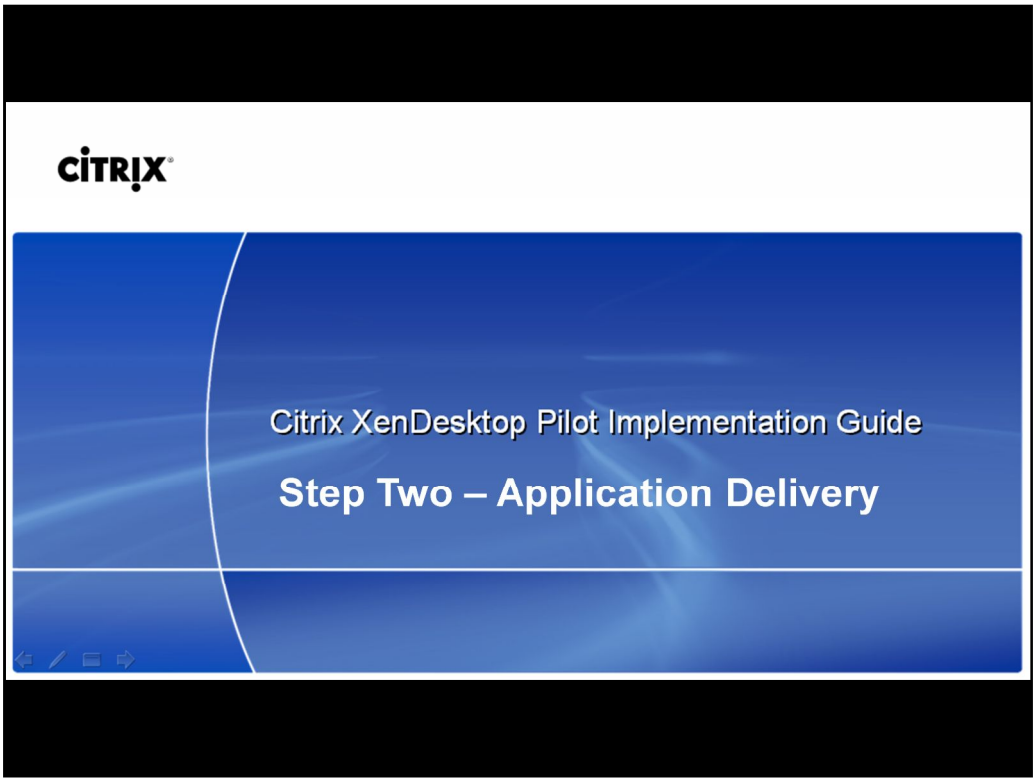
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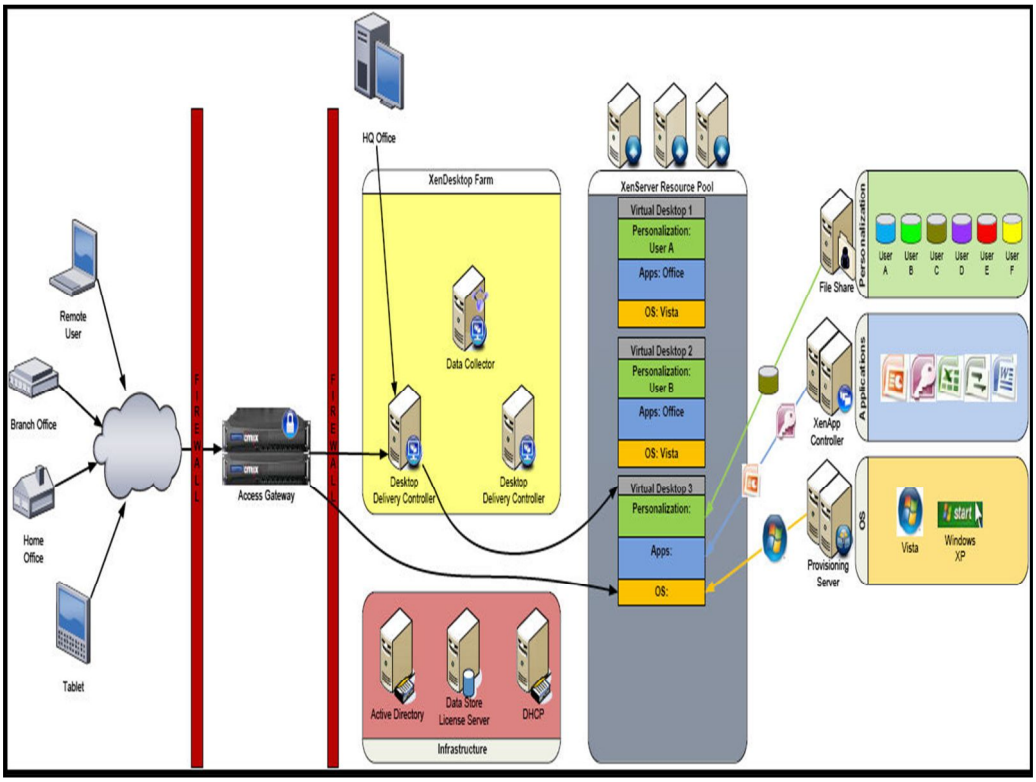
Citrix XenDesktop Pilot Implementation Guide
Step Two – Application Delivery



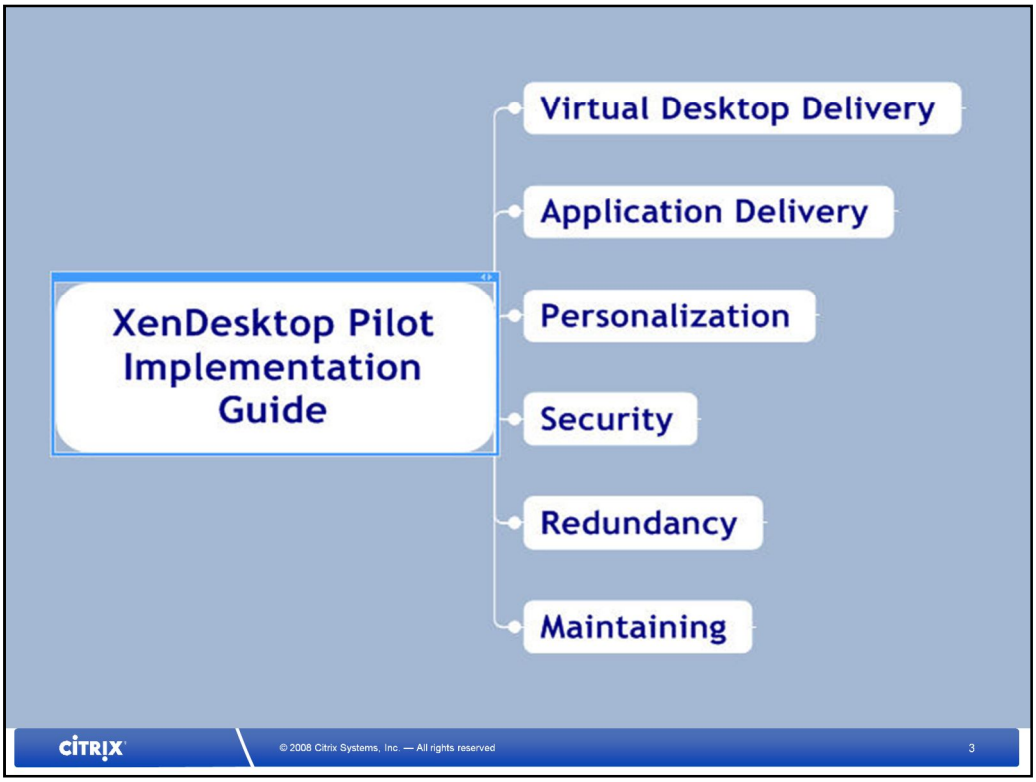
The architecture can be broken down into six core components:

1. Virtualization Infrastructure: The virtualization infrastructure allows for the dividing of a single physical server into multiple virtual servers all sharing resources. The virtualization infrastructure for this pilot architecture is based on XenServer as it is included as part of the XenDesktop overall solution. The virtualization infrastructure could also leverage Microsoft Hyper-V or VMware ESX.

2. Virtual Desktop Delivery Controller: The virtual desktop delivery controller is responsible for the registration of new virtual desktops and directing requests for virtual desktops to available systems. Users interact indirectly with the controller via the integrated Web Interface component. Through a web-based site, or through a locally installed receiver, users will be delivered their virtual desktop.

3. Virtual Desktop Provisioning: The provisioning server aspect of the XenDesktop solution delivers an operating system image to the virtual desktop instance on the virtualization infrastructure. A base operating system image is created that contains all operating system-level configurations as dictated by the organization's policies. The base image, however, does not contain applications. As each virtual desktop boots, the operating system is streamed over the network to the virtual desktop. The power of this solution is identified when updates are

required as only the base image requires updating and all virtual desktops will utilize the latest image upon next reboot. By stripping out the applications, a single


XenDesktop Pilot Implementation Guide
Virtual Desktop Delivery
Application Delivery
Personalization
Security
Redundancy
Maintaining
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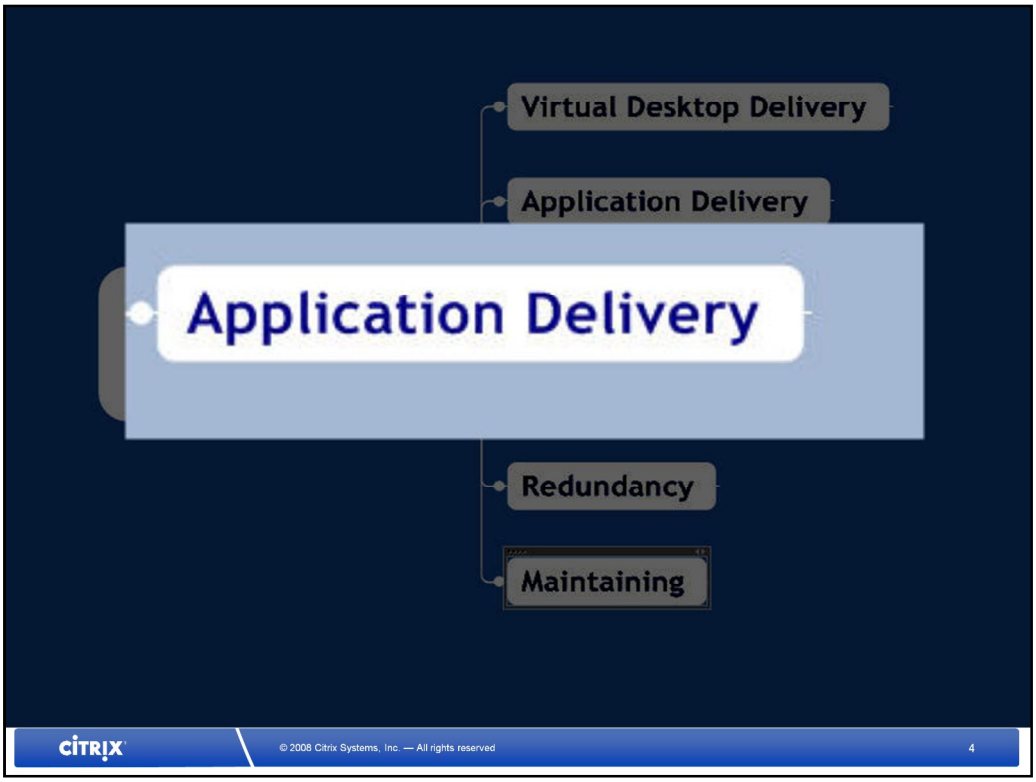
3


Virtual Desktop Delivery
Application Delivery
Application Delivery
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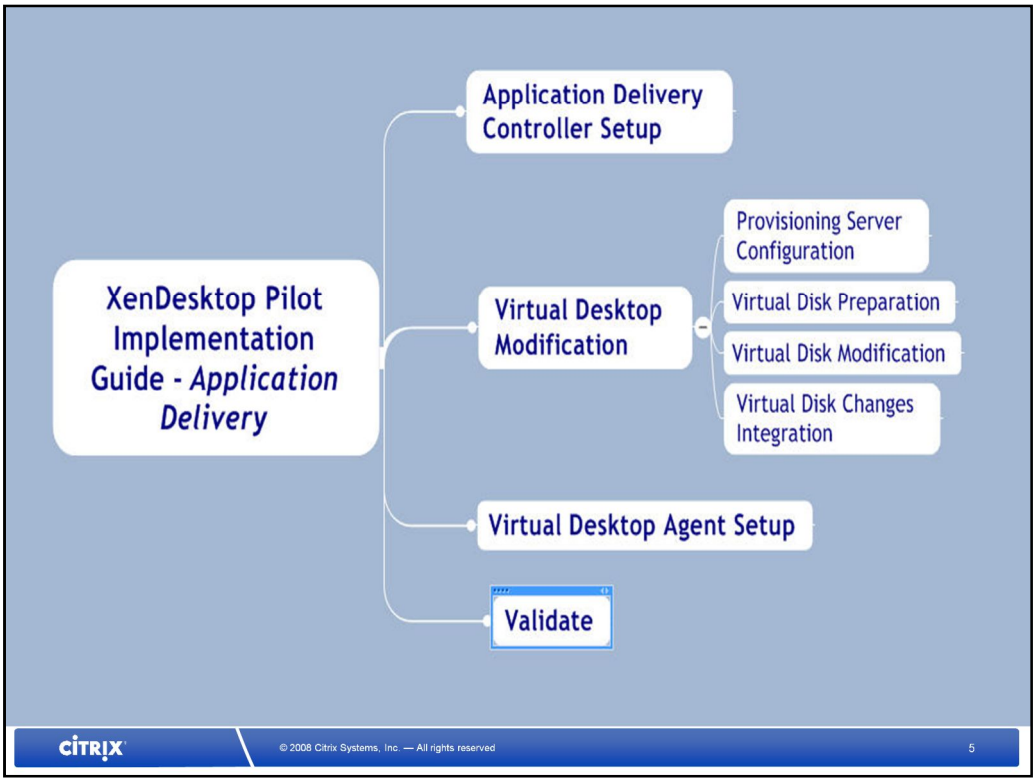
XenDesktop Pilot Implementation Guide - *Application Delivery*
Application Delivery Controller Setup
Virtual Desktop Modification
Provisioning Server Configuration
Virtual Disk Preparation
Virtual Disk Modification
Virtual Disk Changes Integration
Virtual Desktop Agent Setup
Validate
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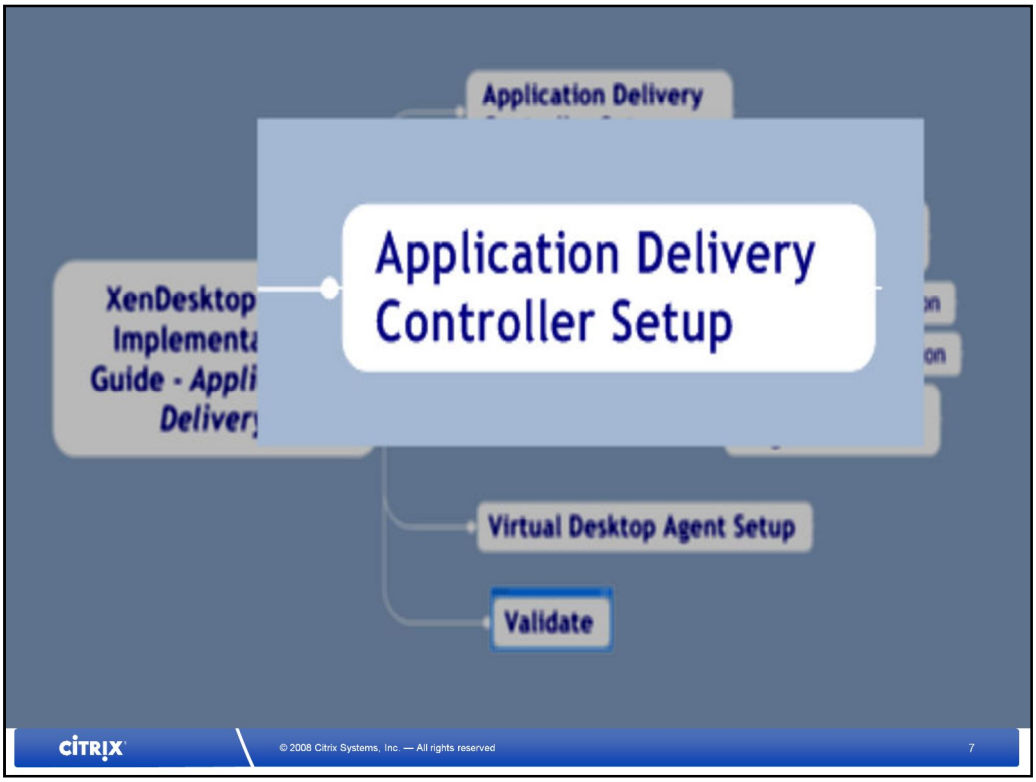
5

Virtual Desktop Creation

At the core, the XenDesktop solution is based on a core operating system image to be delivered to thousands of endpoints. To simplify and reduce the number unique virtual desktops, the base image should only contain the minimal set of options. The following sub-sections will show how to build either a Windows XP or Windows Vista base image for a XenDesktop Pilot. This step is broken down into the following components:

- XenServer Virtual Machine Creation
- Operating System Installation
- Citrix Virtual Desktop Agent Setup



XenApp for Virtual Desktops

Separating the applications from the desktop helps reduce the overall number of virtual desktop images that must be managed. The next step in the building of the Pilot environment is to integrate application delivery into the desktop delivery infrastructure. This is accomplished with the following process:

- Application Delivery Controller Setup

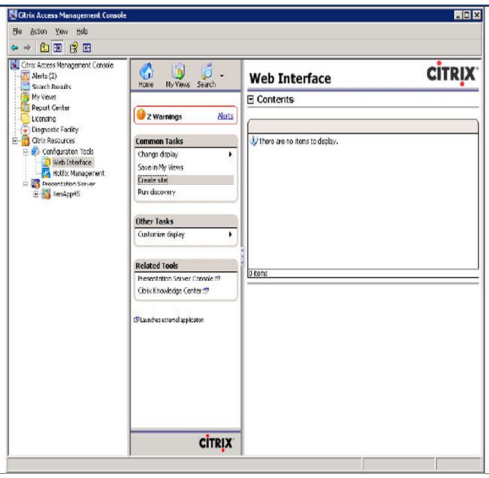
- Virtual Desktop Modification

Assumption: The XenApp environment has already been setup and configured with hosted and streamed applications to users and groups. This section is only showing how to properly deliver applications to a virtual desktop.

This section is only showing how to properly deliver applications to a virtual desktop.

Application Delivery Controller Setup

Application Delivery Controller Setup

	Screenshot	Description
1		• On the XenApp server, launch the Access Management Console • Select the **Web Interface** option • Select **Create site**

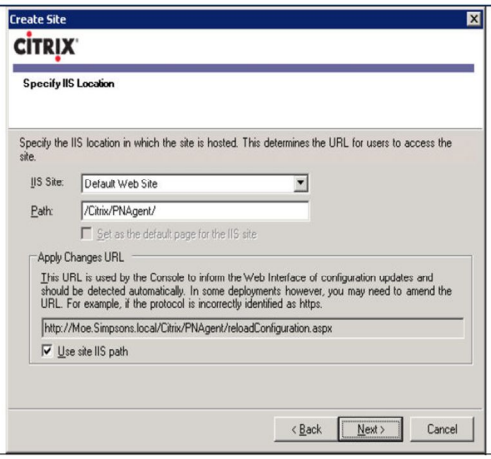
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• On the **Create Site** screen, select the **Program Neighborhood Agent Services site** option • Select **Next**

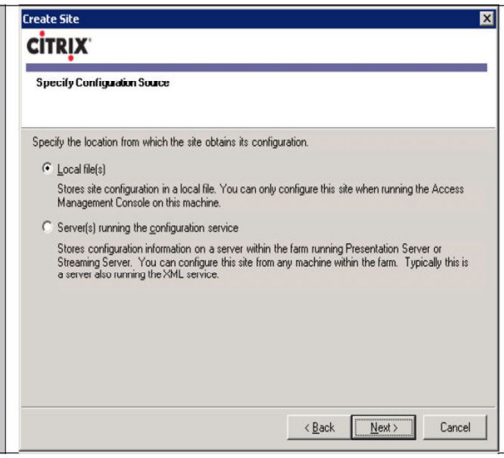
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Leave the IIS Location information as default and select **Next**

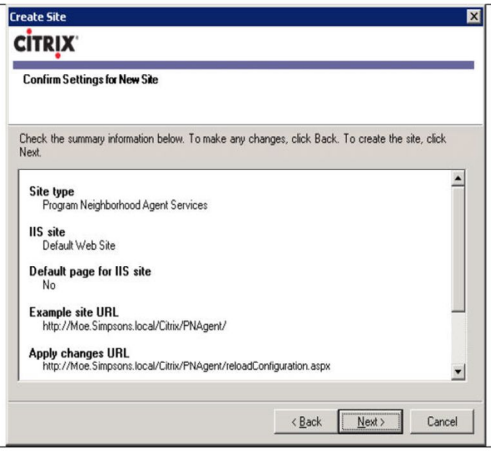
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Leave the Configuration Source options as default and select Next

Application Delivery Controller Setup

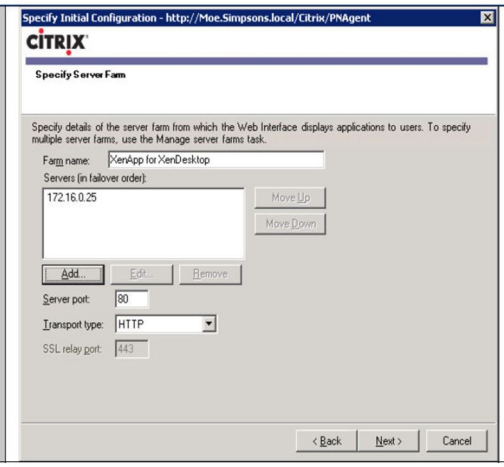
Application Delivery Controller Setup

Screenshot	Description
	• On the **Confirm Settings for New Site** screen, select **Next** • A new Web Interface site is being created that will deliver applications to the virtual desktops. • When the setup is complete, enter in the **Advanced Configuration options** screen

Application Delivery Controller Setup

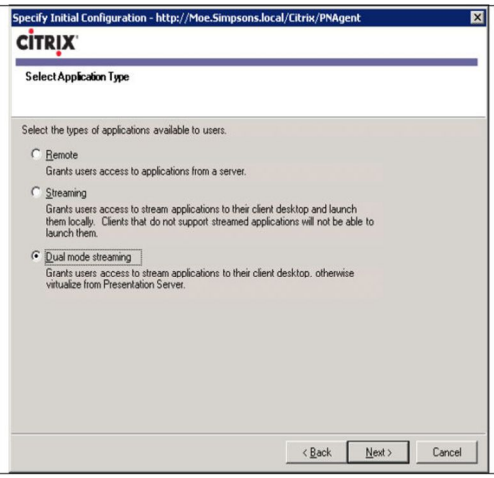
Application Delivery Controller Setup

Screenshot	Description

	• Enter in the following information for Farm Information screen
	  ○ **Farm Name**: XenApp for XenDesktop (this is customizable)
	  ○ **Servers:** IP address of the XenApp server
	• Select **Next**
	
	Note: *To provide some redundancy, multiple XenApp servers should be built and located within the same XenApp farm. The Servers entry on this screen should contain multiple XenApp servers for redundancy.*

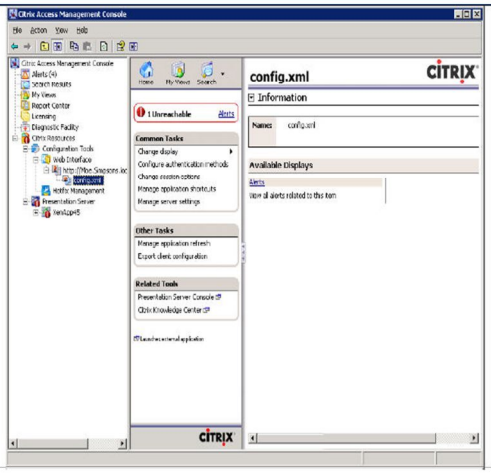
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• On the Application Type screen, select **Dual mode streaming** • Select **Next** • Select **Finish** The Web Interface site is now ready to delivery applications to virtual desktops. If the defaults IIS settings were used, the address is: http://IPAddress/Citrix/PNAgent

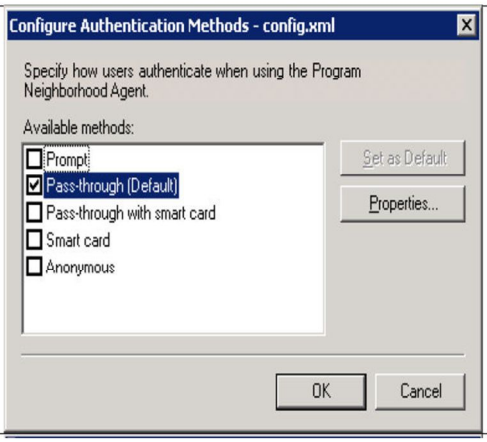
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Select the newly created site's config.xml file • Select **Configure authentication methods**

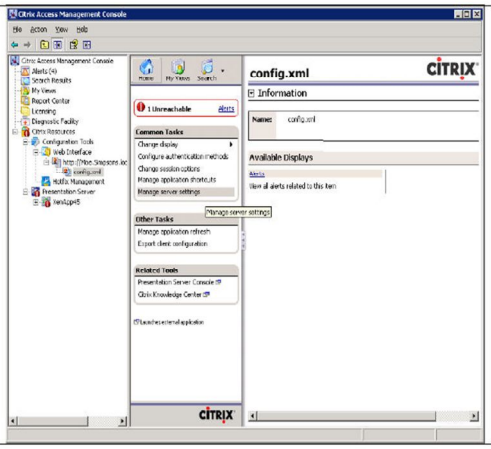
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Select the **Pass-through** option for authentication • Select **OK** This option will automatically use the user's workstation login credentials to log in with the Application Receiver. When a users logs into the workstation, those credentials will also be used to authenticate to the XenApp farm and the appropriate applications will automatically be delivered down to the virtual desktop.

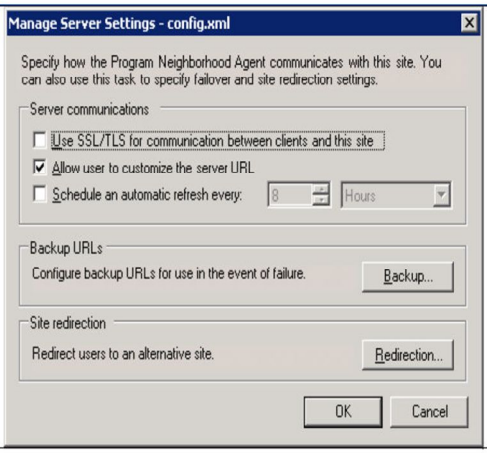
Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Select the **Manage Server Settings** option within the Access Management Console

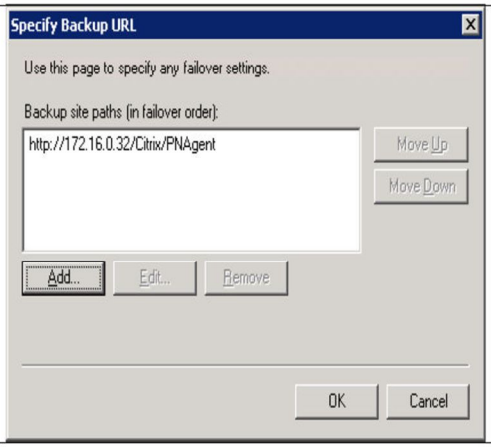
Application Delivery Controller Setup

Application Delivery Controller Setup

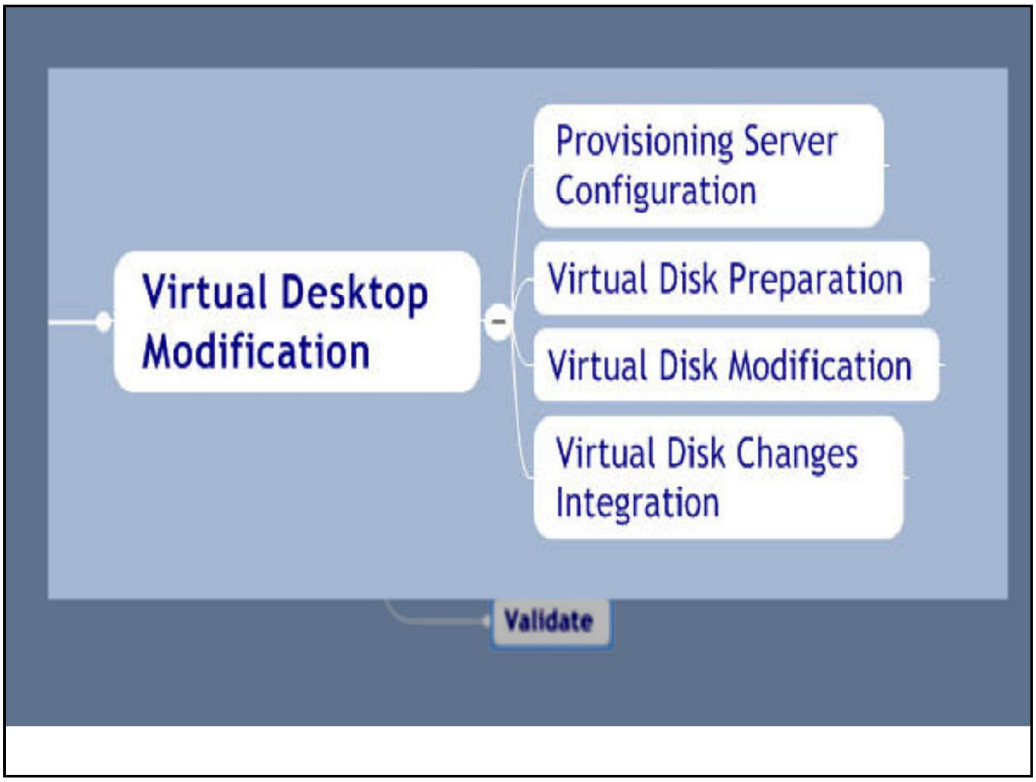
Screenshot	Description
	• Select the **Backup** button to provide redundancy

Application Delivery Controller Setup

Application Delivery Controller Setup

Screenshot	Description
	• Enter in the URL for the secondary XenApp server. If connections to the primary fail, the Application Receiver will contact the backup address.


Virtual Desktop
Modification



Virtual Desktop Modification

Overview

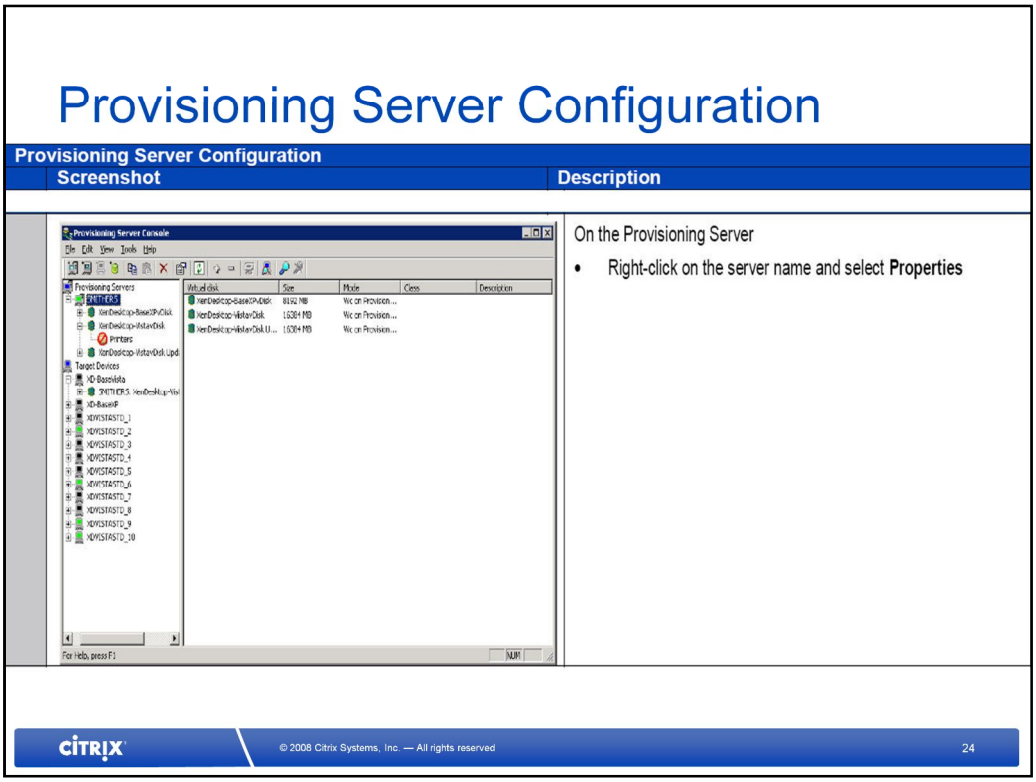
With so many devices utilizing a single image, it is imperative that changes to the virtual disk happen in a structured and protected manner. Updates should be tested in a pilot/staging environment and after approval they should be integrated into the production system. This can be quickly accomplished by using the update virtual disk functionality within Provisioning Server by following:

- Provisioning Server Configuration
- Virtual Disk Preparation
- Virtual Disk Modification
- Virtual Disk Updates

Integrating XenApp application delivery into the virtual desktop image will follow this process.

Provisioning Server Configuration

This section will show a few items that must be validated before virtual disk modification can begin.



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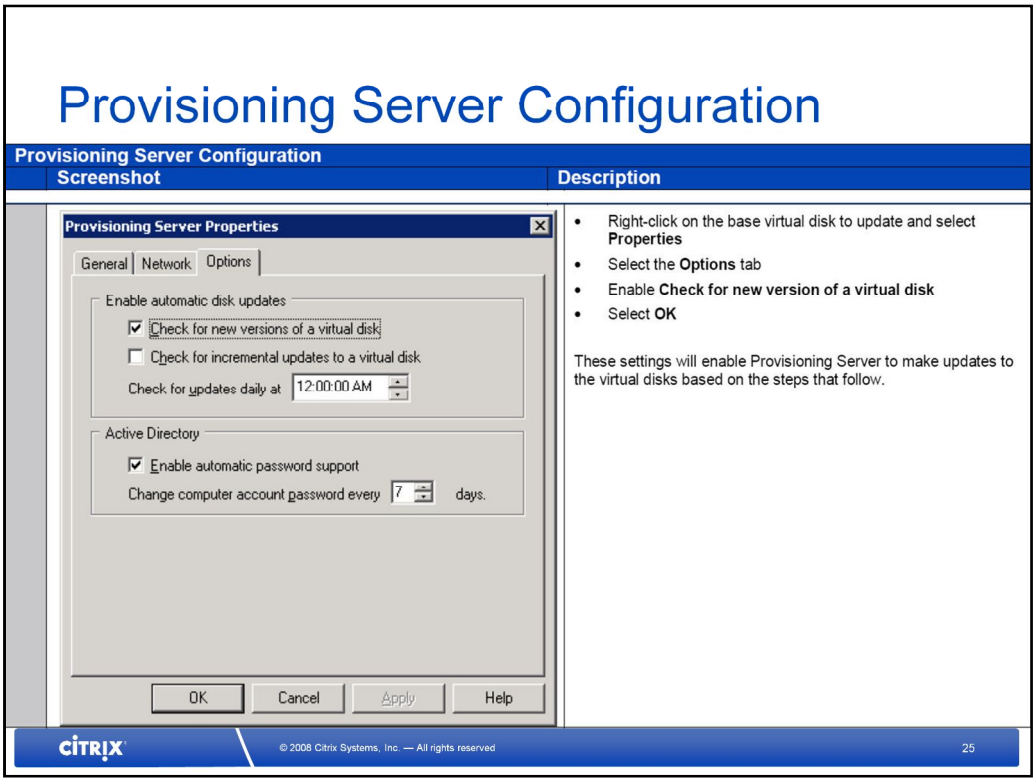

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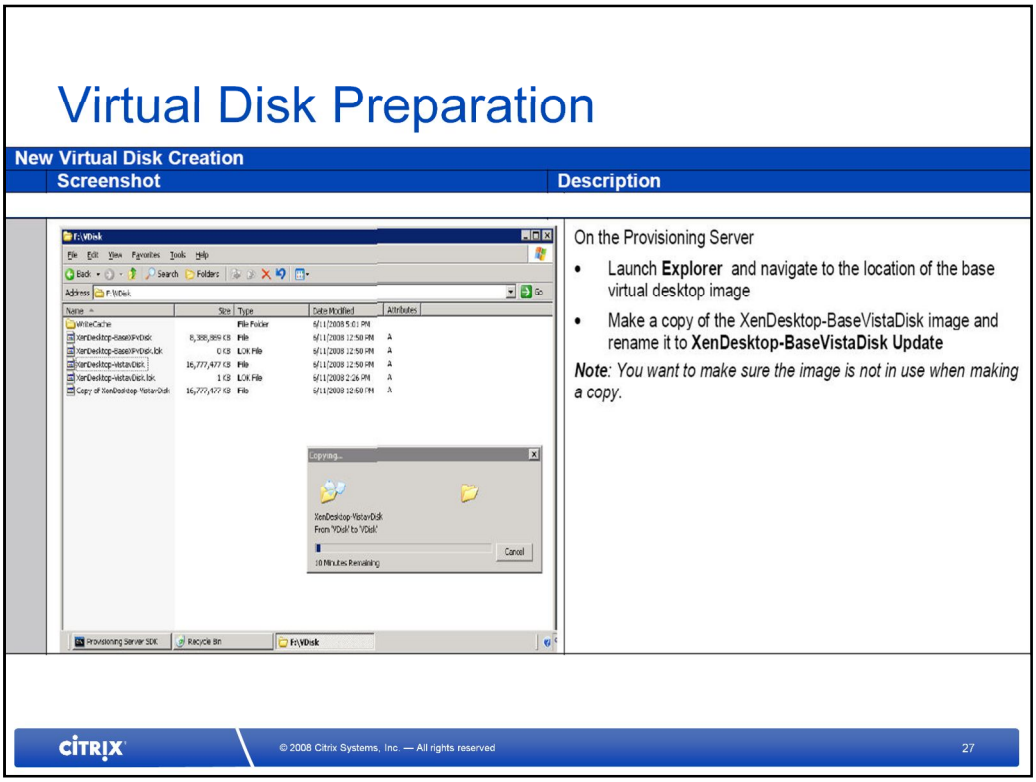
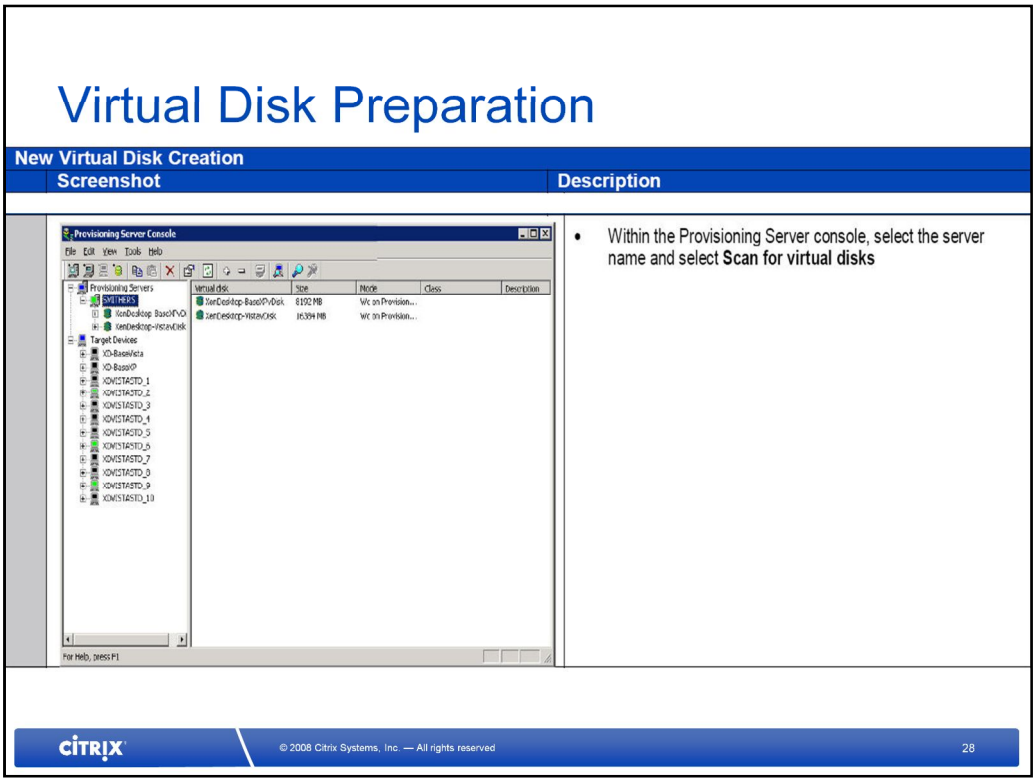
Virtual Disk Preparation



Virtual Disk Preparation

Updating a virtual disk image should follow a process where a secondary disk is modified and then all target devices are updated to use the newest version automatically. This provides a phased change process and allows for a fallback option in case the changes do not function correctly.



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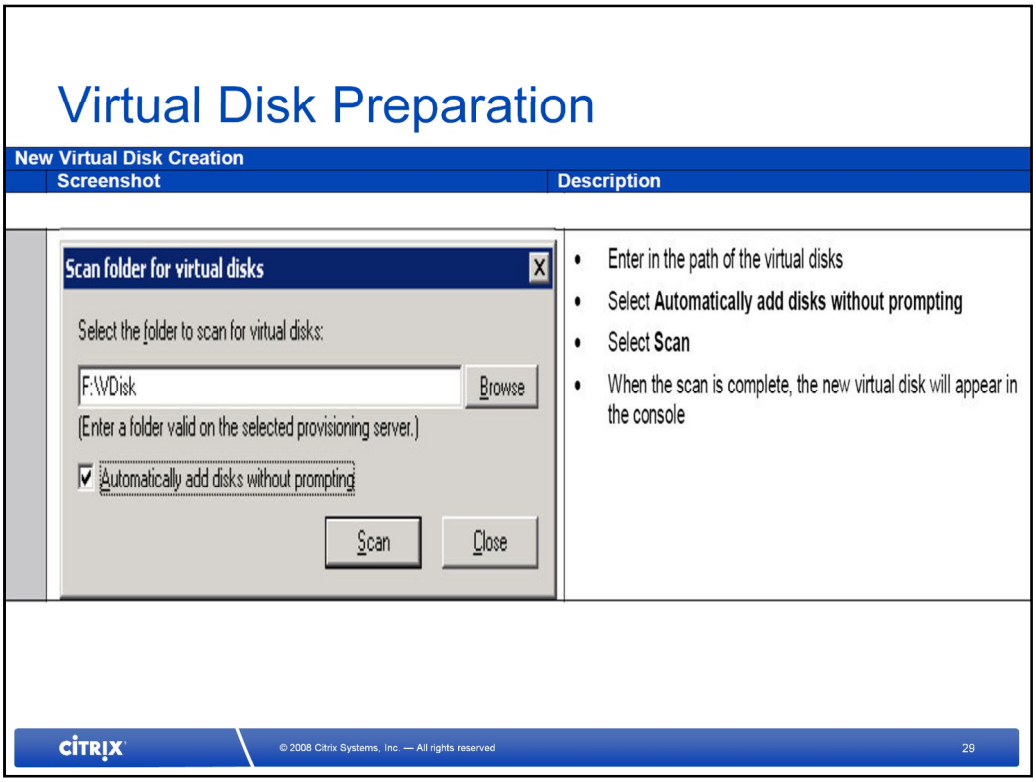

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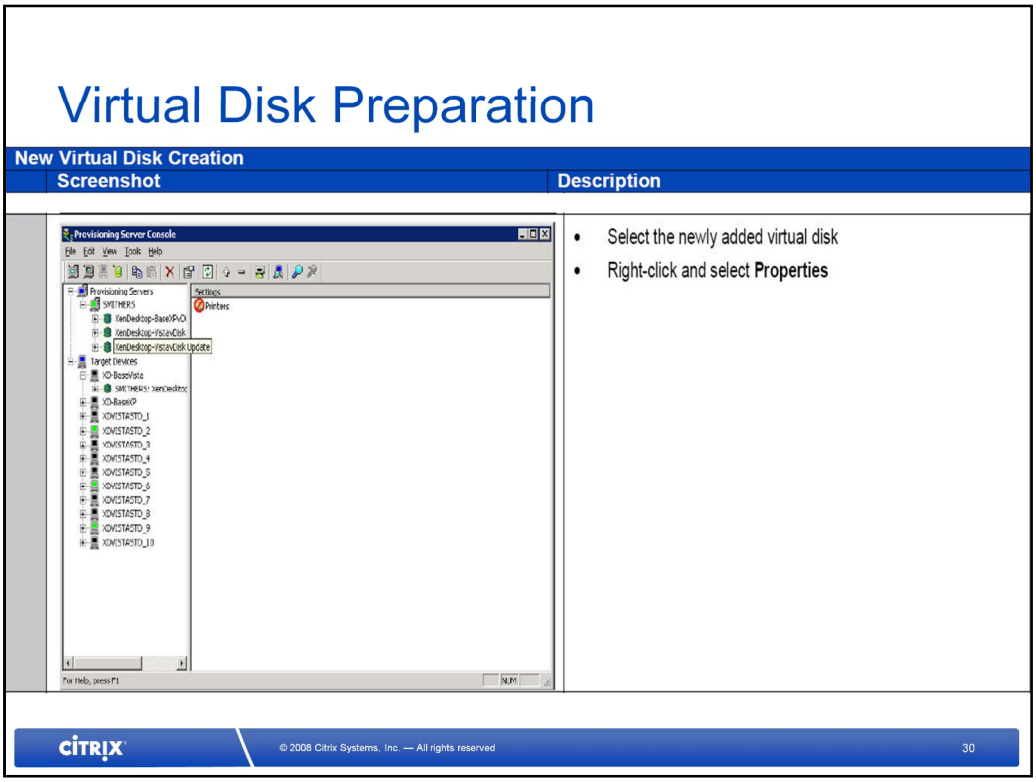

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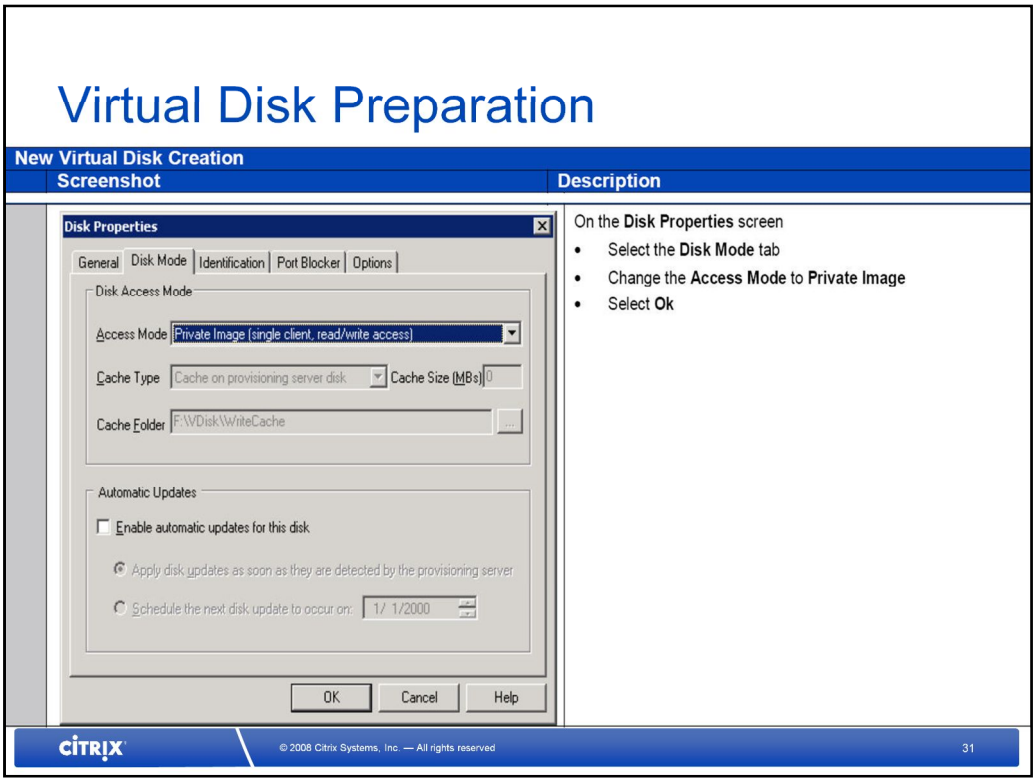

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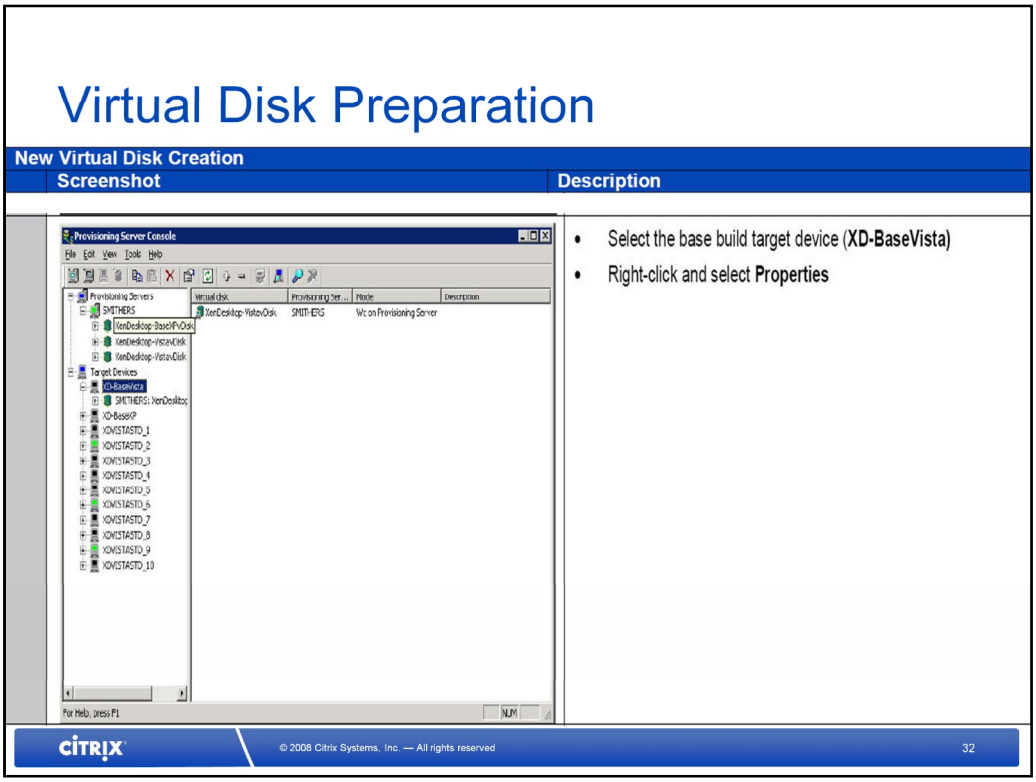

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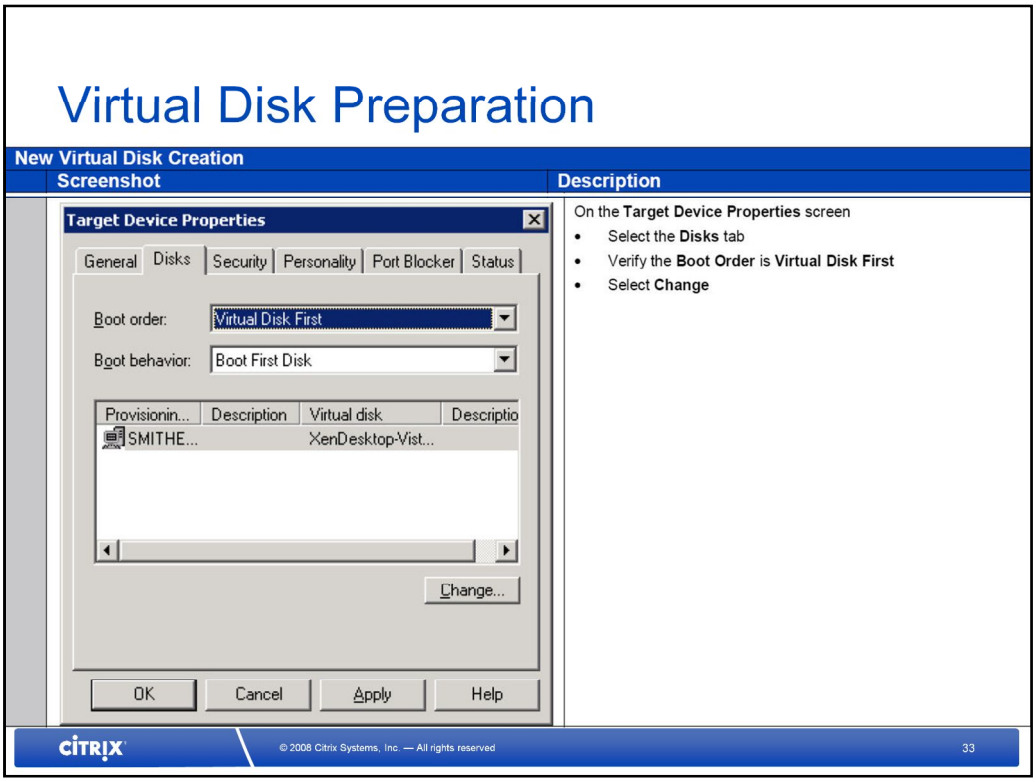

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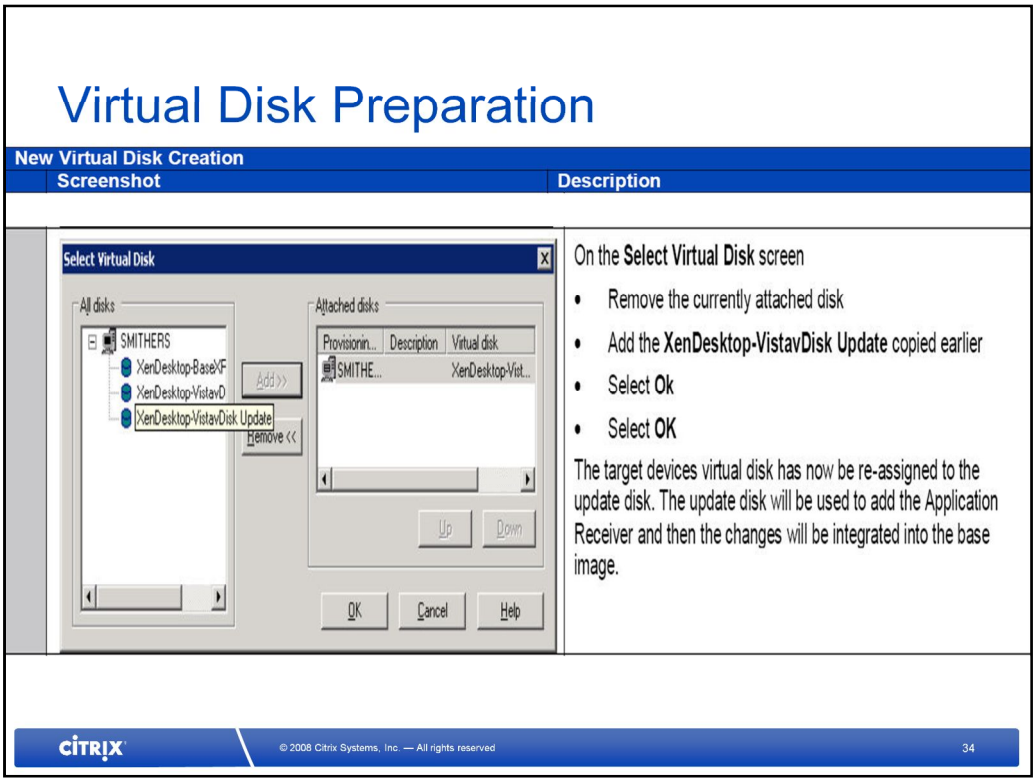

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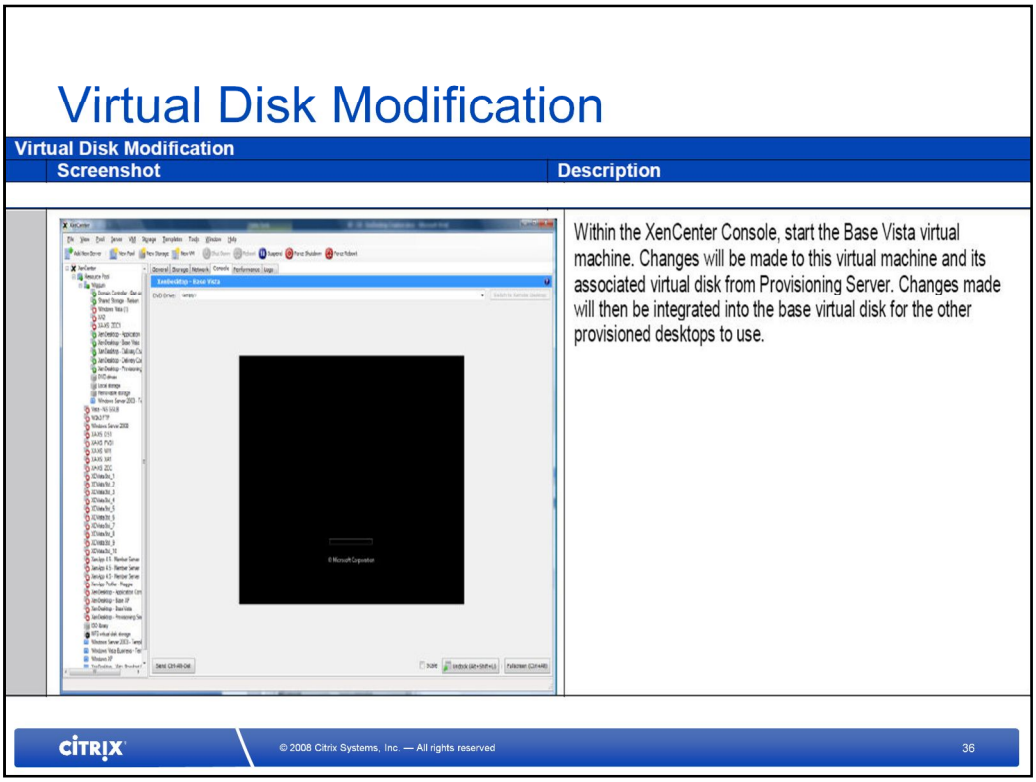
Virtual Desktop Provisioning

Once the golden base image has been created, it has to be delivered to the potentially thousands of users in an efficient manner, which is with provisioning. The following subsections will demonstrate how to setup the infrastructure to provision the base desktop image:

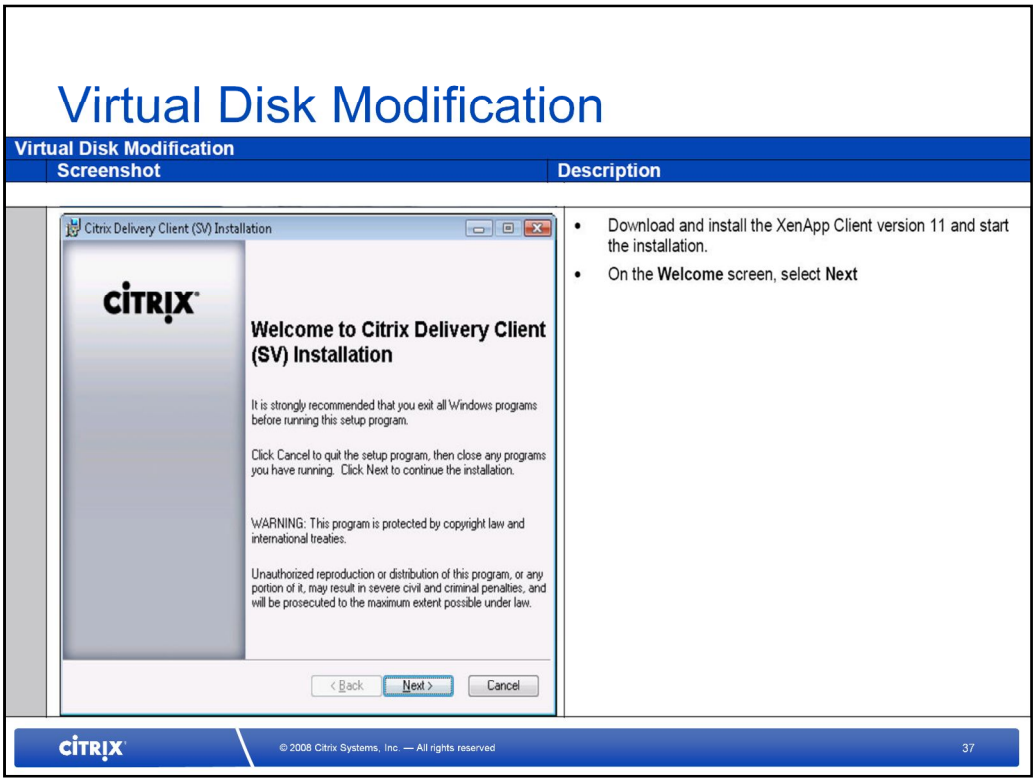
- Virtual Disk Allocation
- Provisioning Server Agent Setup
- Desktop and Virtual Disk Linking
- Base Image Build

Assumption: To provide redundancy, two Provisioning Servers are setup and configured. The storage location (F:\) is a Network Attached Storage share.



Virtual Disk Modification

Using the newly create virtual disk, the appropriate changes will be integrated. Those changes will then be propagated to the target devices in the following process.



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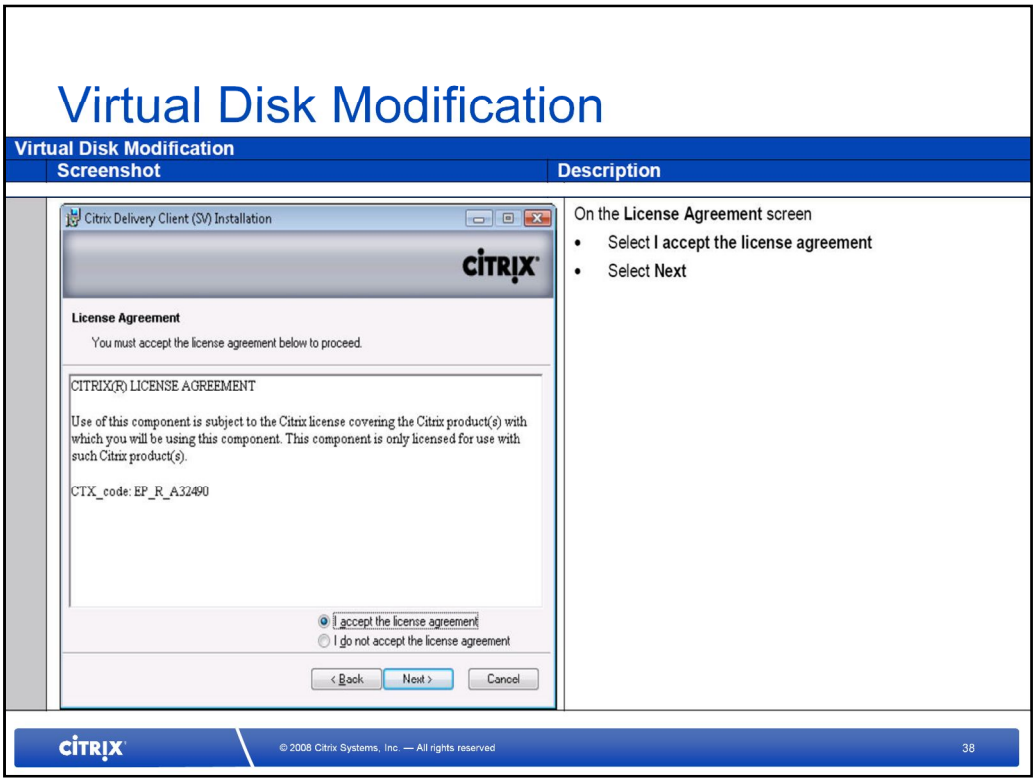

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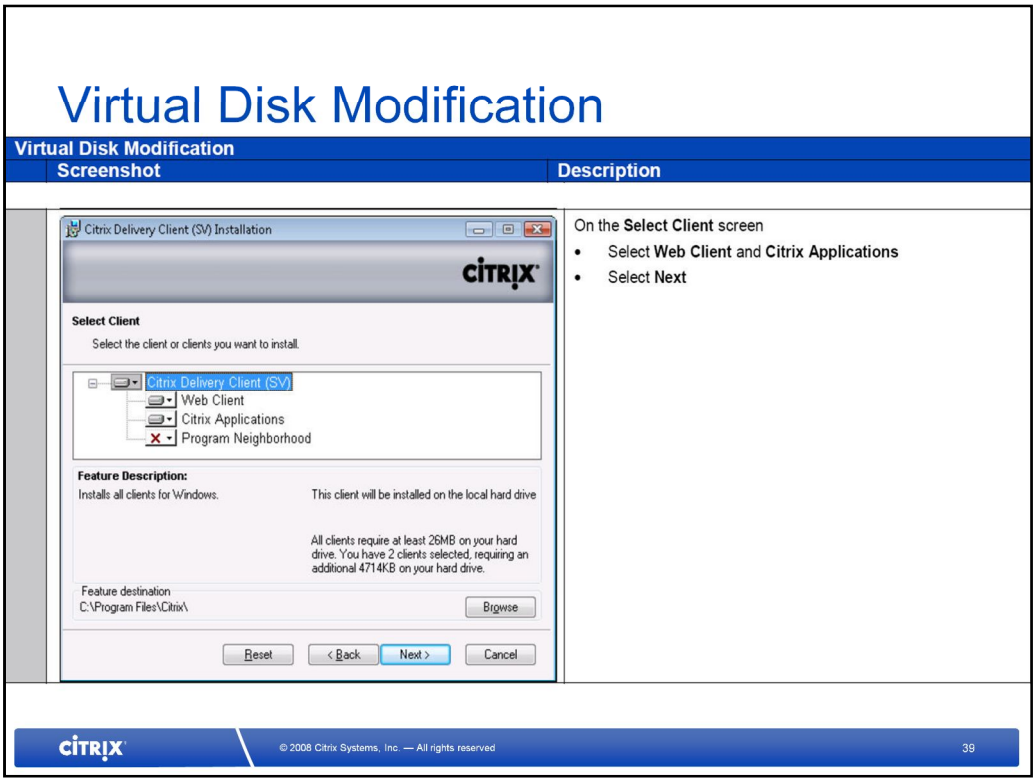

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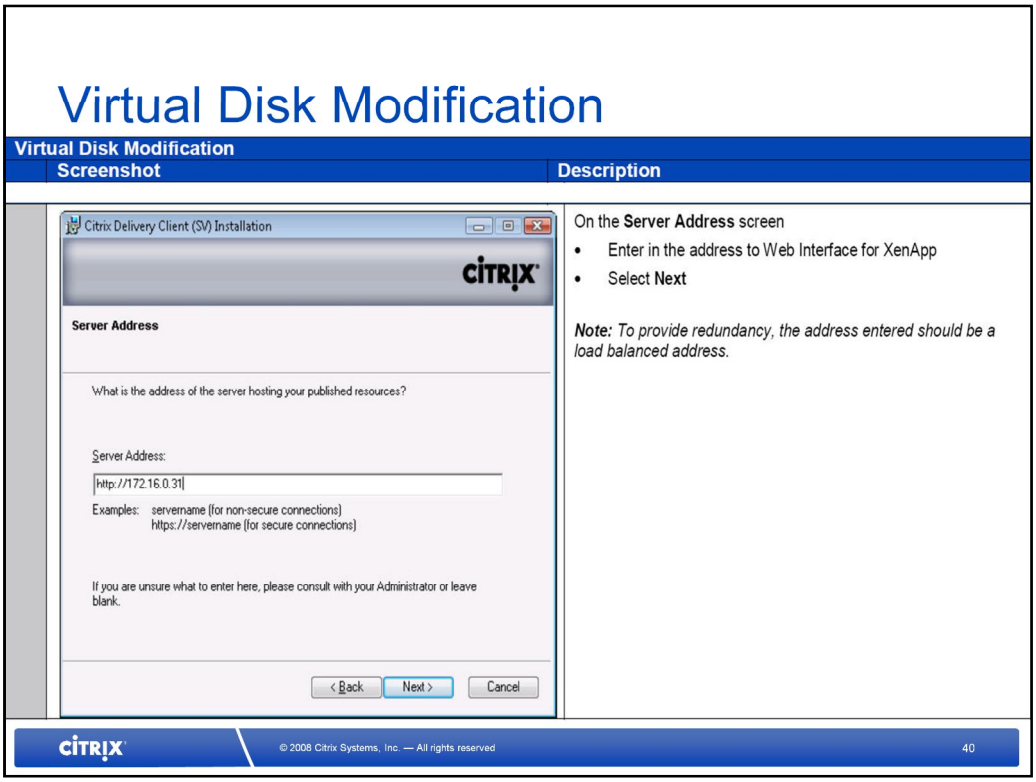

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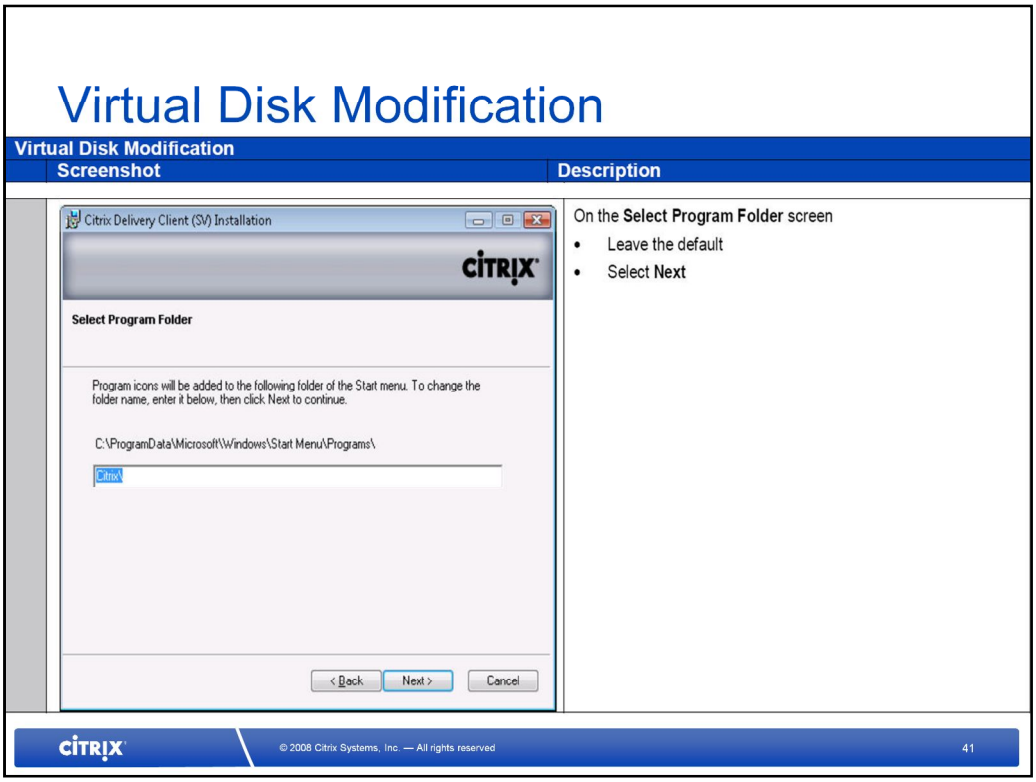

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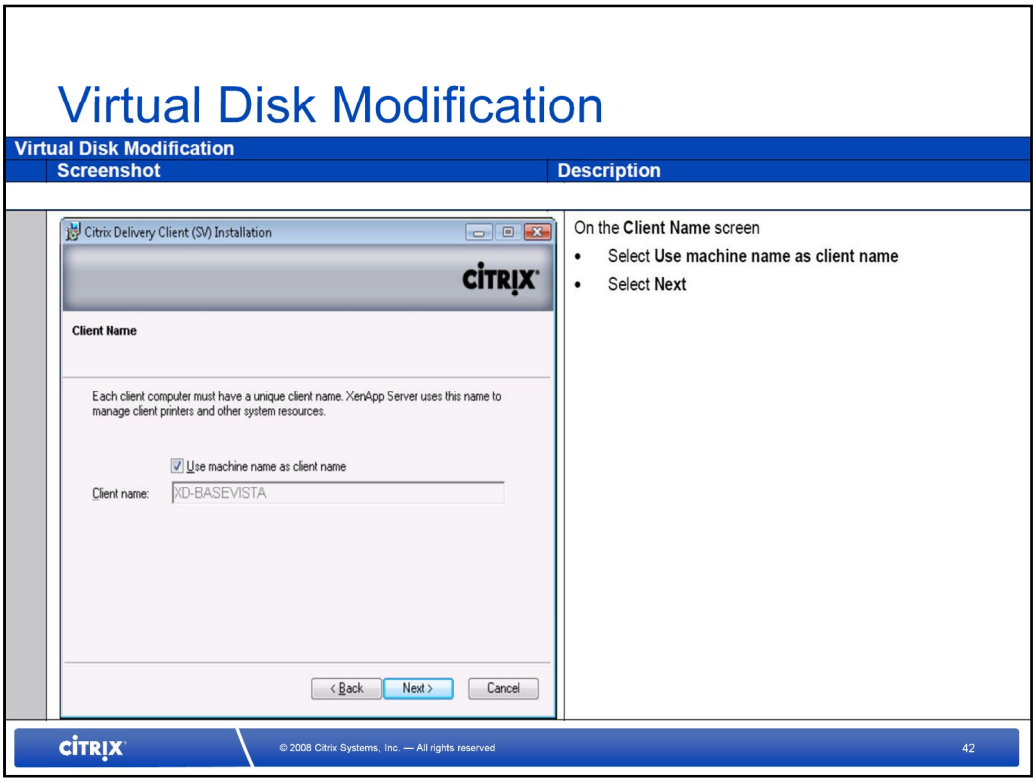

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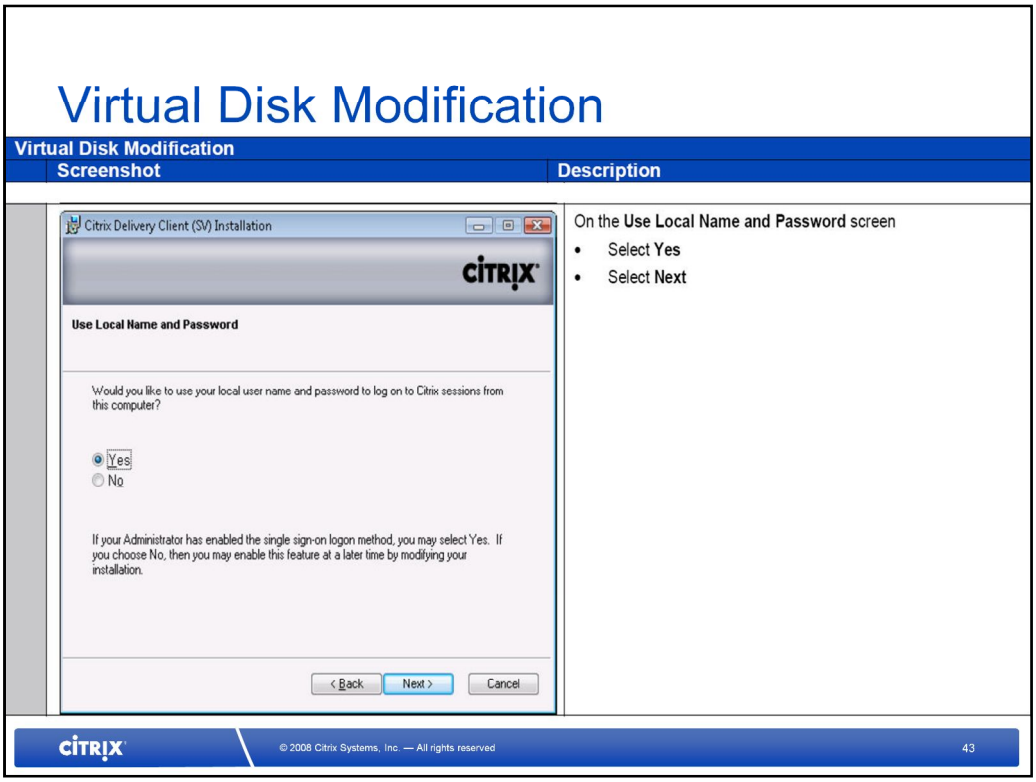

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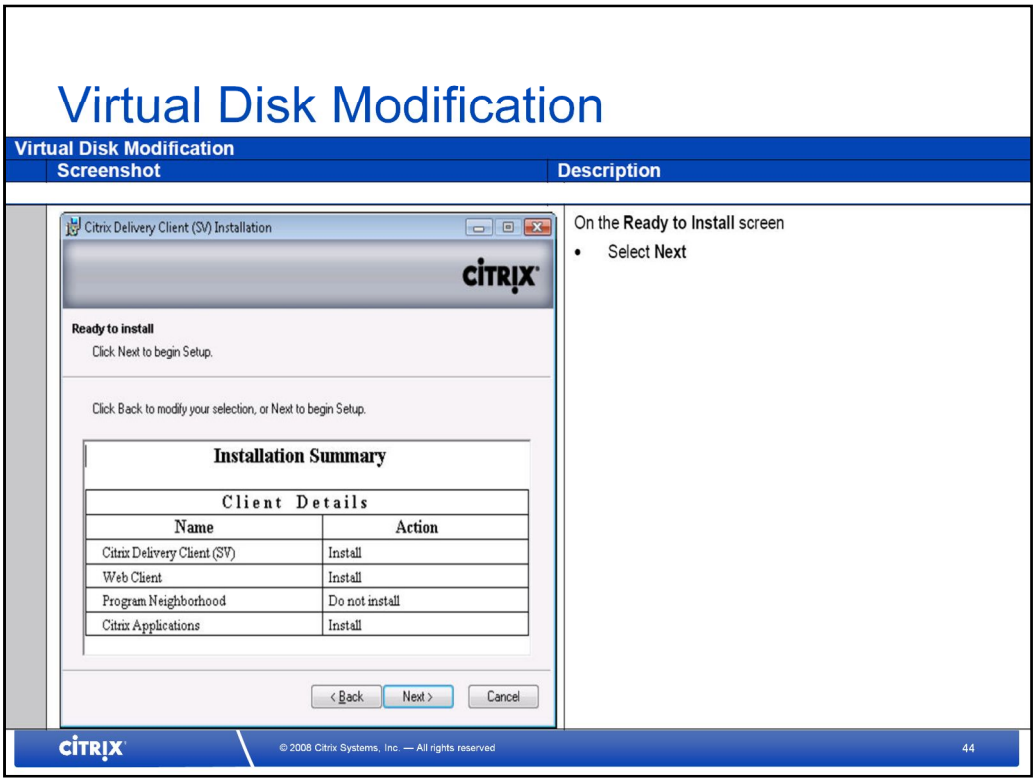

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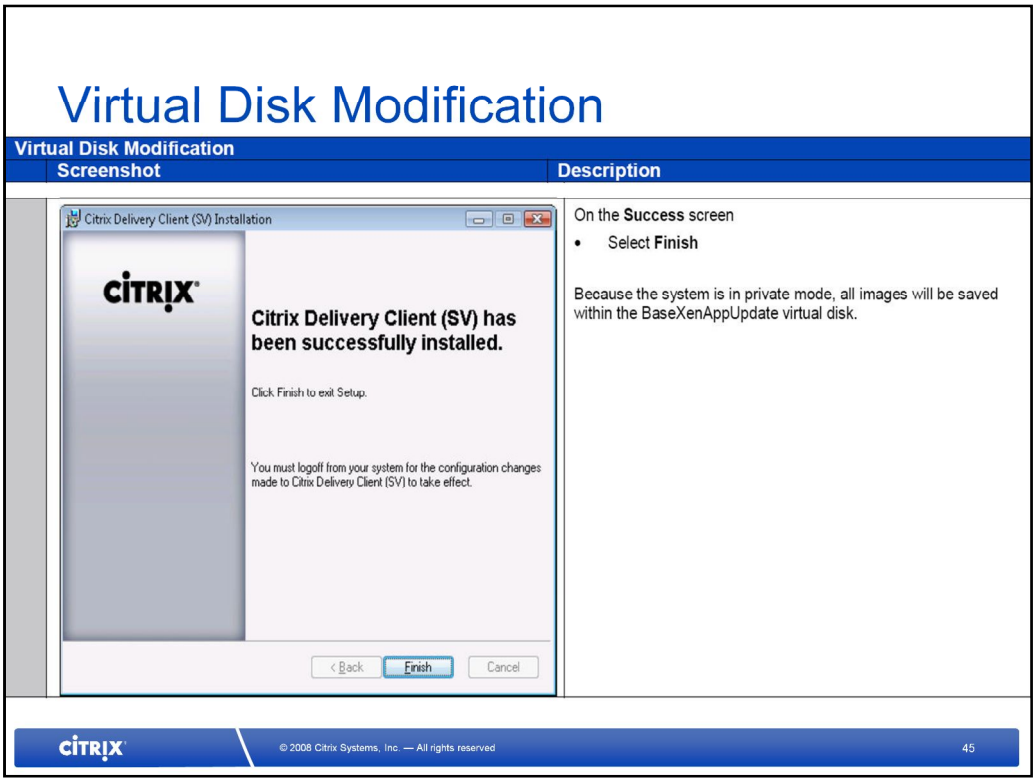

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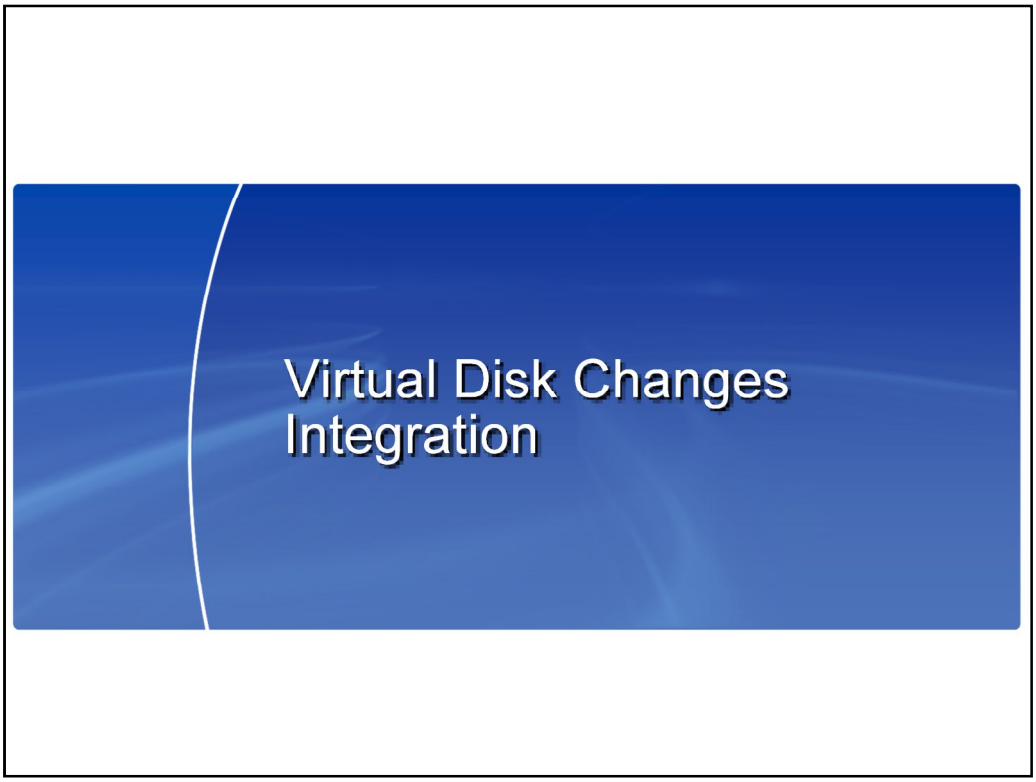

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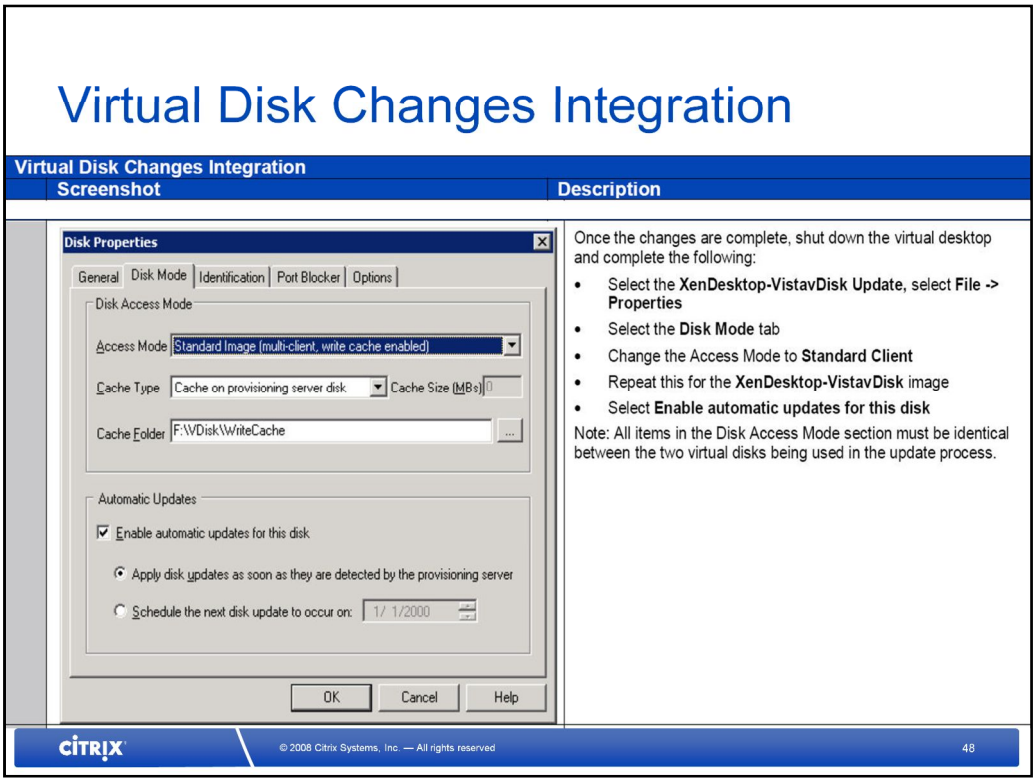
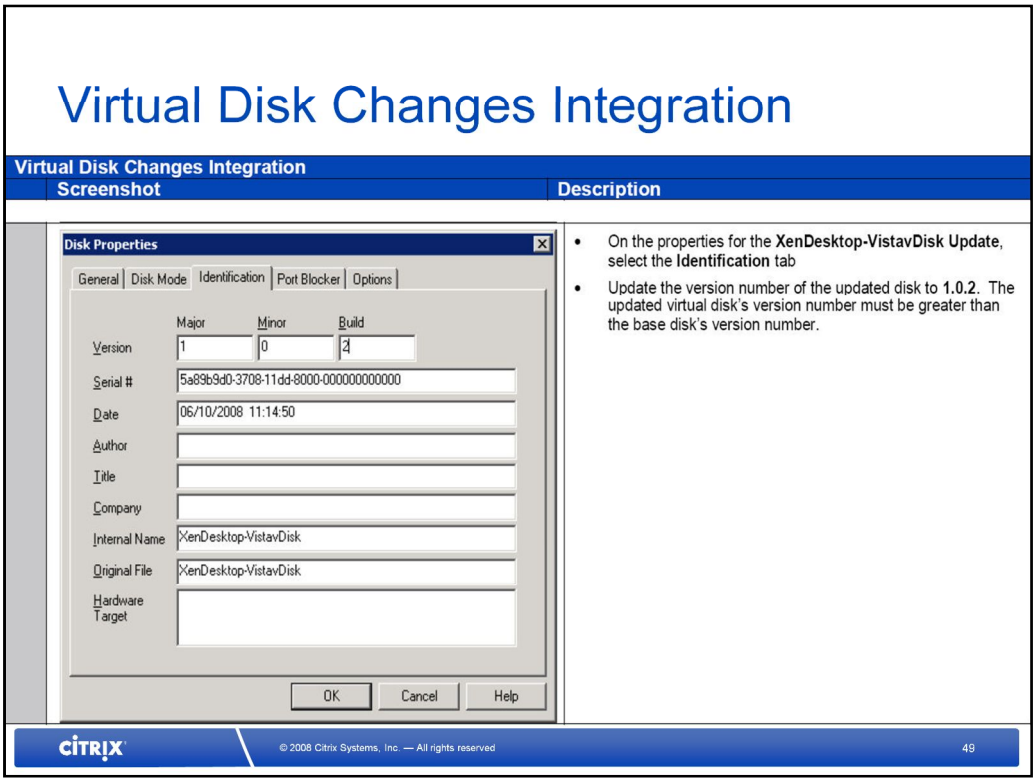


Virtual Disk Changes Integration

With the virtual disk changes complete, the target devices must be set to utilize the latest and greatest image. The following steps outline the process.



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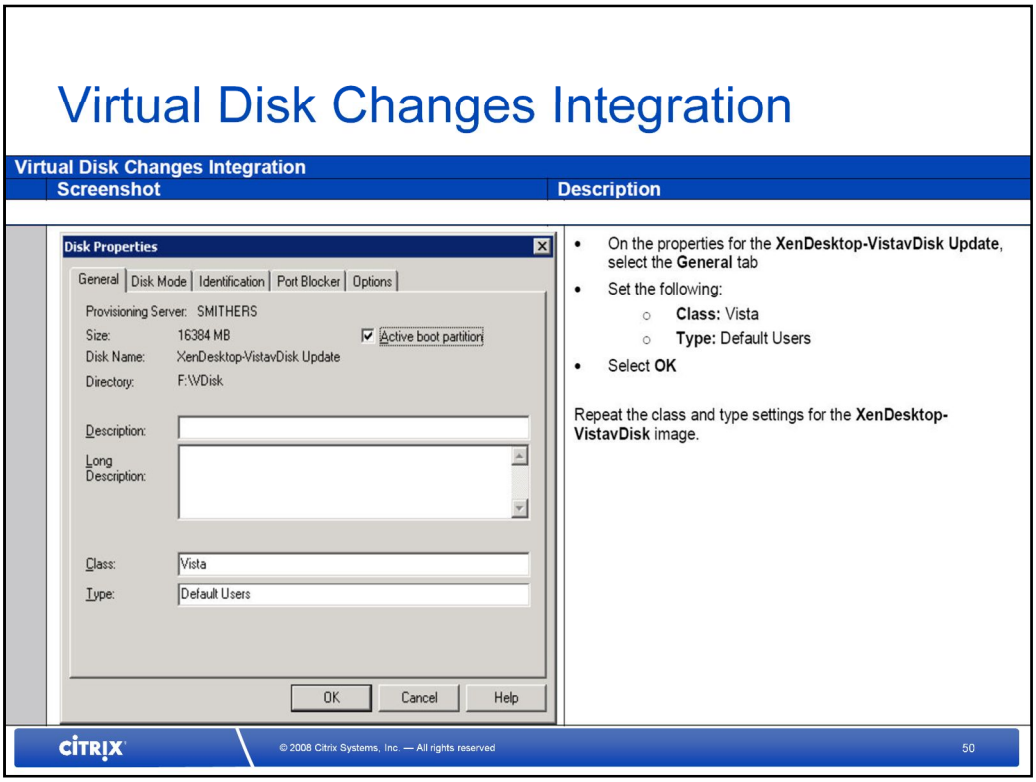

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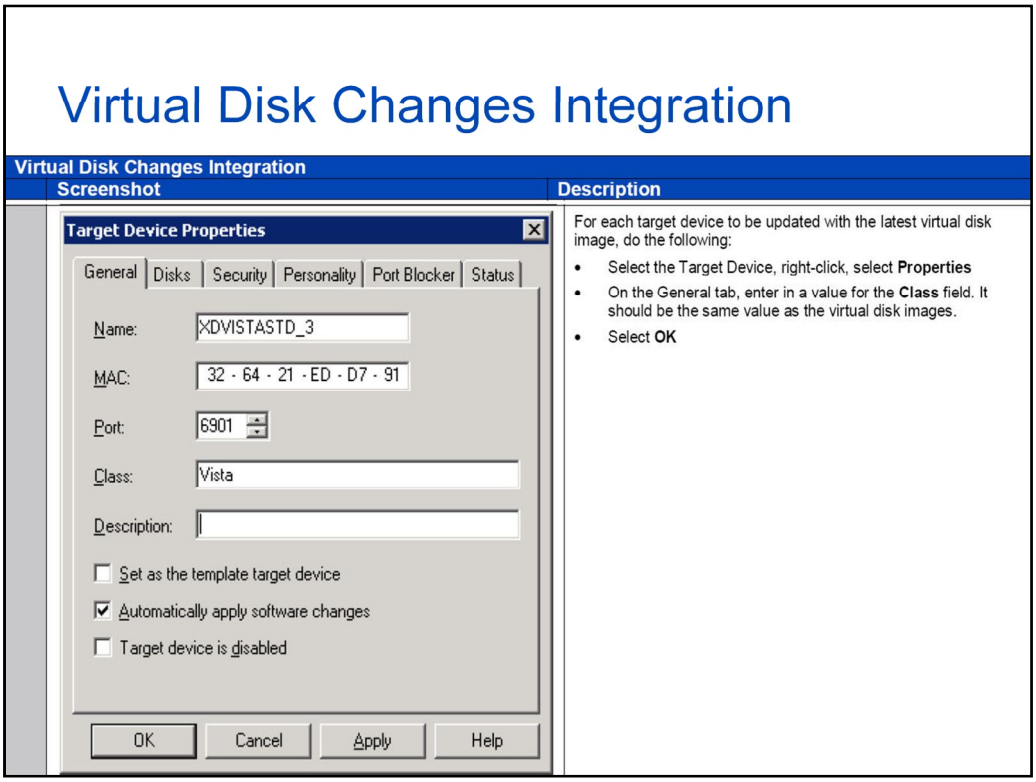

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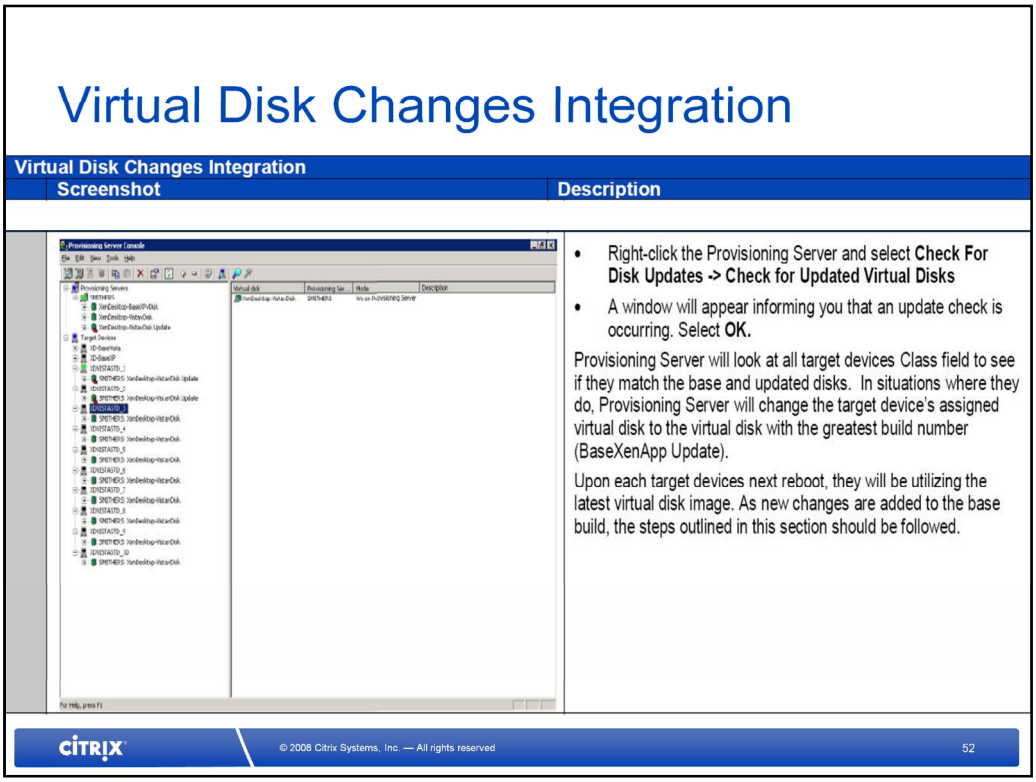

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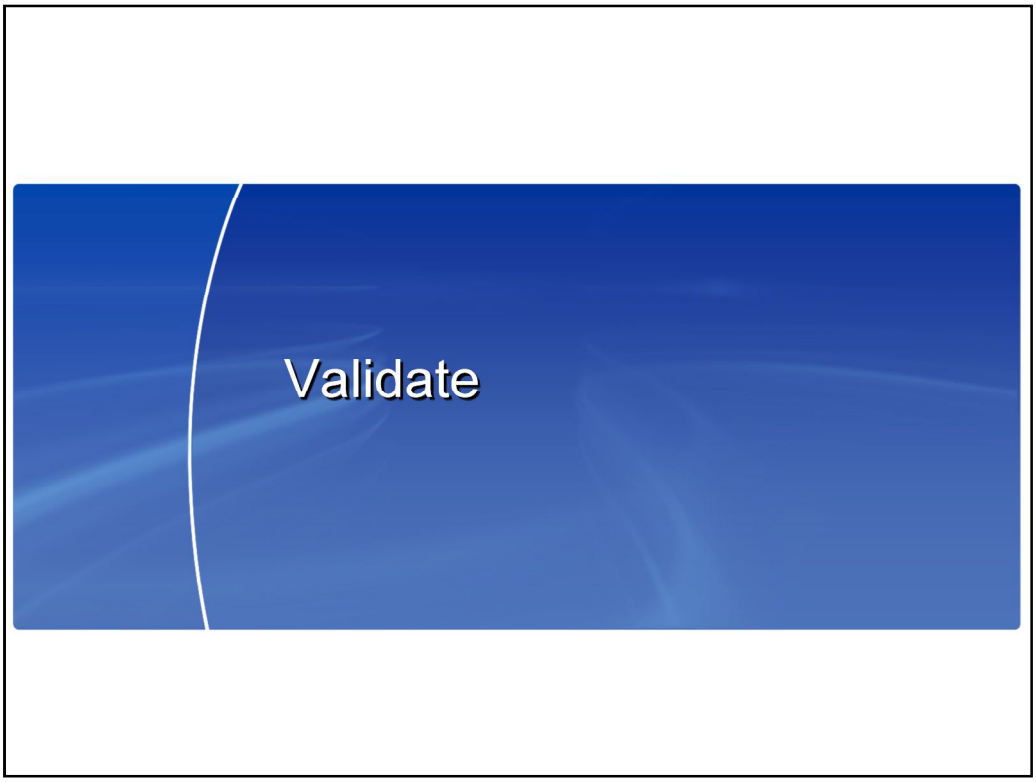
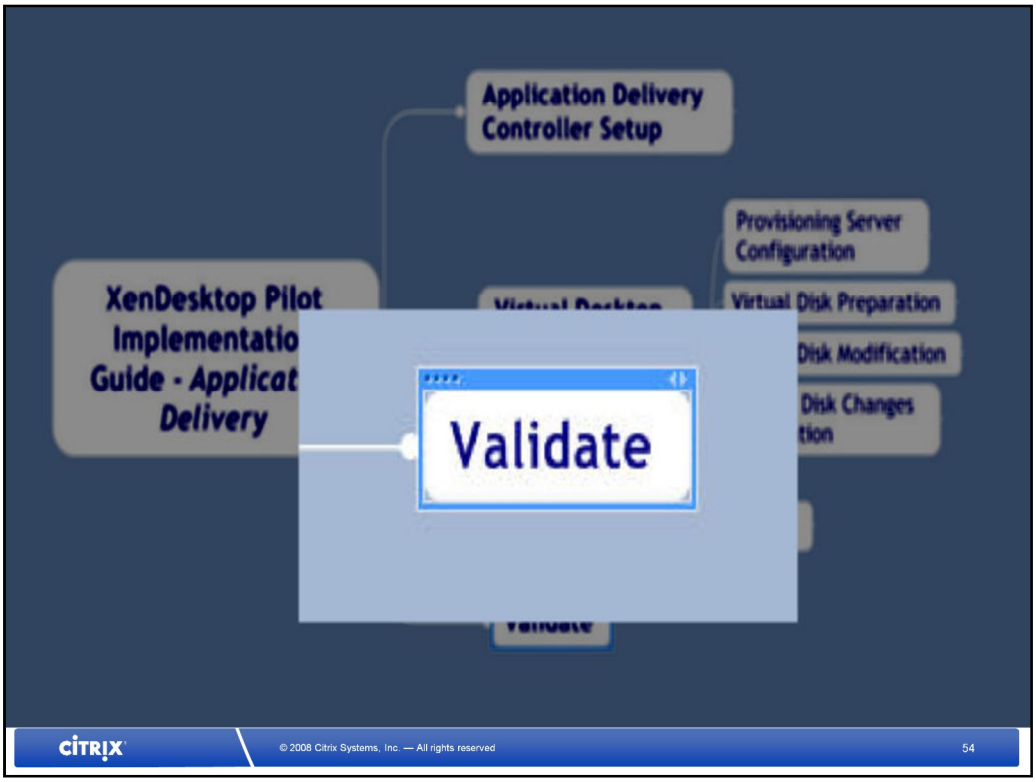


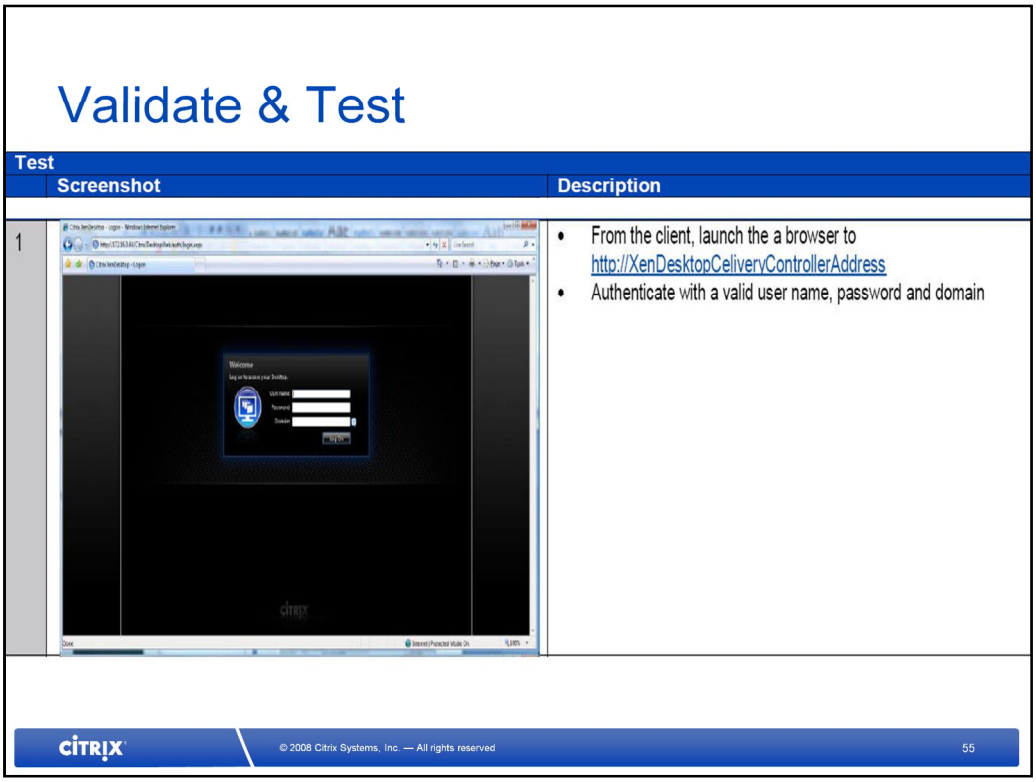
Virtual Desktop Provisioning

Once the golden base image has been created, it has to be delivered to the potentially thousands of users in an efficient manner, which is with provisioning. The following subsections will demonstrate how to setup the infrastructure to provision the base desktop image:

- Virtual Disk Allocation
- Provisioning Server Agent Setup
- Desktop and Virtual Disk Linking
- Base Image Build

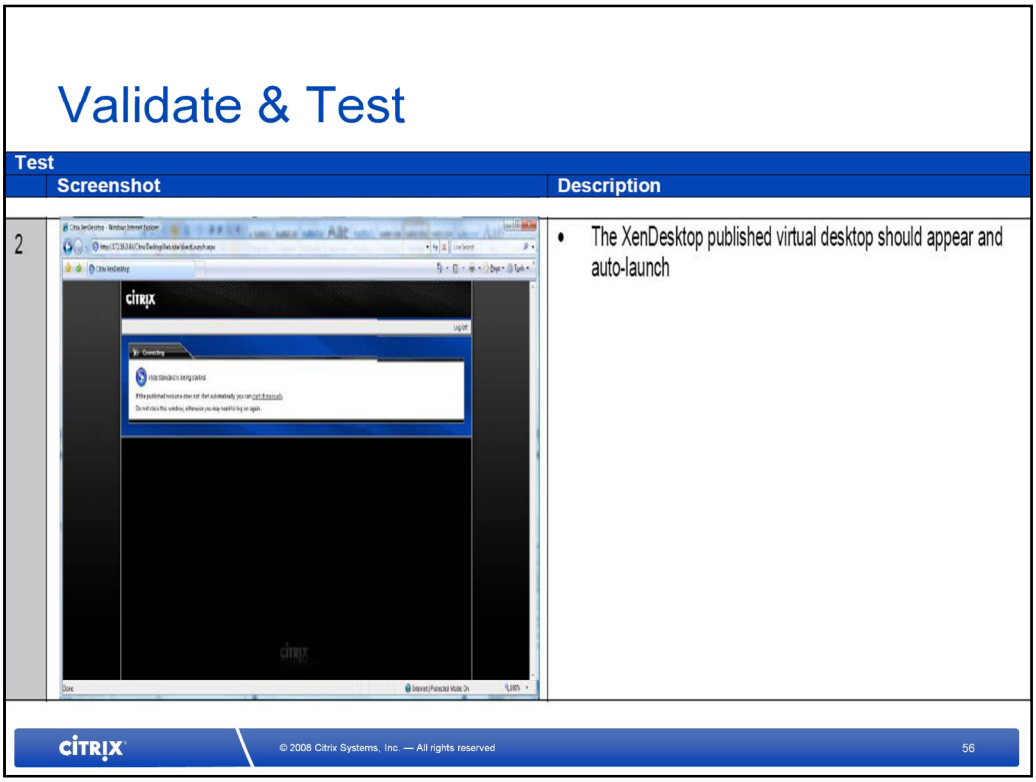
Assumption: To provide redundancy, two Provisioning Servers are setup and configured. The storage location (F:\) is a Network Attached Storage share.





Validate

With the XenApp integration complete, it is time to test to verify users receive their applications appropriately.



Validate

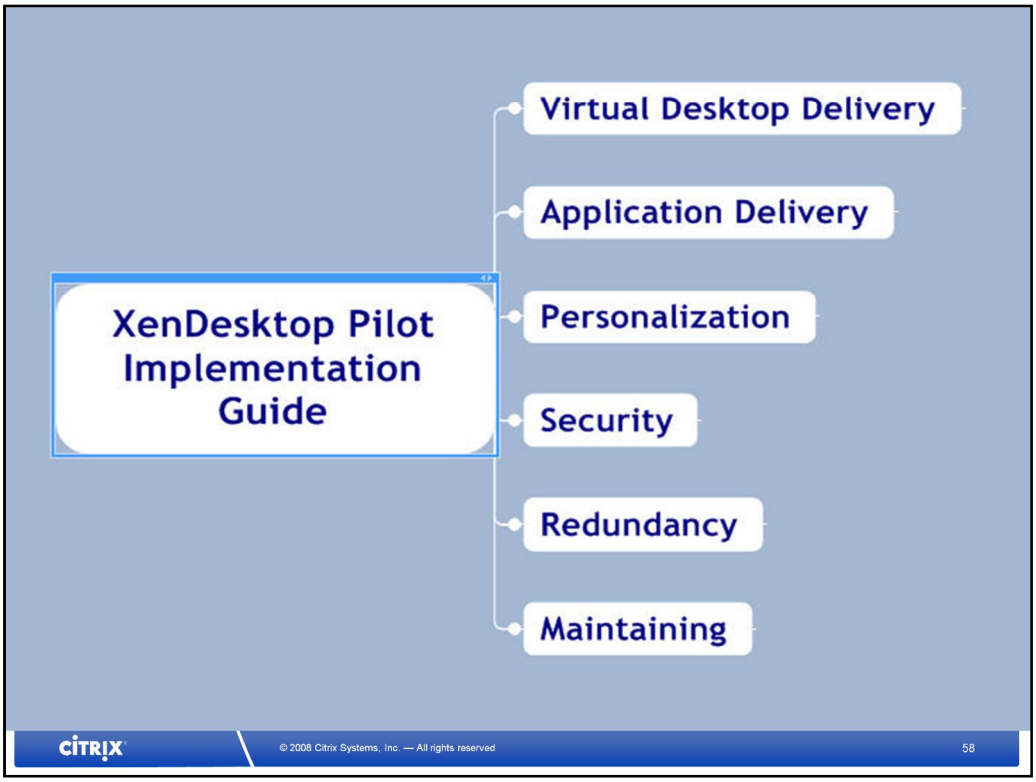
With the XenApp integration complete, it is time to test to verify users receive their applications appropriately.

Validate & Test

Test	Screenshot	Description
3		• The new virtual desktop should be launched and the user should be automatically signed in. Upon reaching the virtual desktop, the delivered applications should appear, based on the XenApp configuration.

Validate

With the XenApp integration complete, it is time to test to verify users receive their applications appropriately.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