ACLs). You'll see more about this pane in Lesson 14, "Understanding File Access."



TIP If you have multiple volumes attached to your server, only the boot volume has special folder icons for the Applications, Groups, Library, Shared Items, System, and Users folders. Other volumes have regular folder icons.

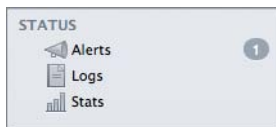
Accounts

The Accounts section of the Server app sidebar contains the Users and the Groups panes. Lesson 8, “Managing Local Accounts,” and Lesson 10, “Managing Local Network Accounts,” make extensive use of the Users and Groups panes.



Status

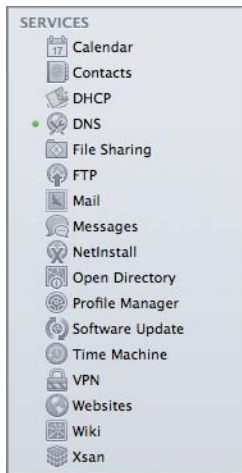
Lesson 6, “Using Status and Notifications,” covers using the Alerts, Logs, and Stats panes to proactively monitor your server.



Services

This is a list of the services that OS X Server offers. A green status indicator appears next to the services that are currently running. Select any service to configure it.

MORE INFO ► The “Additional Resources” section of Lesson 2, “Installing OS X Server,” contains a list of Knowledge Base articles that address services that have been offered in previous versions of Mac OS X Server but do not appear in this list of services.



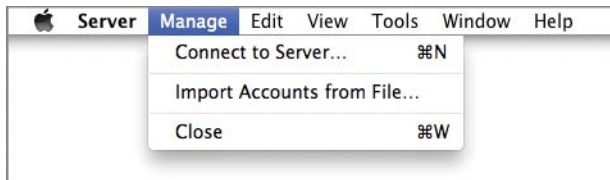
Reference 4.4

Using the Manage Menu

The Server app's Manage menu offers three menu items.

“Connect to Server” opens the “Choose a Mac” pane, where you see a list that includes your Mac, servers in your broadcast domain, and Other Mac, which allows you to specify another Mac by its host name or IP address.

The “Import Accounts from File” menu item is covered in Lesson 8, “Managing Local Accounts,” and Lesson 10, “Managing Local Network Accounts.”



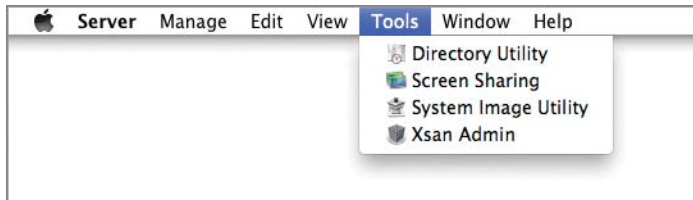
Reference 4.5

Using the Tools Menu

The Tools menu allows you to quickly open four administration applications:

- ▶ Directory Utility
- ▶ Screen Sharing
- ▶ System Image Utility
- ▶ Xsan Admin

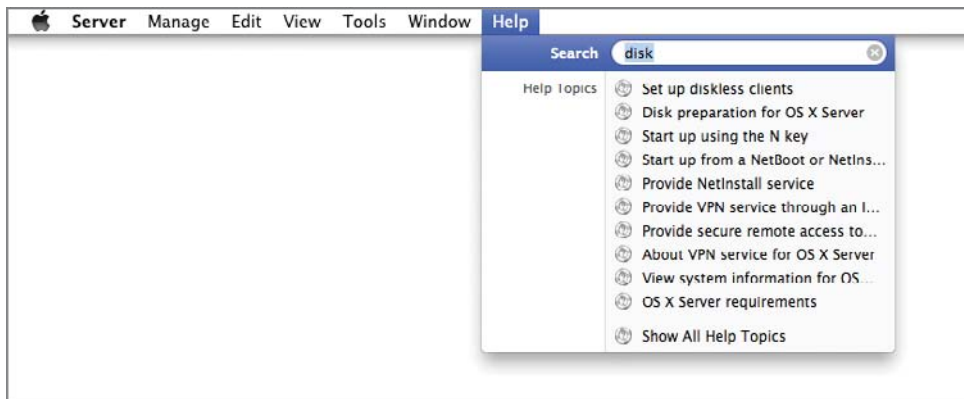
The first three applications are located in /System/Library/CoreServices on every Mac with OS X Mountain Lion. Xsan Admin is located inside a folder in the Server app itself.



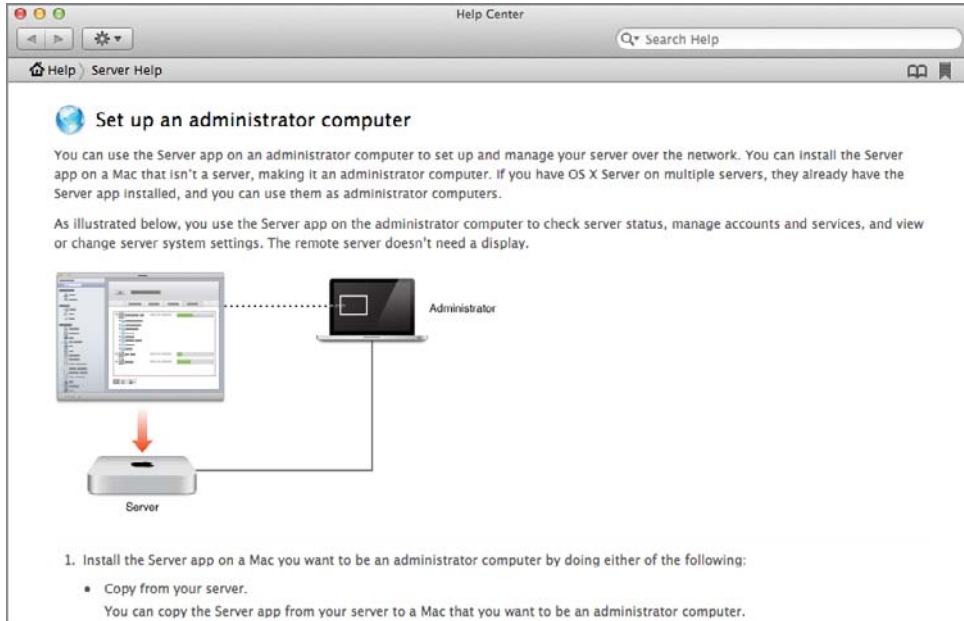
Reference 4.6

Using Help

Don't underestimate the power of the Server Help. After you enter search terms into the Search field, Help displays a list of Server Help resources that match your query.



Once you choose a topic from the list of results, the Help Center window stays in the foreground until you close it.



Reference 4.7

Troubleshooting

If your administrator computer does not have DNS records available for a remote server, you will not be able to authenticate to that server with the Server app.

On your server, do not delete the Server app or move the Server app from the Applications folder on your startup volume. If you do, you will see a dialog that all your services have stopped; when you reinstall OS X Server (or just move the Server app back into the Applications folder of the server's startup volume), you will have the opportunity to reenter your Apple ID to renew your Apple Push Notification service certificates, and then your services will start again.

It is recommended that you do not change the name of your server's startup volume, but if you do, you will need to restart your server to restart its services.

Exercise 4.1

Enable Screen Sharing And Remote Management

In Exercise 2.2, you confirmed that your server allows remote administration using the Server app. Now you will enable screen sharing and remote management as well. If you had a copy of Apple Remote Desktop, performing this action would allow you to use it to control your server. In this exercise you will use Screen Sharing to control your server.

Open a connection to your server with the Server app if you don't already have one open.

- 1 On your administrator computer, open the Server app, and choose Manage > Connect to Server. Select your server and click Continue.
- 2 Provide administrator credentials (Administrator Name **ladmin** and Administrator Password **ladminpw**).
- 3 Click Connect.

Enable screen sharing and remote administration.

- 1 If your server isn't already selected in the Server app sidebar, select your server now.
- 2 Click the Settings tab.
- 3 To enable you to open a Screen Sharing session using the Server app on a remote administrator computer, select the checkbox "Enable screen sharing and remote management."

Open a Screen Sharing connection.

- 1 Click the arrow next to the “Enable screen sharing and remote management.”
- 2 Enter local administrator credentials for your server computer.

NOTE ► If you provided your Apple ID when setting up OS X, you will see “Connect as a registered user” and “Using an Apple ID” as two different options in the window. If this is the case, select “Connect as a registered user” and enter credentials for the local administrator on your server.

NOTE ► The Name field automatically contains the full name of the currently logged-in user on your administrator computer.



- 3 Click Connect.
- 4 Move some windows around to demonstrate that you are controlling your server computer.
- 5 In the Screen Sharing window, click the close button.

Because you selected the checkbox for “Enable screen sharing and remote management,” you were able to take control of your remote server computer using Screen Sharing, right from the Server app’s shortcut.

Exercise 4.2

Explore the Next Steps Drawer

The Server app has a helpful Next Steps drawer that helps you determine your next management and monitoring steps.

Like many exercises in this guide, you can open the Server app on your administrator computer, or on your server computer.

- 1 If it isn't already open, open the Server app and connect to your server.
- 2 In the Next Steps drawer, click Configure Network. Review the text, which contains information about your IP address and host name and instructions for changing these.
- 3 In the second sentence, click the blue word "Server," which is a link to the Network pane; this produces the same result as selecting your server in the Server app sidebar and then clicking Network.
- 4 Unlike earlier versions of OS X Server, if you want to change your IP address or host name, you do not have to use the command line. To access the appropriate interface to change your IP address or host name, click Edit next to the Host Name field.
- 5 In the Change Host Name pane, click Continue.
- 6 If you see the Multiple Networks Detected pane, confirm that the pop-up menu contains your primary network connection, and choose Continue.
- 7 In the Host Name pane, select "Host name for Internet" and click Continue.
- 8 Review the computer name, host name, and network address. This is where you would make changes when appropriate, but for the purposes of this guide, do not make any changes at this point: Click Go Back as many times as it takes to get back to the Change Host Name pane, and then click Cancel.

- 9 Click the four other Next Steps buttons and review their content.
- 10 Click the Next Steps button in the lower-left corner to make the Next Steps drawer disappear.
- 11 Click the Next Steps button again to make the drawer reappear.

The Next Steps drawer is a great place to start when you're new to administering your server with the Server app, but you can close the Next Steps drawer when you're more familiar with the Server app.

Exercise 4.3

Configure the Service Data Volume

► Prerequisite

- Exercise 4.1, "Enable Screen Sharing And Remote Management"

In this exercise, you will go through the procedure to relocate your service data volume but will not actually change it.

Moving the Service Data to a Different Volume

Using the Server app, you can choose a different volume for service data. It's a good idea to perform this task as early as possible, so that you don't have to wait with services disabled while a large amount of data is moved to the new volume.

- 1 If necessary, on your administrator computer, open the Server app and connect to your server.

- 2 In the Server app sidebar, select your server and click Settings.
- 3 Next to the Service Data field, click Edit.
- 4 Inspect the current Service Data Size, as well as how much space is available on any listed volume. If you have another volume available on which to store the service data, you could select that volume and click Choose.

Because it is possible that you do not have any extra volumes in your test environment, the rest of the exercises for this guide are written with the assumption that the service data is stored on the startup volume. So, for the purposes of these exercises, click Cancel to close the window.

Even though you went through the procedure to relocate your service data volume, you didn't actually change it in this exercise. You can use this procedure in a production environment with an additional storage volume.

Additional Resources

The following documents provide more information about using the Server app to manage and configure OS X Server.

Many other documents are available at www.apple.com/osx/server/resources/documentation.html.

OS X Server Administration Guides

OS X Server: Advanced Administration <http://help.apple.com/advancedserveradmin/mac/10.8/>

Apple Knowledge Base Documents

You can check for new and updated Knowledge Base documents at www.apple.com/support/.

Document HT1822, "OS X Server: Admin tools compatibility information"

Document HT4974, "OS X Server: Changing the service data storage location"

Document HT4814, "How to administer OS X Server remotely using Server App"

Document HT5359, "OS X Server: Dedicating system resources for high performance services"

Lesson Review

1. Using an administrator computer with the Server app installed, how do you use the Server app to administer a remote server?
2. What option do you need to select in order to allow another Mac to administer your server, and where is its checkbox?
3. What tools does the Tools menu give you quick access to open?
4. Do you have to install extra software to take control of your server's keyboard and mouse?
5. How do you hide the Next Steps drawer?
6. If you use the Server app to choose a different service data volume to a volume called /Volumes/Data, what folder will contain the service data?
7. Do you need to stop all services before using the Server app to change your service data volume?
8. Can you remotely install OS X Server on a brand new Mac computer that comes with OS X Server, without first configuring OS X on that computer?

Answers

1. Open the Server app, choose Manage > Connect to Server, select your remote server from the list (or select Other, and then provide its host name or address), and provide credentials for a local administrator.
2. Select your server in the Server app sidebar (in the Hardware section), click the Settings tab, and then select the option "Allow remote administration using Server."
3. The Tools menu gives you access to these applications:
 - Directory Utility
 - Screen Sharing
 - System Image Utility
 - Xsan Admin
4. No, on your server computer, you open the Server app and select your server in the Server app sidebar (in the Hardware section). Click the Settings tab, select the checkbox "Enable screen sharing and remote management," and then on your administrator computer use Screen Sharing to take control of your server computer's keyboard.

5. Click the Next Steps button, or choose Help > Next Steps Button.
6. In this case, your service data will be stored in /Volumes/Data/Library/Server.
7. No, the Server app automatically stops the appropriate services before moving their data to the new service data volume.
8. No, you need to configure OS X before installing and configuring OS X Server.

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