



Deployment Guide

XenDesktop

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Introduction

Citrix XenDesktop™ is a desktop virtualization and VDI solution that delivers a complete Windows desktop experience as an on-demand service to any user, anywhere. Whether users are task workers, knowledge workers or mobile workers, XenDesktop can quickly and securely deliver individual applications or complete desktops while providing a high-definition user experience. All of this is made possible by FlexCast™ delivery technology that enables IT to deliver any type of virtual desktop, on any device. With XenDesktop, IT can manage single instances of each OS, application and user profile and dynamically assemble them to increase business agility and simplify desktop management. By deploying a desktop virtualization solution, companies can migrate to new versions of Operating Systems, such as Windows 7, quickly, efficiently and cost-effectively.

XenDesktop makes virtual desktops a mainstream reality for hundreds of millions of corporate employees for the first time ever. Unlike first-generation virtual desktop (VDI) solutions that were applicable only to a narrow set of users, XenDesktop with its new FlexCast delivery technology is the first product in the industry to support every desktop virtualization model in a single, integrated solution. This approach improves ROI, simplifies management and extends the benefits of virtualization to every employee in the enterprise. With the full integration of Citrix XenApp™ functionality, customers can deliver on-demand applications as a seamless part of their overall desktop management strategy.

Citrix XenDesktop™, a member of the Citrix Delivery Center™ product family, is a comprehensive desktop delivery system that allows customers to virtualize Windows desktops in the datacenter and deliver them on-demand to office workers in any location. By dynamically assembling each user's unique personal desktop from new, pristine components each time they log on, XenDesktop offers an unparalleled end-user experience, dramatically simplifies desktop management and reduces the cost of traditional desktop computing by up to 40 percent. XenDesktop Enterprise and Platinum Editions tightly integrates the industry's most proven application virtualization via the XenApp for Virtual Desktops feature.

When using the Web Interface, Applications and Desktops are delivered through Internet Browsers to the client device. When using the Citrix Online Plugin, Applications and Desktops are delivered through the Citrix Online Plugin on the client device.

This guide will walk through the steps to deploy a complete XenDesktop environment.

Solution Requirements

- Windows Desktops delivered to Clients - regardless of client operating system.
- Fast Delivery of XenDesktop

Prerequisites

- Citrix XenDesktop 4.0+
- Citrix Branch Repeater Solution v5.6+
- Citrix XenServer 5.5+ (500 Gb Storage)
- Citrix XenCenter 5.5+
- Microsoft Windows Server 2003 x32bit (AD, DHCP, DNS)
- Microsoft Windows Server 2003 x32bit (XenDesktop DDC)
- Microsoft Windows Server 2003 x32bit (XenDesktop PVS)
- vBaseDesktop1 (Windows 7 XenDesktop Base Image)
- vDesktop1 through vDesktop5 (Windows 7 Virtual Desktops)
- Clients

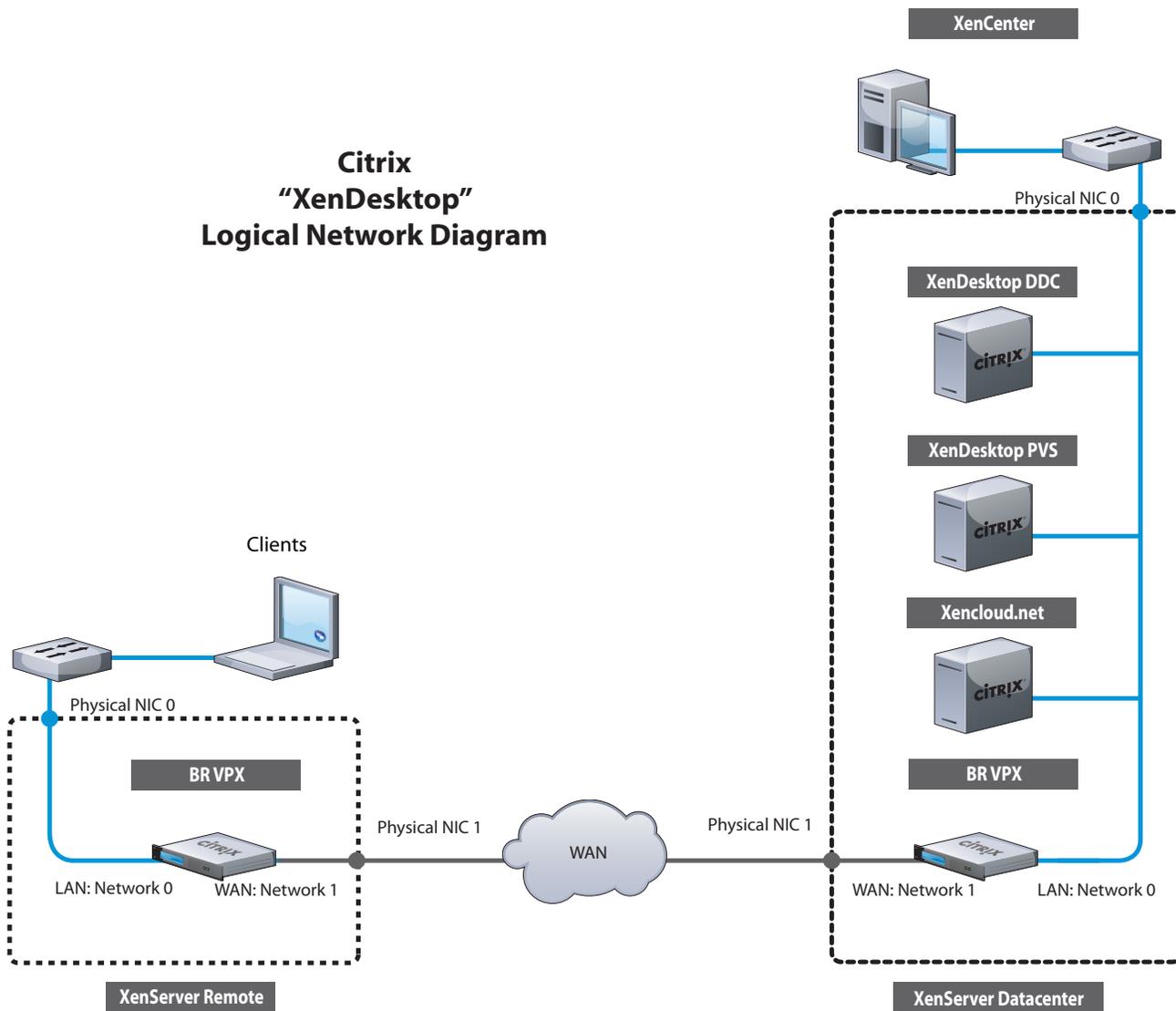
Additional Information

- <http://flexcast.citrix.com/>

Network Diagram

The following is the Network that was used to develop this deployment guide.

Citrix "XenDesktop" Logical Network Diagram



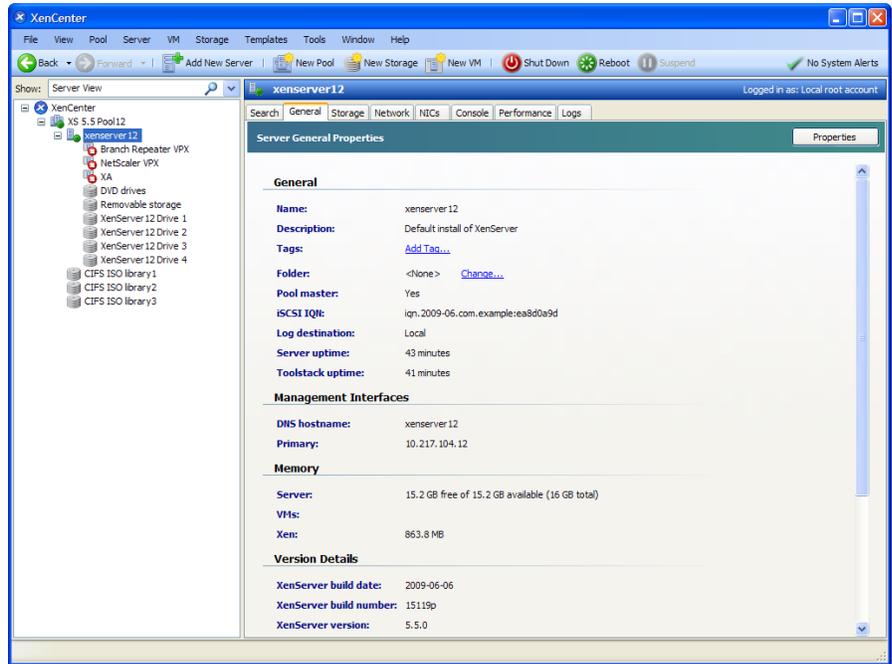
Virtual machine	IP Address
Gateway	10.217.104.1/24
Active Directory, DHCP, DNS	10.217.104.200
XenDesktop DDC	10.217.104.201
XenDesktop PVS	10.217.104.202
XenApp	10.217.104.205
BR VPX Datacenter	10.217.104.206
BR VPX Remote	10.217.104.207
DHCP Range	10.217.104.210-.240
XenCenter PC	10.217.104.105
XenServer Datacenter	10.217.104.12
XenServer Remote	10.217.104.13

XenServer

Install Citrix XenServer on the server that will run the XenDesktop Infrastructure. Install Citrix XenCenter on a PC to manage the XenServer and XenDesktop environment.

Connect to XenServer:

From the XenCenter PC, Launch XenCenter and connect to the XenServer.



XenDesktop

Windows Server 2003 Base Image

To create the Virtual Desktop Infrastructure (VDI), we will start by creating a base Windows 2003 server image, install SP2, and all Operating System updates. This image will be used to create the XenDesktop DDC, XenDesktop Provisioning Server and Domain Controller.

Windows Server Base Image:

Create a new VM of Windows Server 2003 x32.

Note: The OS can be installed from the XenServer CD/DVD Drive or an ISO image.

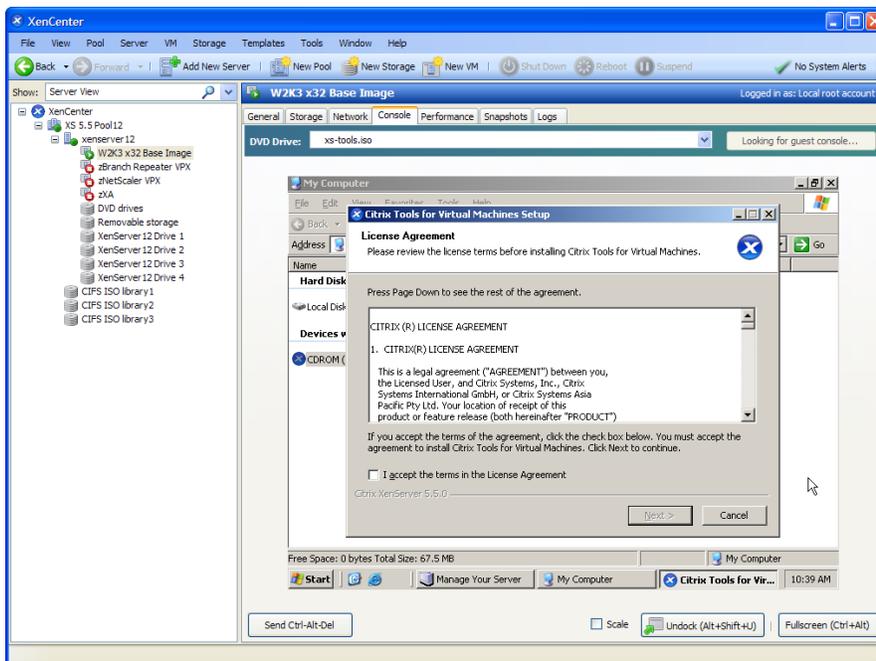
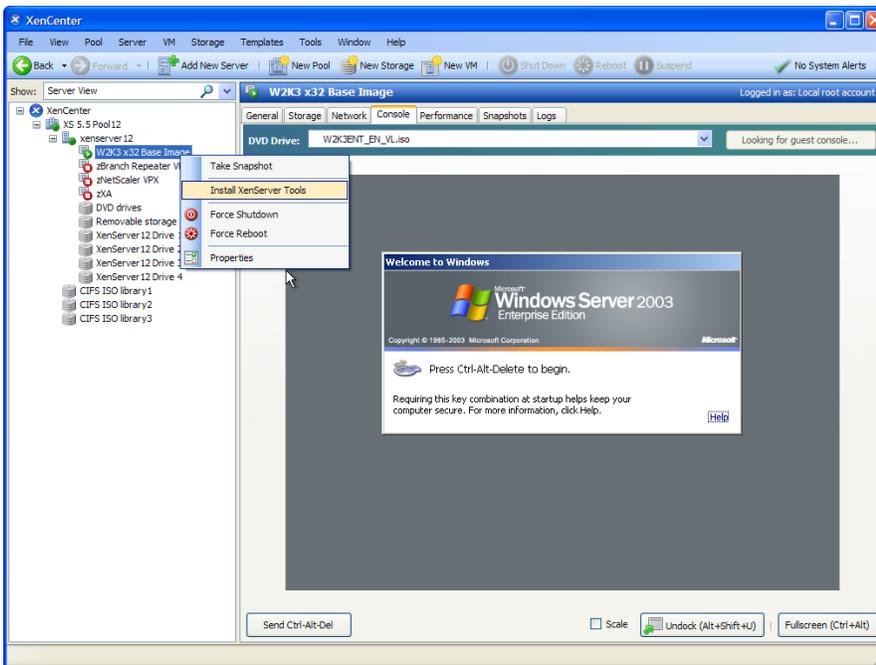
- Name: W2K3 x32 Base Image
- vCPUs: 1
- Memory: 1024 Mb
- Disk: 10 Gb
- Network: Interface 0 (minimum)

Right-Click the W2K3 x32 Base Image in the left panel of XenCenter.

Install XenServer Tools.

Log into the W2K3 x32 Base Image and launch the installer from the CD drive.

Reboot.



Remote Desktop:

Log into the Windows Server through the XenCenter "Console" tab.

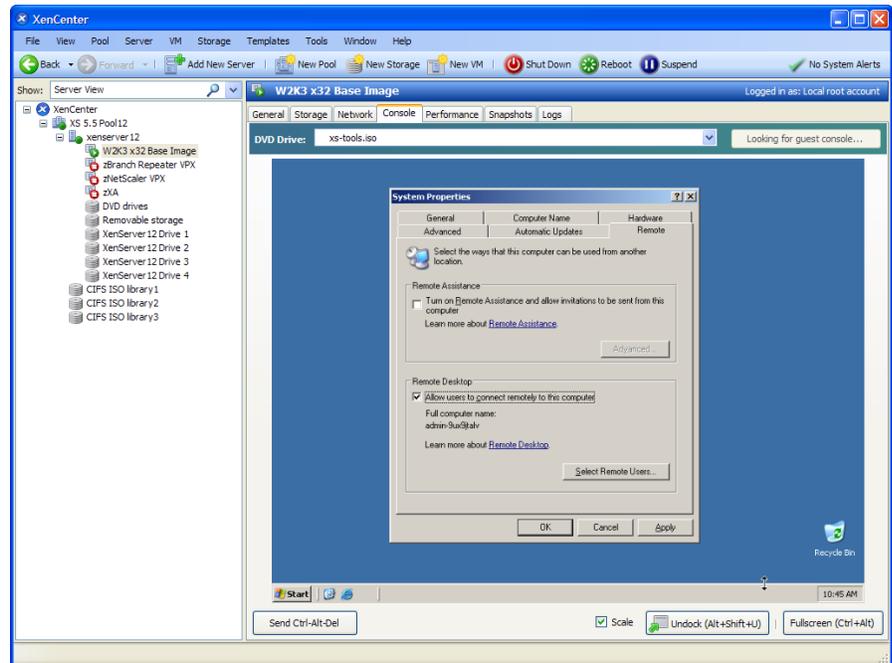
Enable RDP:

Start -> Right-Click My Computer -> Properties -> Remote -> Enable Remote Desktop.

In the Windows Network Settings, disable the Firewall.

If you don't want to install FTP as part of Internet Information Service, you can use other FTP tools such as FileZilla:

<http://filezilla-project.org/>



Install Service Pack 2.

Install Operating System Updates.

Make sure .NET 3.5 Framework is installed.

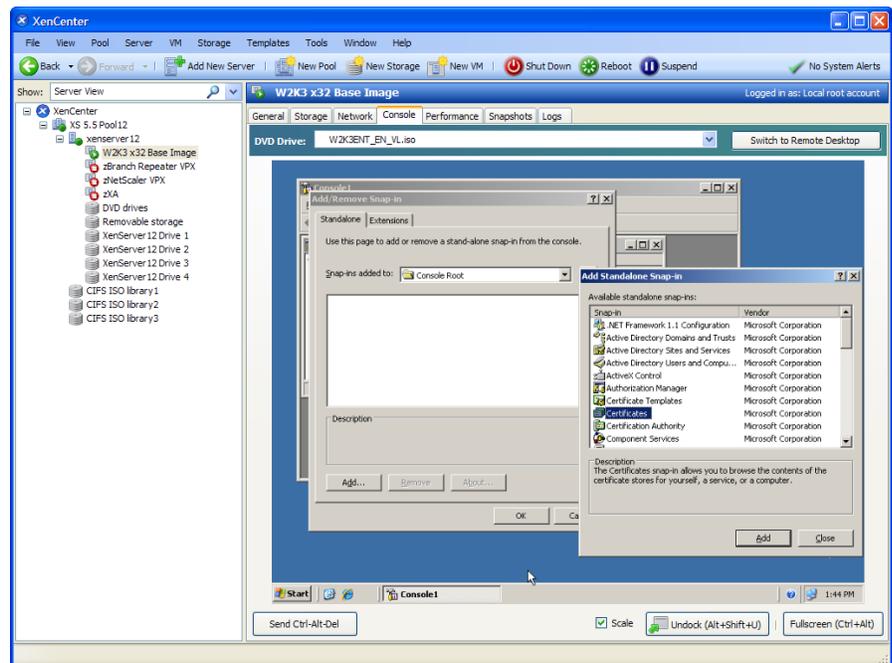
Certificates MMC:

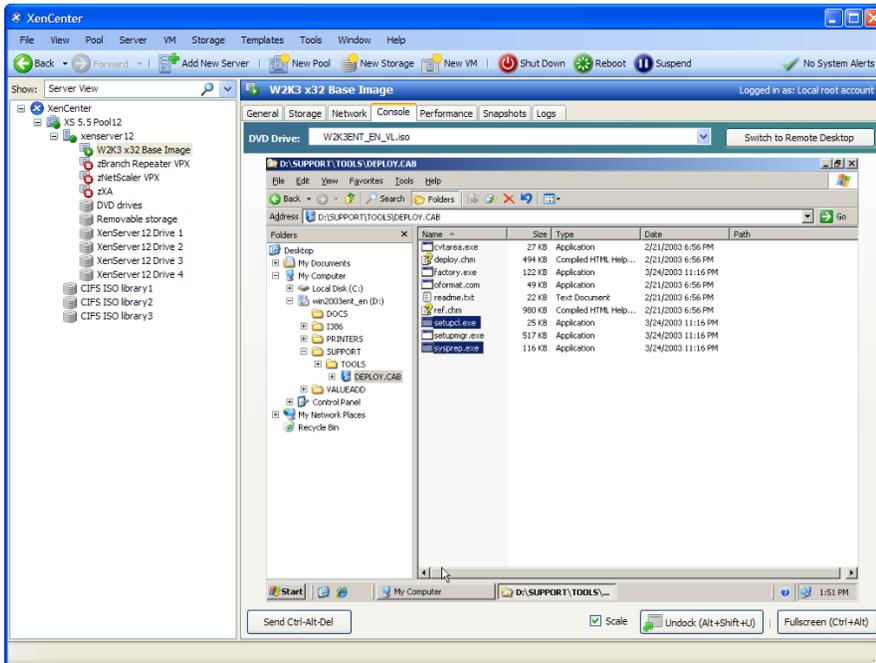
Launch the Microsoft Management Console and install the Certificates Snap-In.

Start -> Run -> MMC.

File -> Add/Remove Snap-In -> Add -> Certificates -> Add -> Computer Account.

Finish, Close and save the MMC to the C:\ drive.



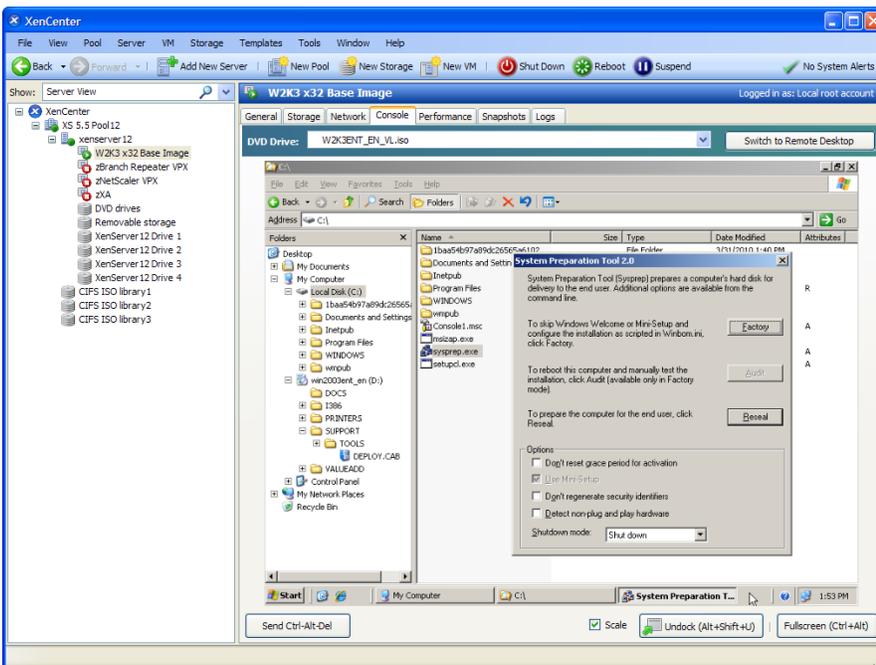


Sysprep:

Open Windows Explorer and navigate to the W2K3 install CD/DVD drive, \Support\Tools directory.

Open the Deploy.cab file.

Select setuppl.exe and sysprep.exe, and copy them to the C:\ drive.



Navigate to the C:\ drive, and launch the sysprep.exe utility.

Select Shut Down for Shutdown mode.

Select Reset.

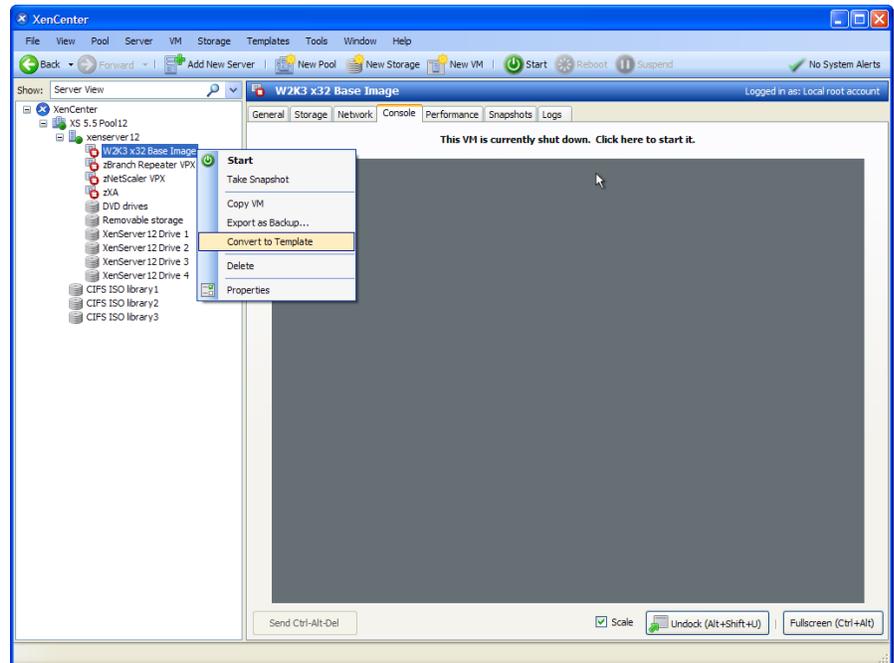
Ok.

Allow the server to shutdown.

Convert to Template:

Wait until the server has shut down completely.

In the left panel of XenCenter select the W2K3 x32 Base Image -> Right-Click -> Convert to Template.



Domain Controller - vDesktopDC

Create the Domain Controller that will host Active Directory, DHCP, DNS for the XenDesktop environment. Note: If you already have a DC, you can use that one.

Domain Controller:

From XenCenter select -> VM -> New VM.

Select the W2K3 x32 Base Image created in the previous step.

Name: vDesktopDC

vCPUs: 1

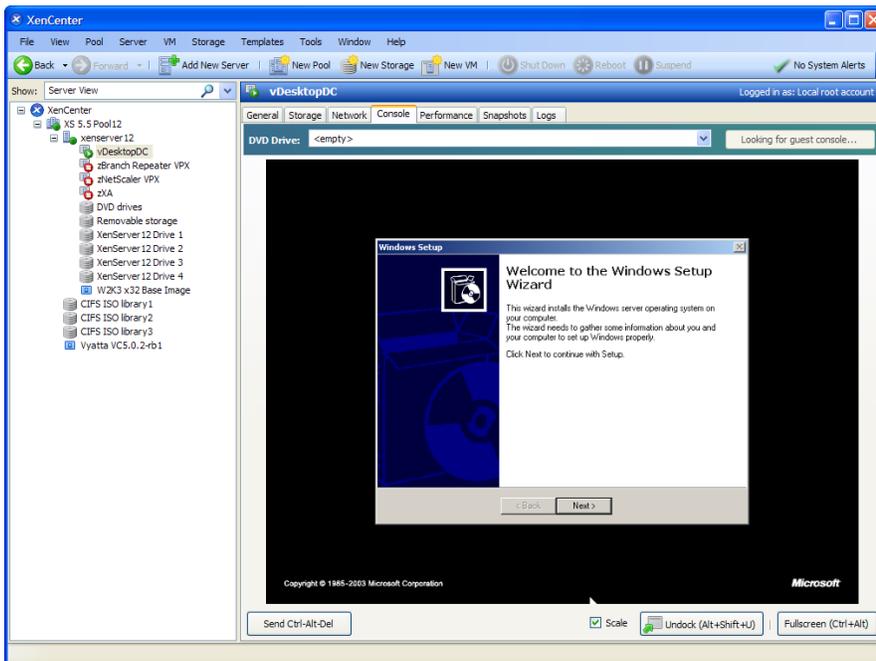
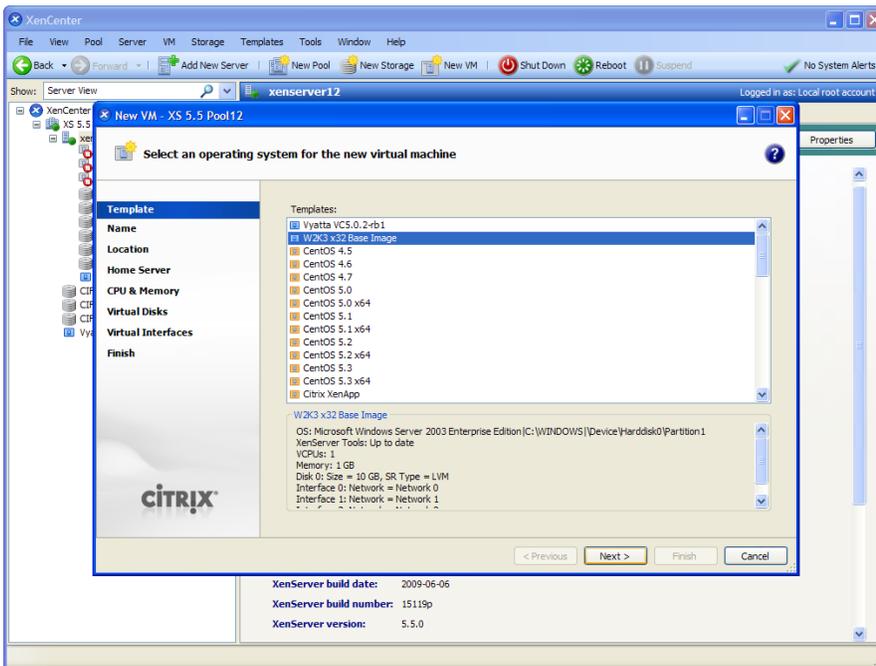
Memory: 1024 Mb

Disk: 10 Gb

Network: Interface 0 (minimum)

Follow the steps to complete the sysprep installation process.

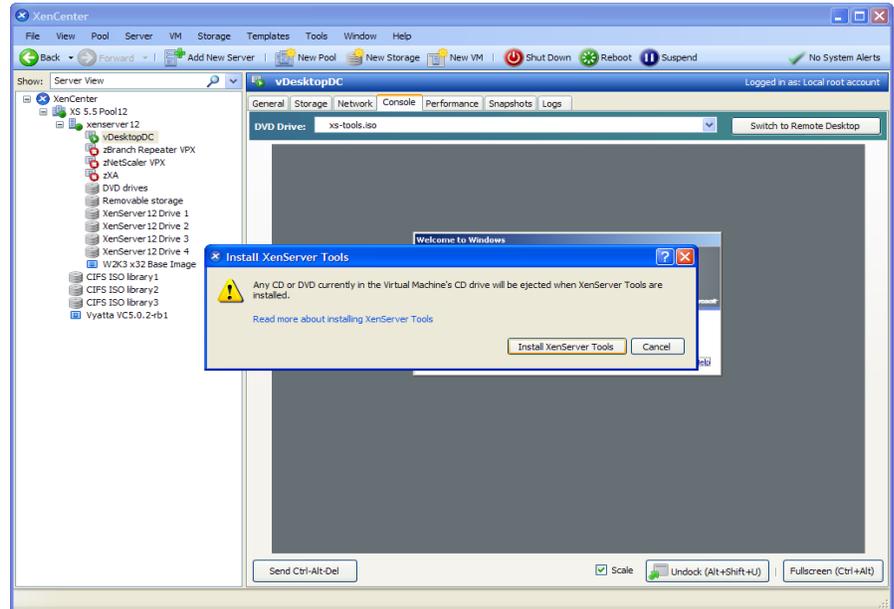
Login as the local Administrator.



XenTools:

Install XenTools.

Select the vDesktopDC from XenCenter left panel -> Right-Click -> Install XenServer Tools.



Network Settings:

Open the Network Settings in the Control Panel.

Assign a static IP Address to the Network Interface.

In this example:

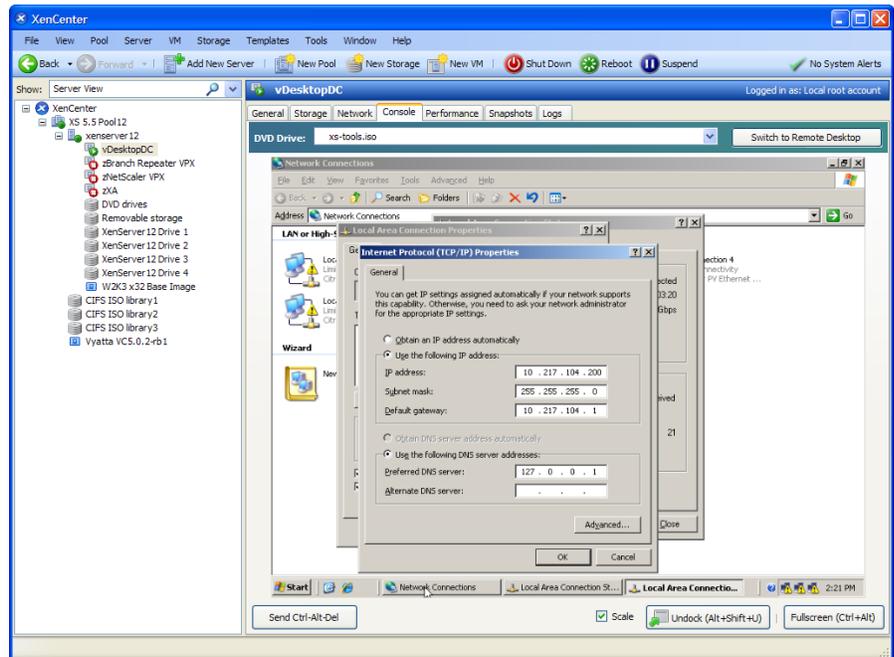
IPA: 10.217.104.200

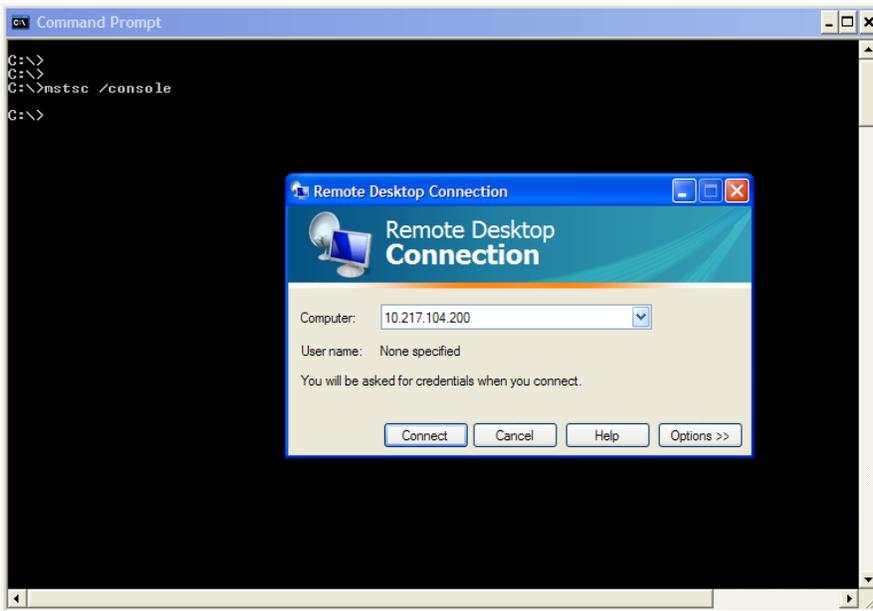
NMK: 255.255.255.0

GWY: 10.217.104.1

DNS: 127.0.0.1

Note: Disable the firewall.





Remote Desktop:

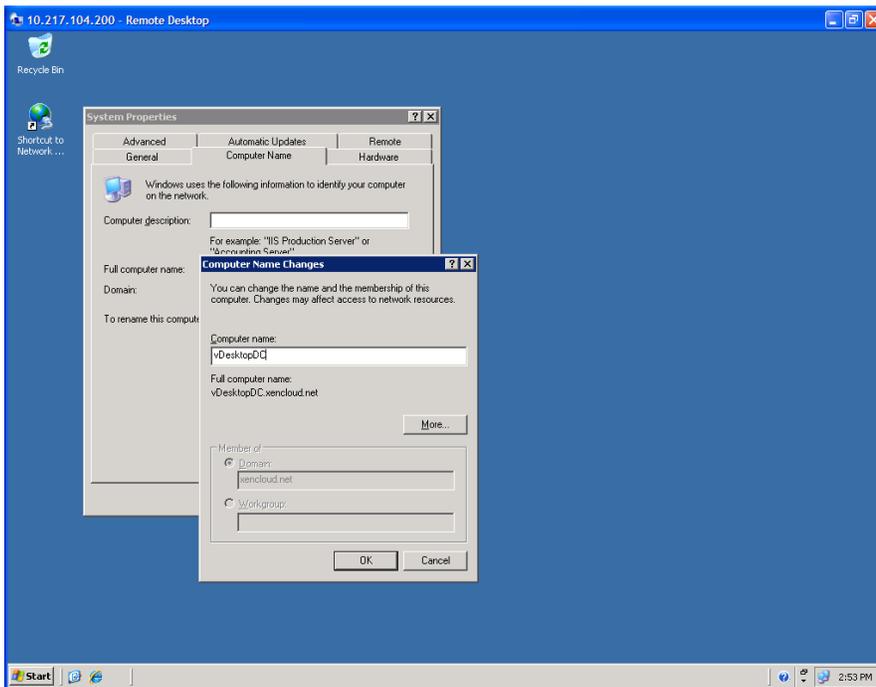
Connect to the Domain Controller using RDP.

From the XenCenter PC, Start -> Run -> cmd.exe.

Within the command prompt window, launch Microsoft Terminal Services:

`c:\mstsc /console`

Enter the IP Address of the Domain Controller.



Rename Computer:

Right-Click on My Computer and change the computer name to vDesktopDC.

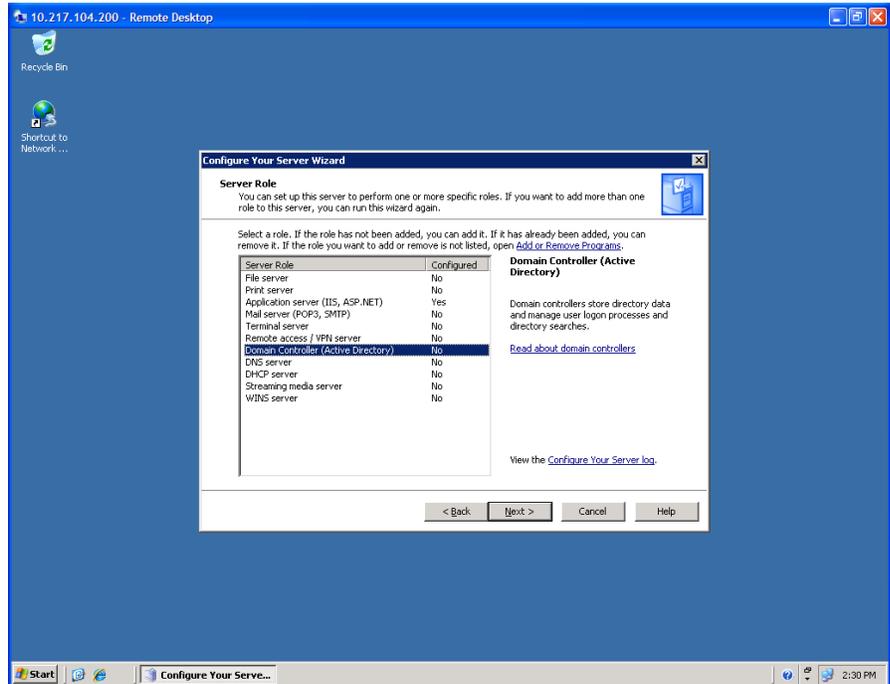
Restart.

DC Role:

Install the Domain Controller Role.

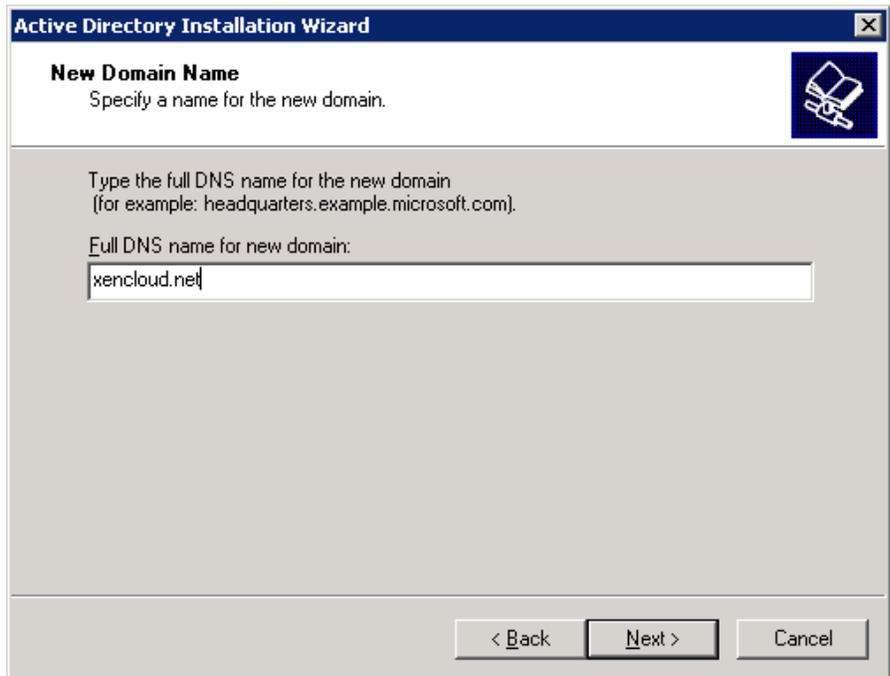
Start -> Administrative Tools -> Configure Your Server Wizard.

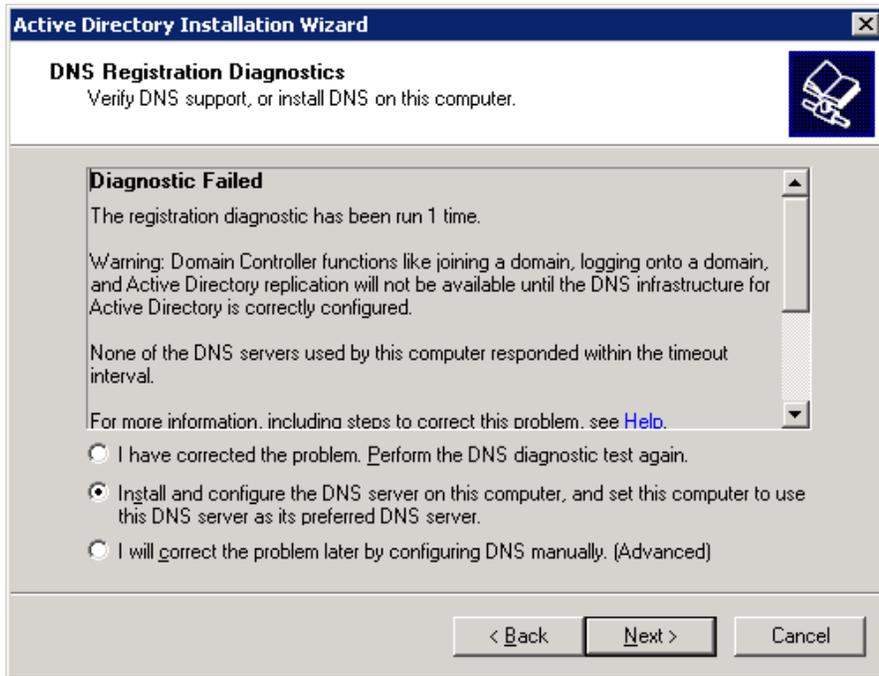
Install the Domain Controller.



Domain:

Enter the domain name you plan to use.



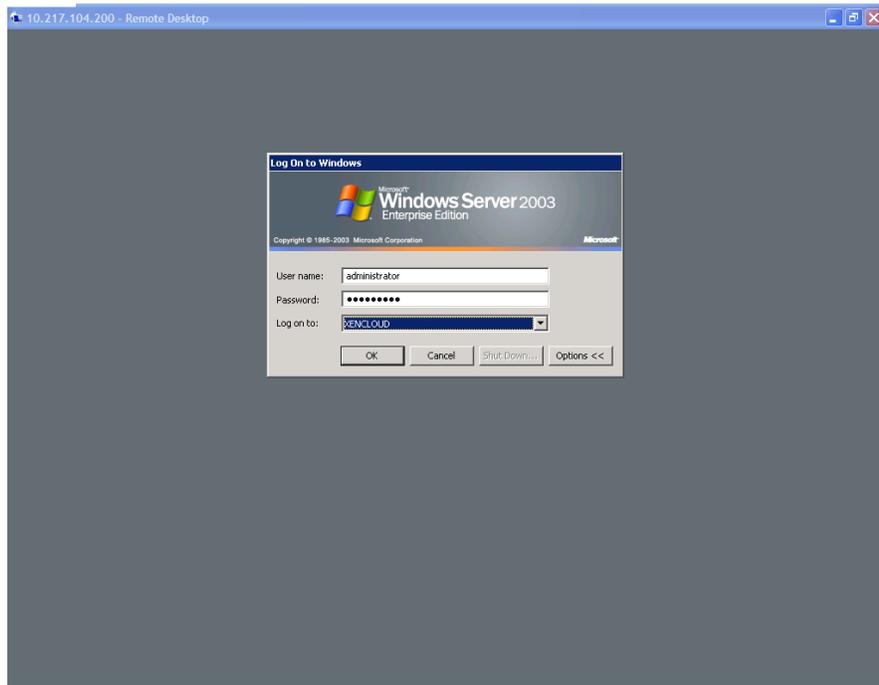


DNS:

Install DNS on this machine.

Restart.

Reconnect using RDP.



Login to the Domain:

From this point forward it is important to login to the Domain account on each computer that has joined the Domain - otherwise the configuration of DDC and PVS will not work.

Reverse Lookup Zone:

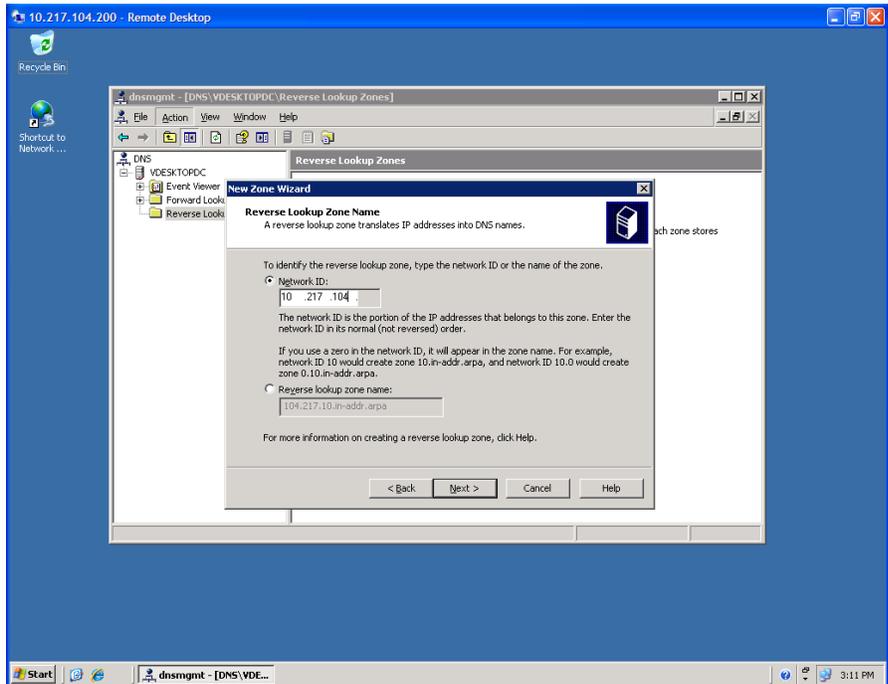
Configure a Reverse Lookup Zone in DNS.

Start -> Administrative Tools -> DNS.

Select Reverse Lookup Zones.

Add a New Zone from the Action Menu.

Follow the New Zone Wizard.



DHCP:

Install the DHCP service.

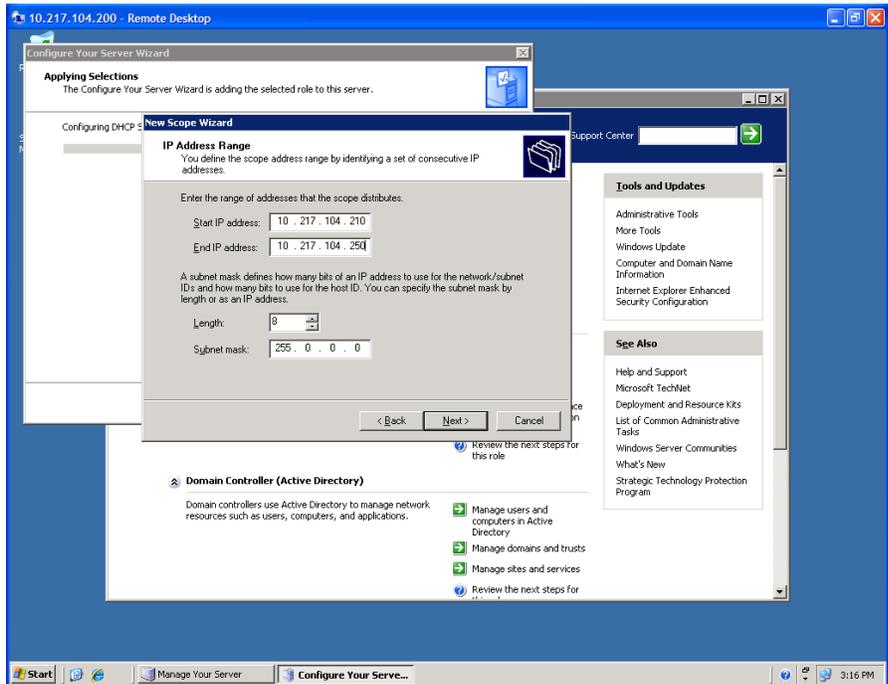
Start -> Administrative Tools -> Manage Your Server.

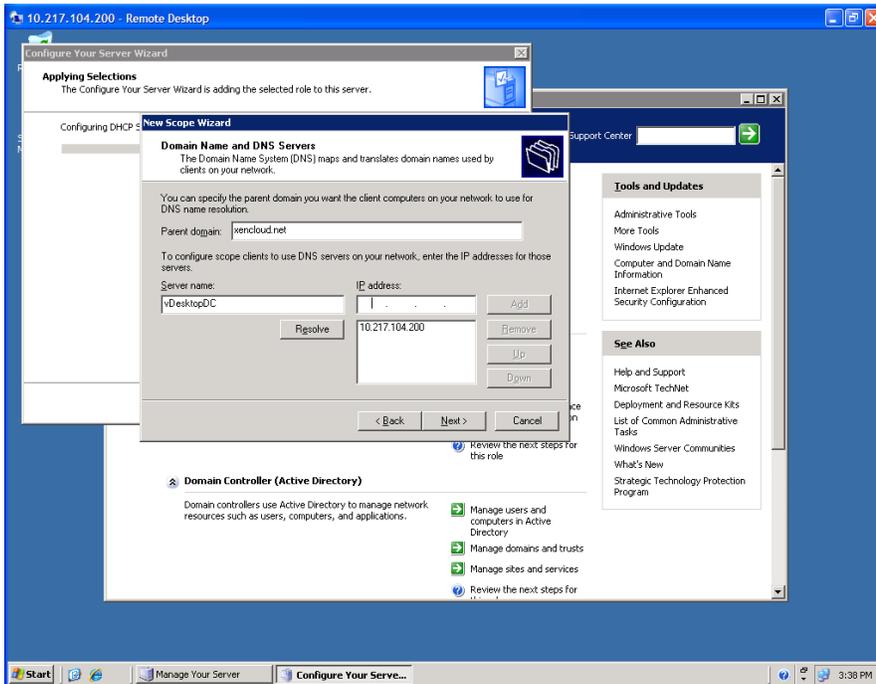
Add Role.

DHCP.

Enter DHCP IP Address Range.

Enter a Default Gateway.





DHCP:

Parent Domain: xencloud.net

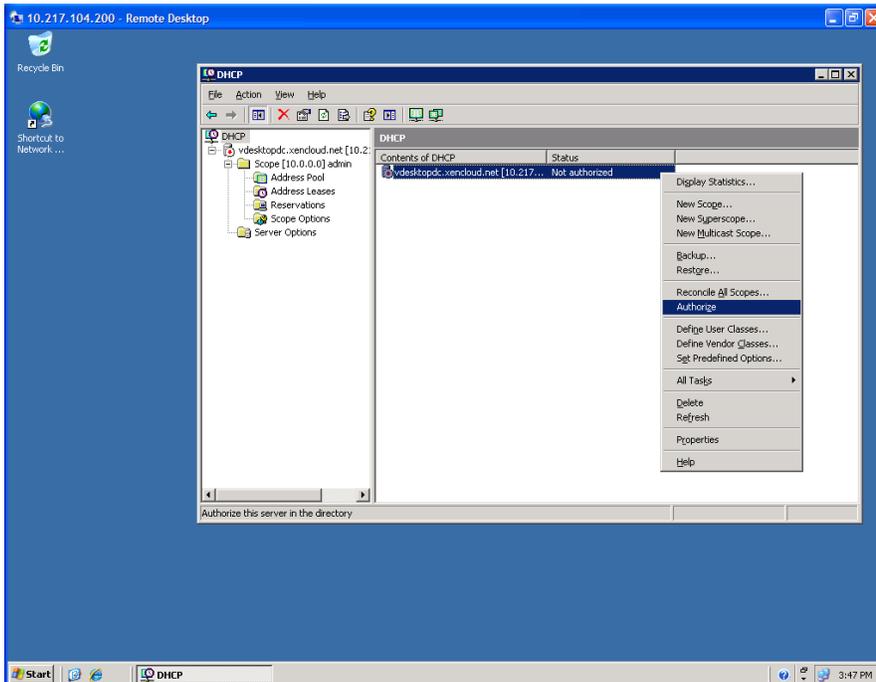
Server Name: vDesktopDC

Click on Resolve.

Add.

Bypass WINS by clicking Next.

Activate the Scope.



DHCP Authorize:

Authorize the DHCP Server.

Start -> Administrative Tools -> DHCP.

Right-Click vDesktopDC in the right panel -> Authorize.

Action -> Refresh.

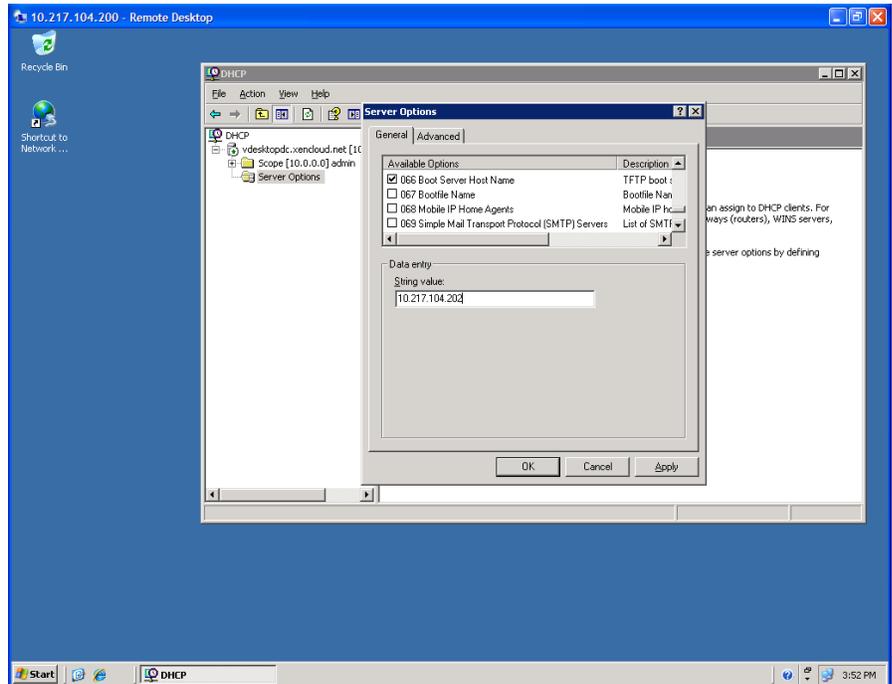
Option 66:

With DHCP still open, select Server Options and Right-Click.

Configure Options.

Scroll Down and select 066 Boot Server Host Name.

Enter the IP Address of the Provisioning Server - vDesktopPVS (Note: The PVS has not been created yet).



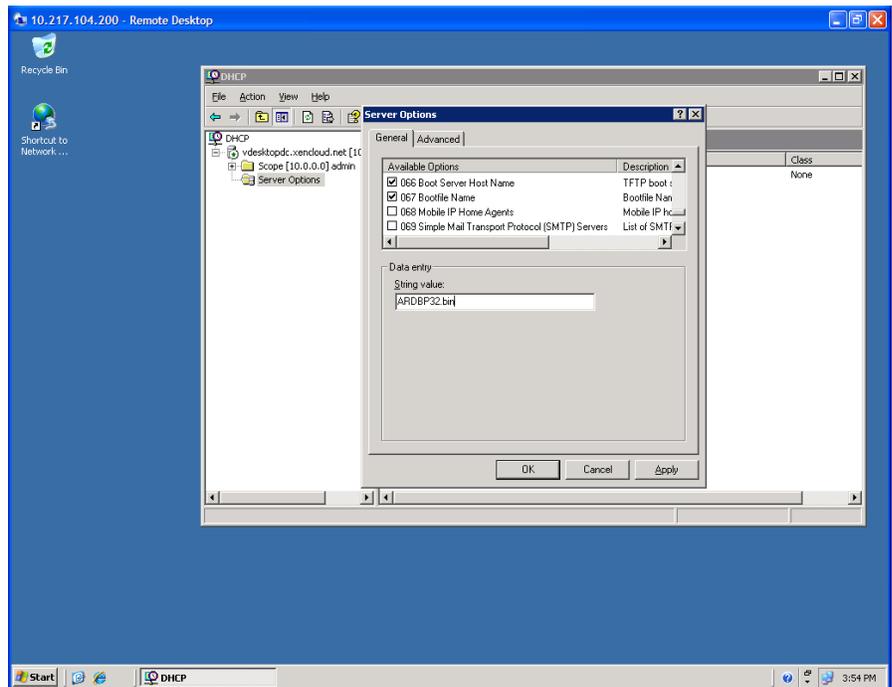
Option 67:

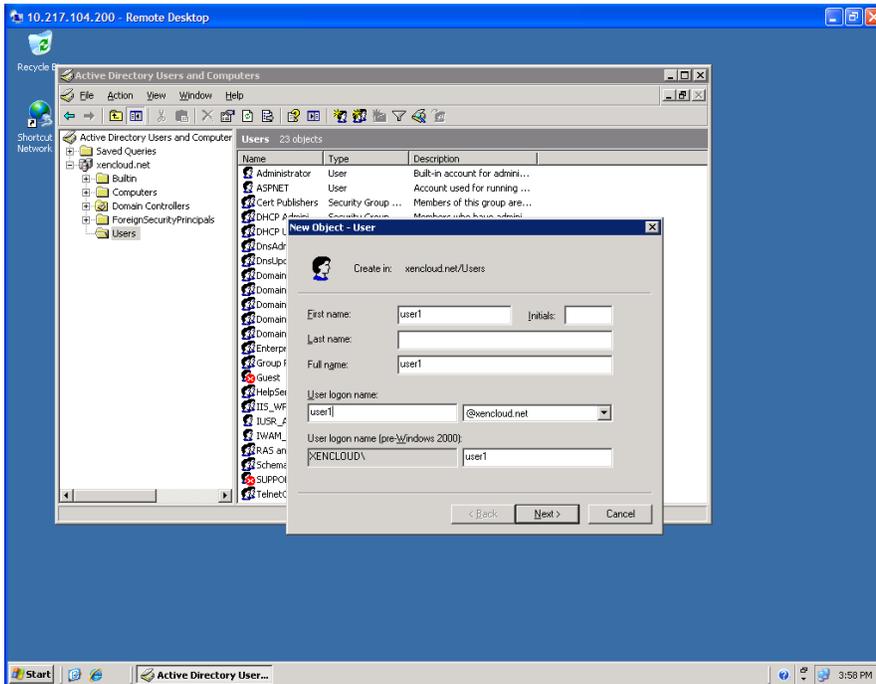
Scroll Down and select 067 Bootfile Name.

Enter the String ARDBP32.bin in the String Value field.

Select Apply.

Ok.





Test User Accounts:

Add some test user accounts.

Start -> Administrative Tools -> Active Directory.

Create five user accounts:

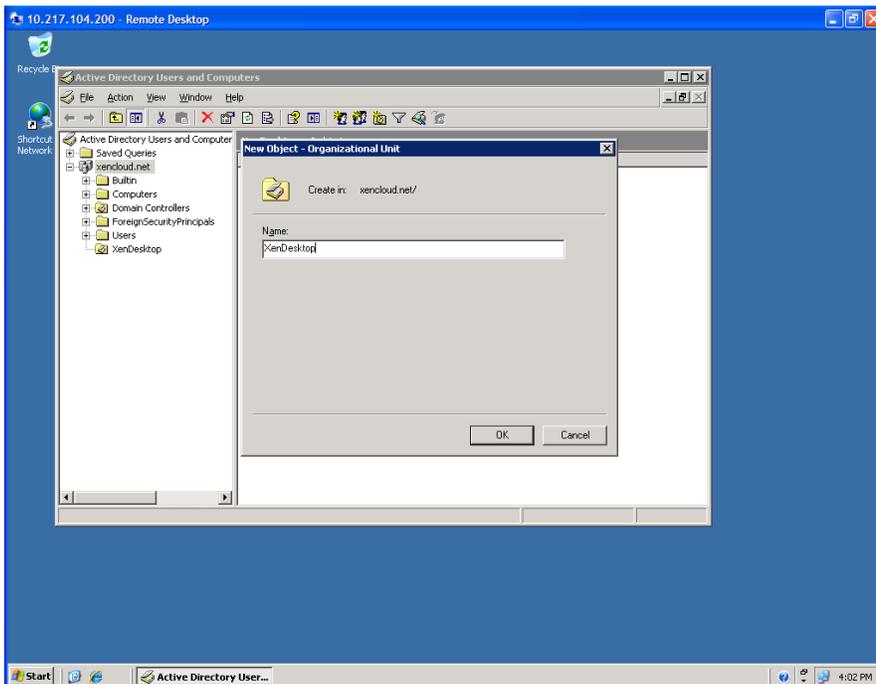
user1

user2

user3

user4

user5



OU:

Select the Xencloud.net server in the left panel.

Right-Click.

New.

Organizational Unit.

Name: XenDesktop

Reboot the server.

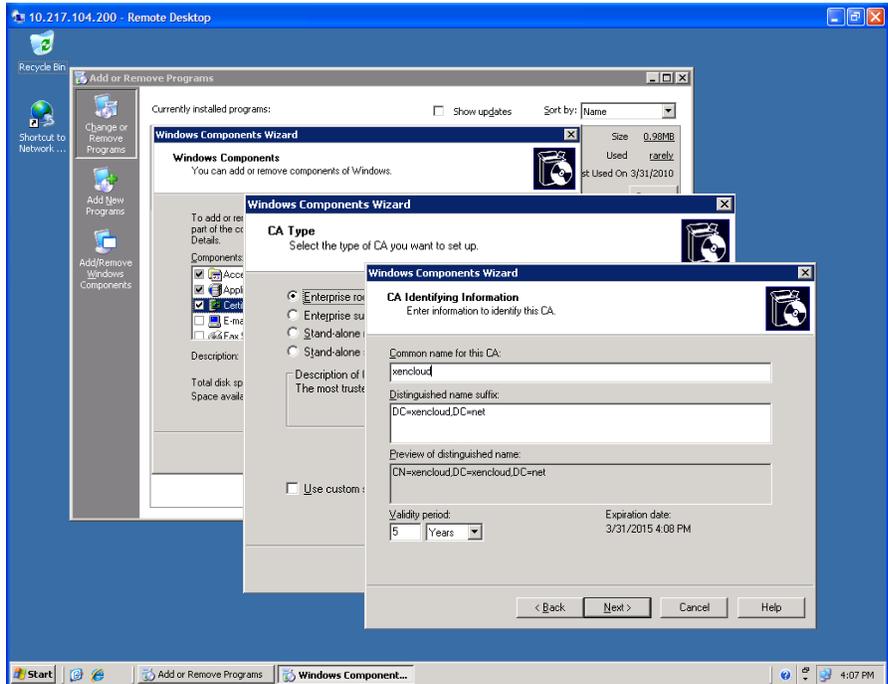
Certificate Services:

Install Certificate Services on the Domain Controller.

From the Control Panel -> Add or Remove Programs -> Windows Components -> Certificate Services -> Enterprise CA.

Common Name: xencloud

Accept the defaults.

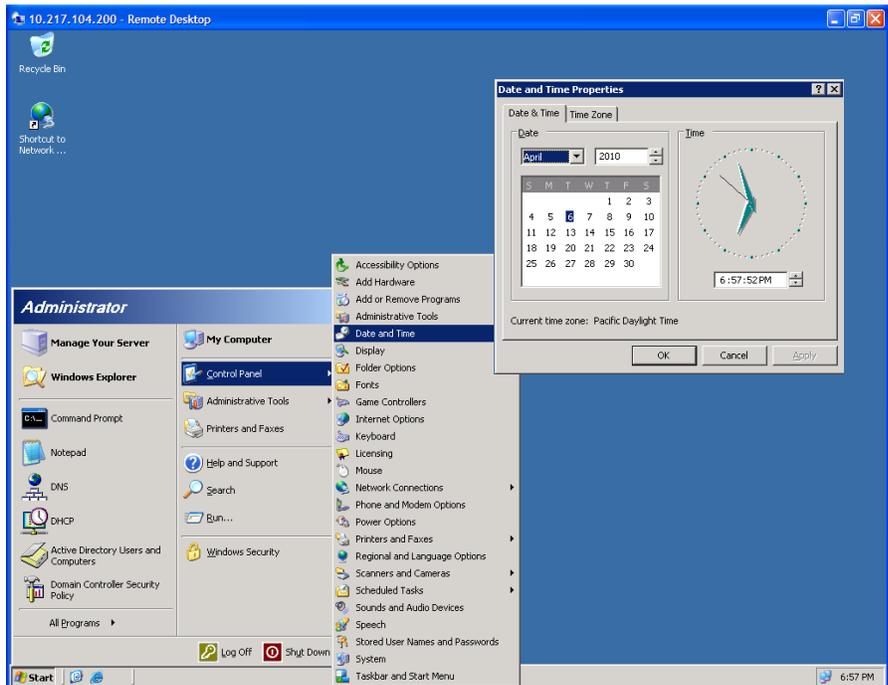


Desktop Delivery Controller:

Time is of the essence.

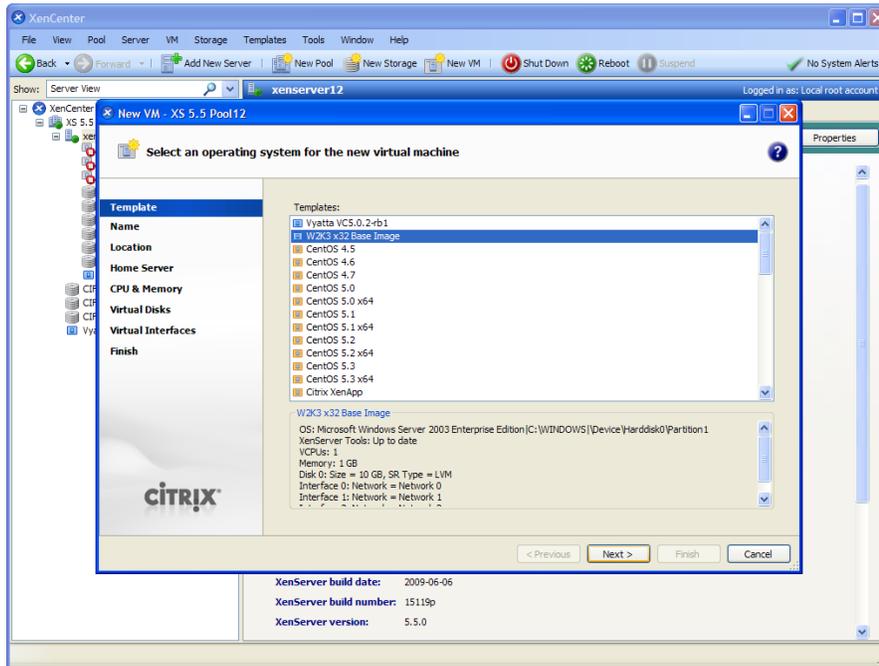
Make sure the Date and Time are set correctly on the Domain Controller. The PVS and DDC sync time when they authenticate with the DC.

If the Date and Time are off, the vDisk will not start.



Desktop Delivery Controller - vDesktop-DDC

Create the Desktop Delivery Controller, join the Domain and add the Domain Controllers root certificate.



Desktop Delivery Controller:

From XenCenter select -> VM -> New VM.

Select the W2K3 x32 Base Image created in the previous step.

Name: vDesktopDDC

vCPUs: 1

Memory: 1024 Mb

Disk: 10 Gb

Network: Interface 0 (minimum)

Follow the steps to complete the sysprep installation process.

During Windows Setup, set the Computer Name:

vDesktopDDC

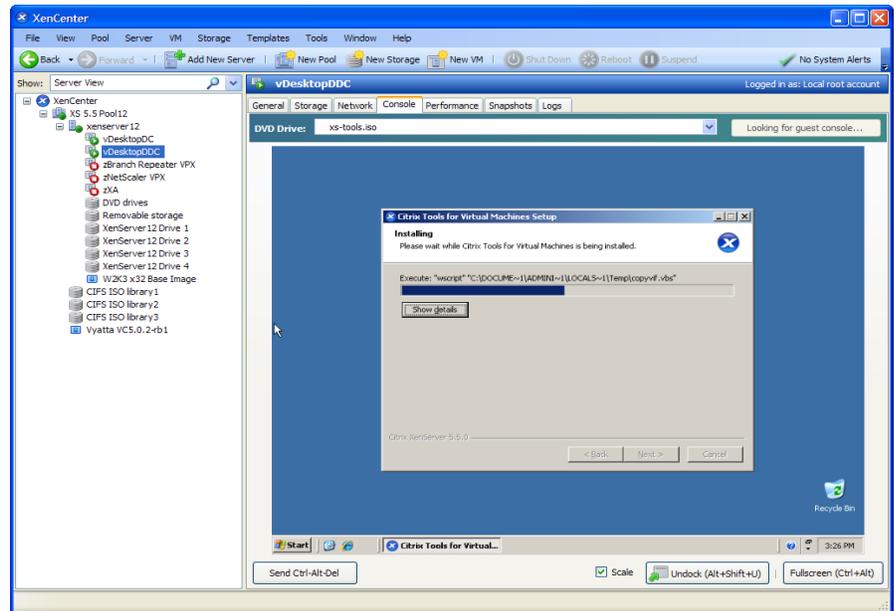
Don't join the Domain yet.

Login as the local Administrator.

XenTools:

Install XenTools.

Select the vDesktopDDC from XenCenter left panel -> Right-Click -> Install XenServer Tools.



Network Settings:

Open the Network Settings in the Control Panel.

Assign a static IP Address to the Network Interface.

In this example:

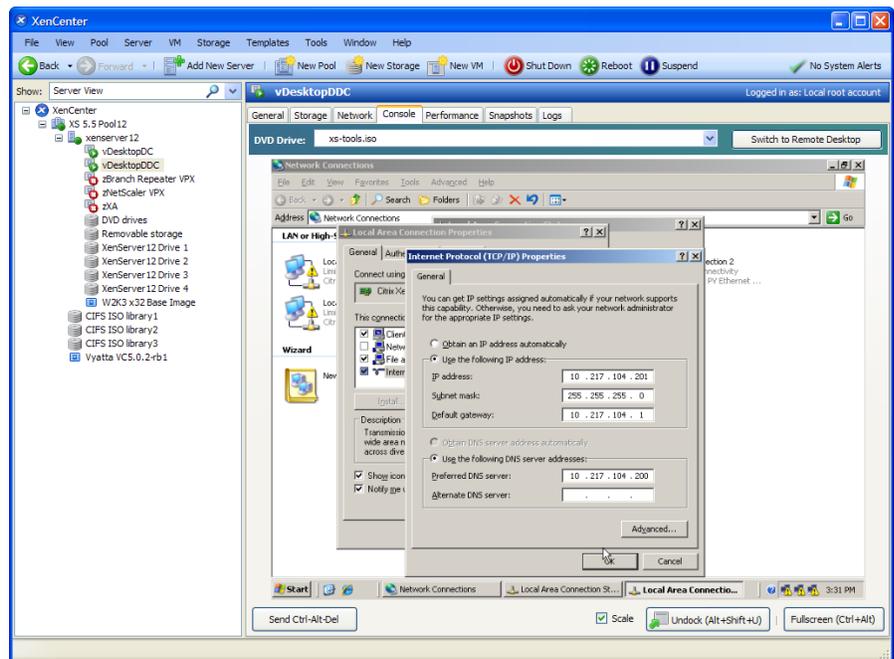
IPA: 10.217.104.201

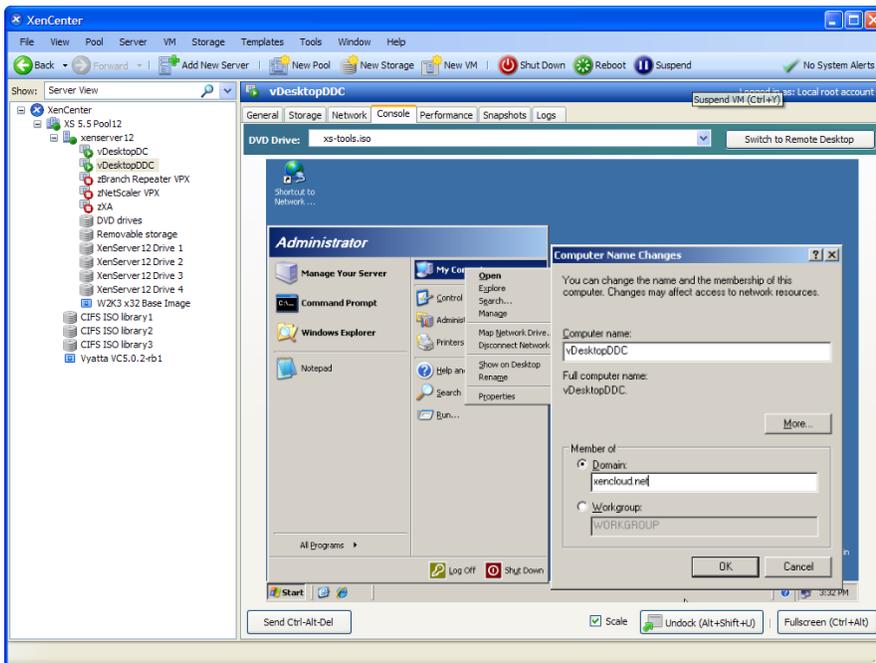
NMK: 255.255.255.0

GWY: 10.217.104.1

DNS: 10.217.104.200

Note: Disable the firewall.





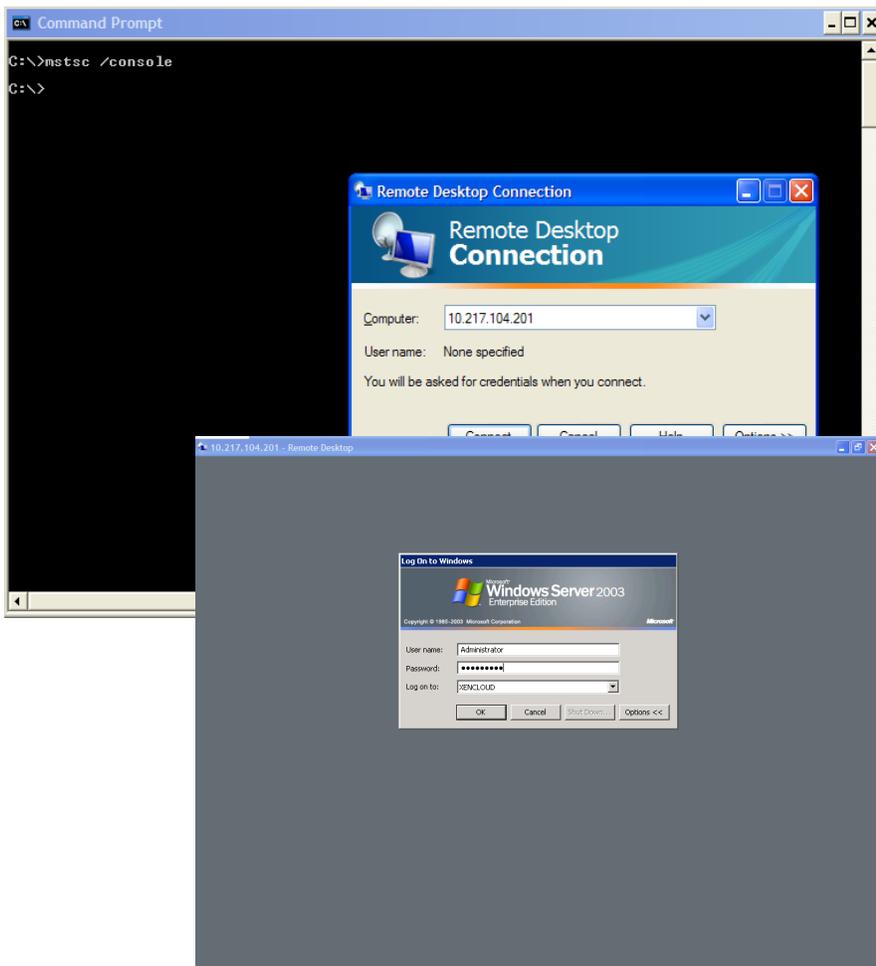
Join Domain:

Join the Domain.

Start -> My Computer -> Right-Click -> Properties -> Computer Name -> Domain:

xencloud.net

Reboot the server.



Remote Desktop:

Connect to the DDC using RDP.

From the XenCenter PC, Start -> Run -> cmd.exe.

Within the command prompt window, launch Microsoft Terminal Services:

`c:\mstsc /console`

Enter the IP Address of the DDC.

Note: Make sure you login to the Domain, and not the local computer account.

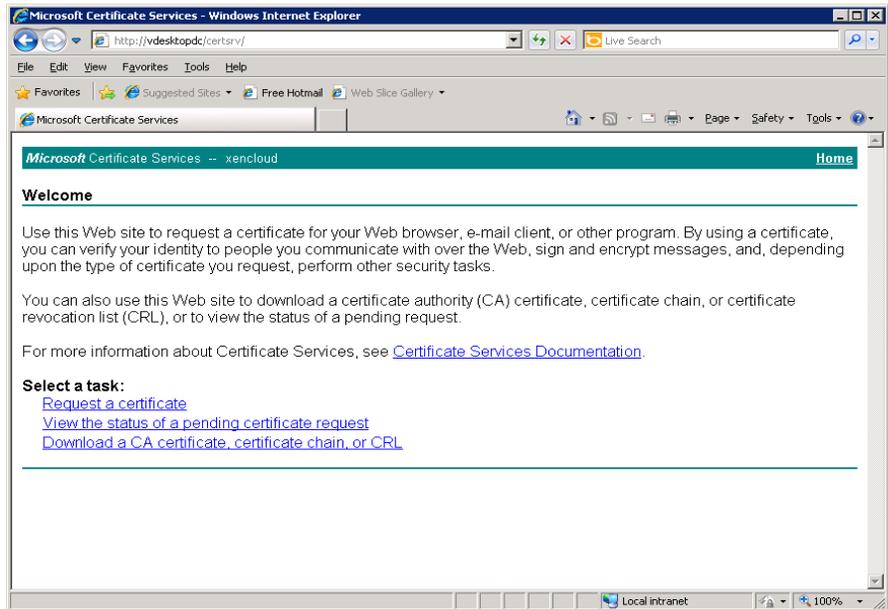
Certificates:

Install the Domain Controller certs on the DDC.

Open an Internet Browser.

Navigate to <http://vDesktopDC/certsrv>

Select Download CA Certificate, Certificate Chain or CRL.

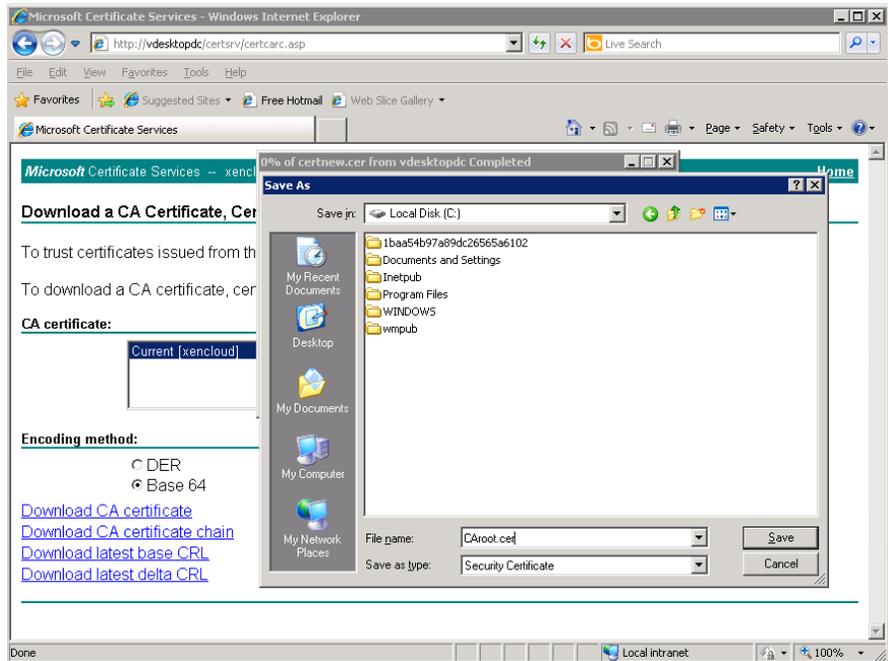


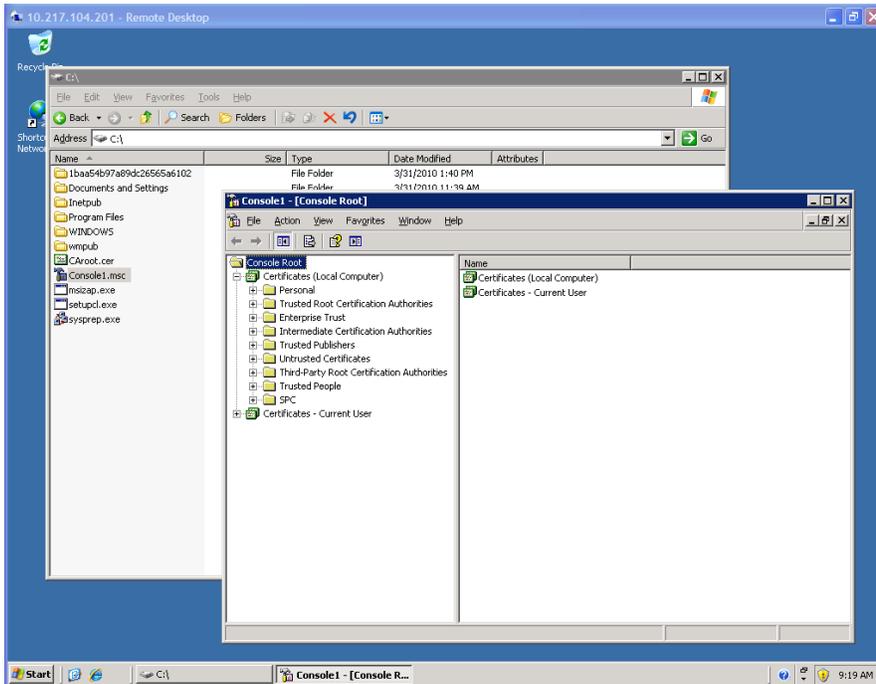
Certificates:

Select the Base 64 radio button.

Download CA Certificate.

Save it to a directory on the C:\drive.





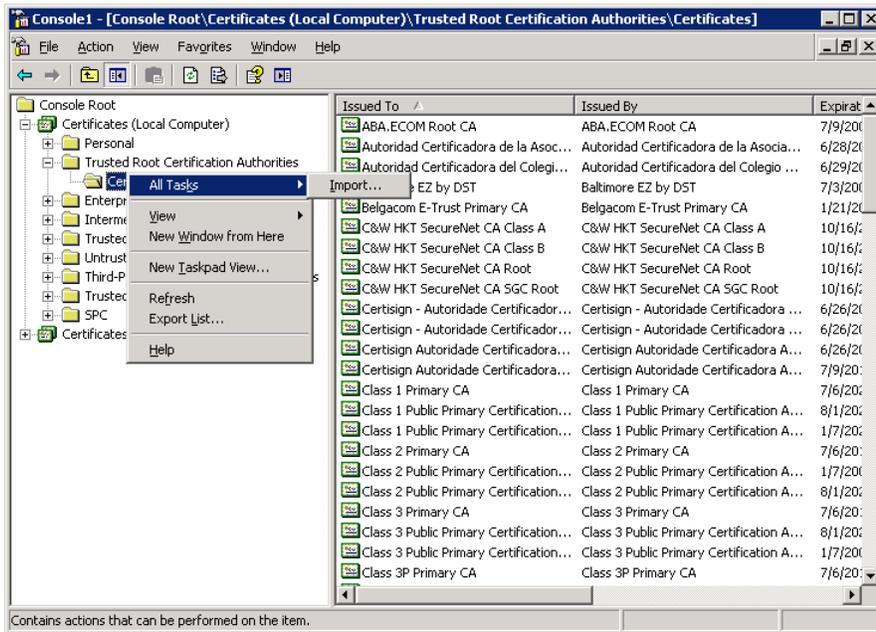
Import Certificate:

Run the Certificate MMC Console created in the base image.

c:\console1.msc.

The Certificates console can also be accessed by the following:

- Start -> Run -> mmc.exe ->
- File -> Add/Remove Snap-In ->
- Add -> Certificates -> Add ->
- Computer Account -> Next ->
- Local Computer -> Finish ->
- Close.



Import Certificate:

Expand Console Root.

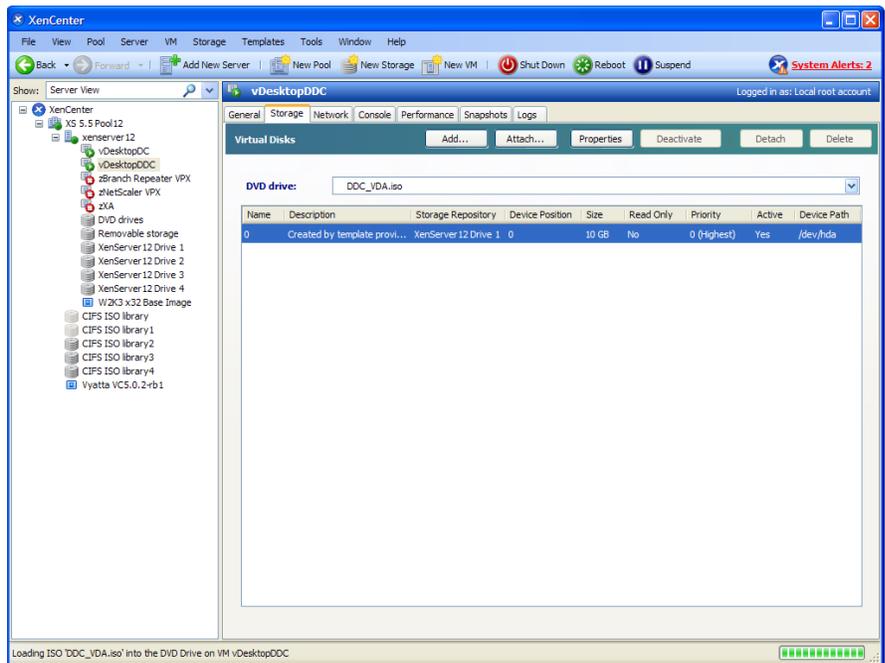
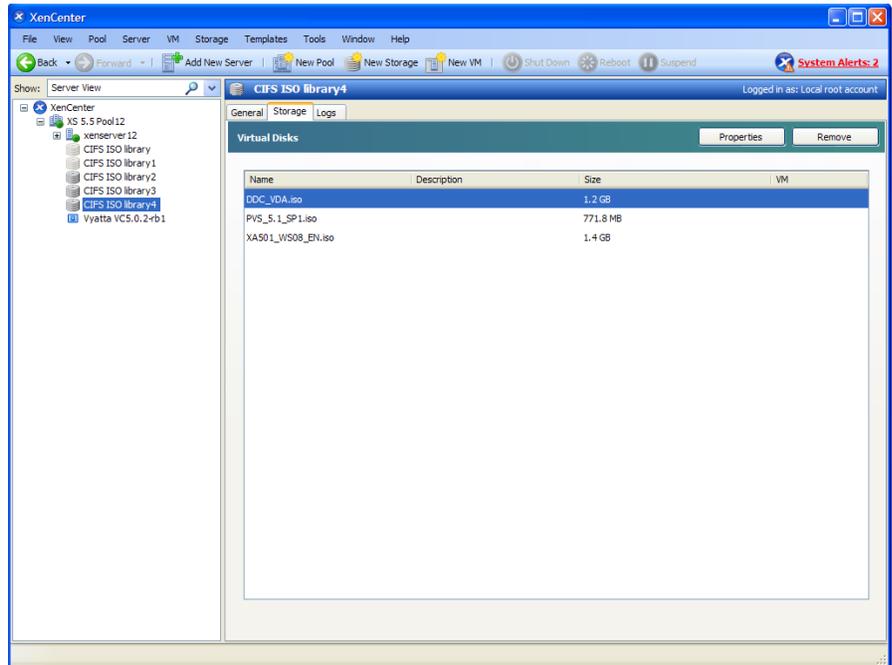
Select Trusted Root Certificates -> All Tasks -> Import.

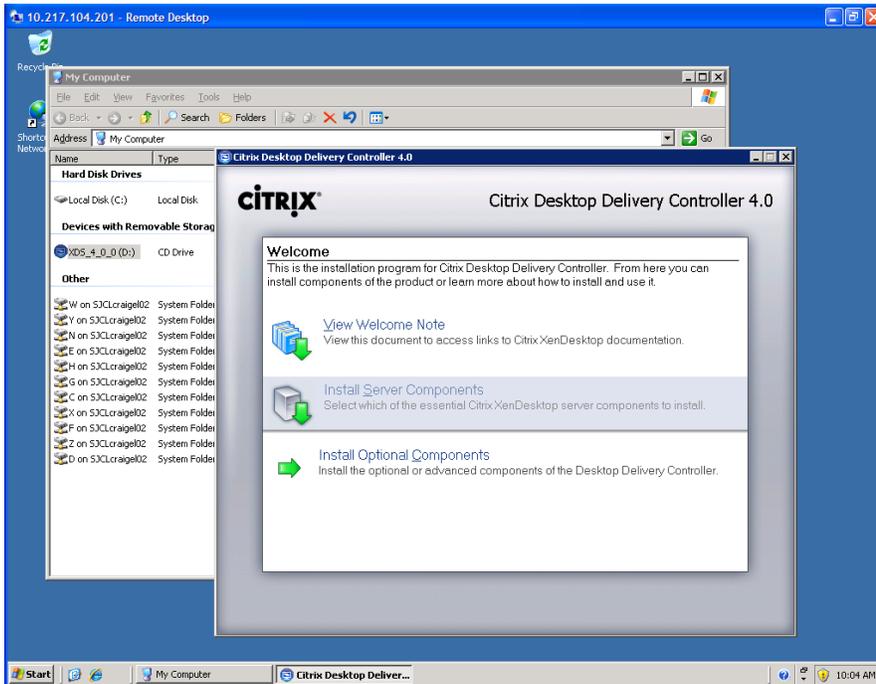
DDC Install:

Place the Desktop Delivery Controller installation media into the CD/DVD drive via the XenCenter console.

Note: In this example, we extracted the DDC and PVS ISO Images into a directory, and created a CIFS Storage Repository in XenCenter.

The DDC ISO Image can then be mounted in the XenCenter Console, in the DDC CD/DVD drive.



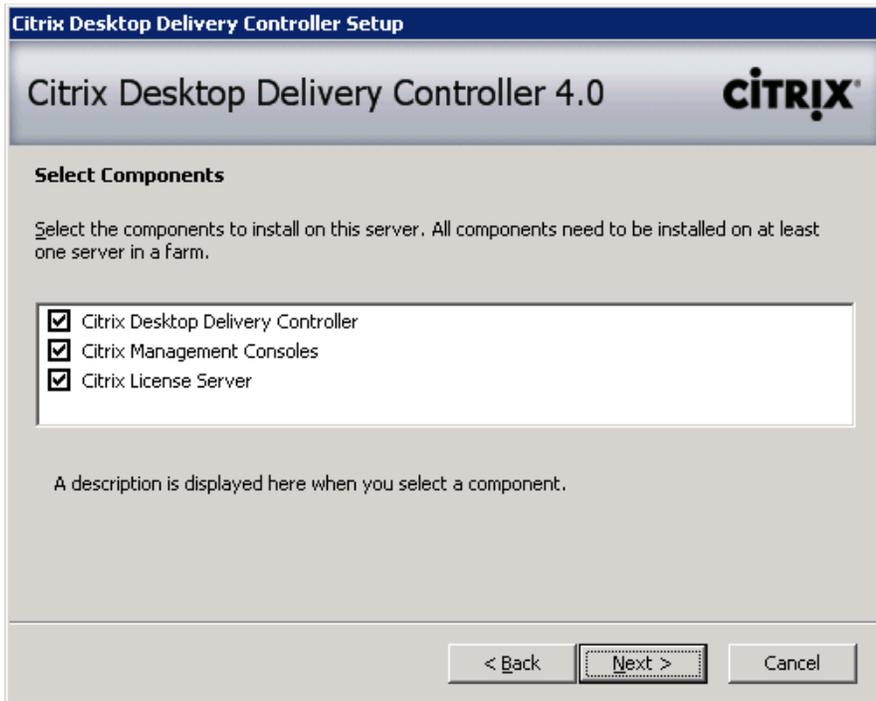


DDC Install:

Launch the DDC installer.

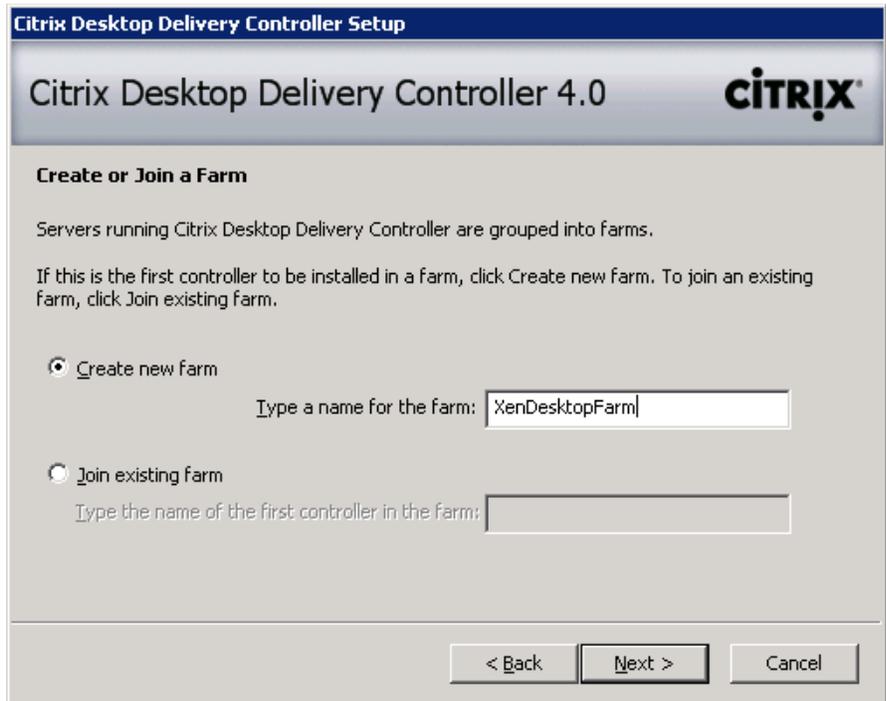
Select Install Server Components.

Select the components to install.



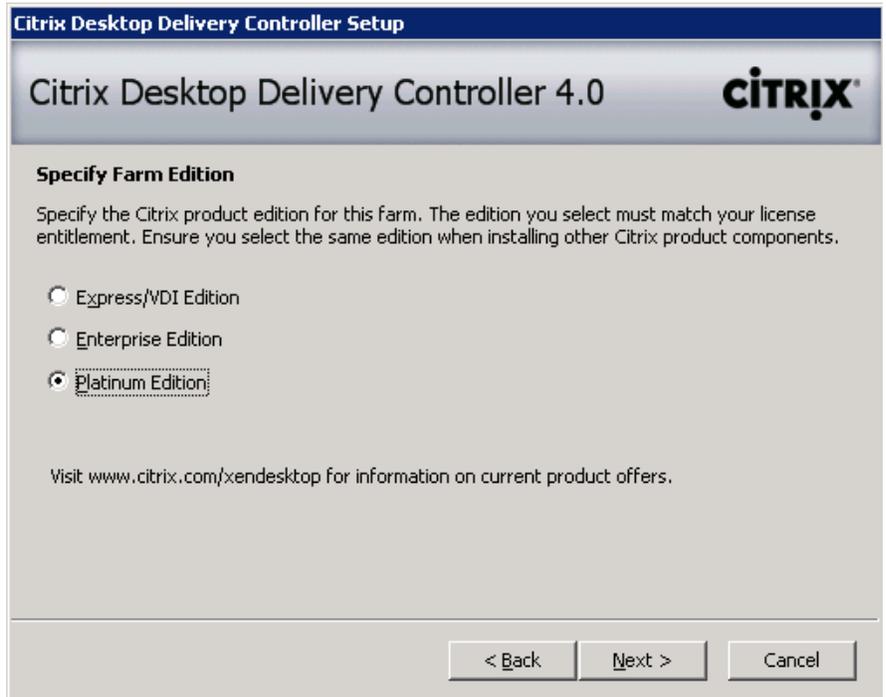
DDC Install:

Create a new farm:
XenDesktopFarm



DDC Install:

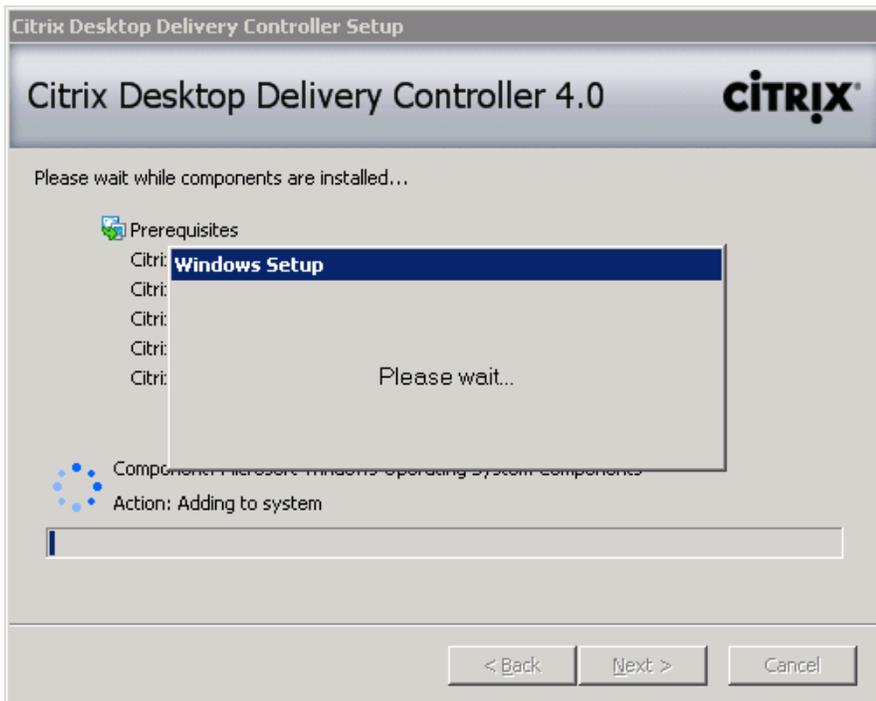
Select License Entitlement.





DDC Install:

Create a new database.



DDC Install:

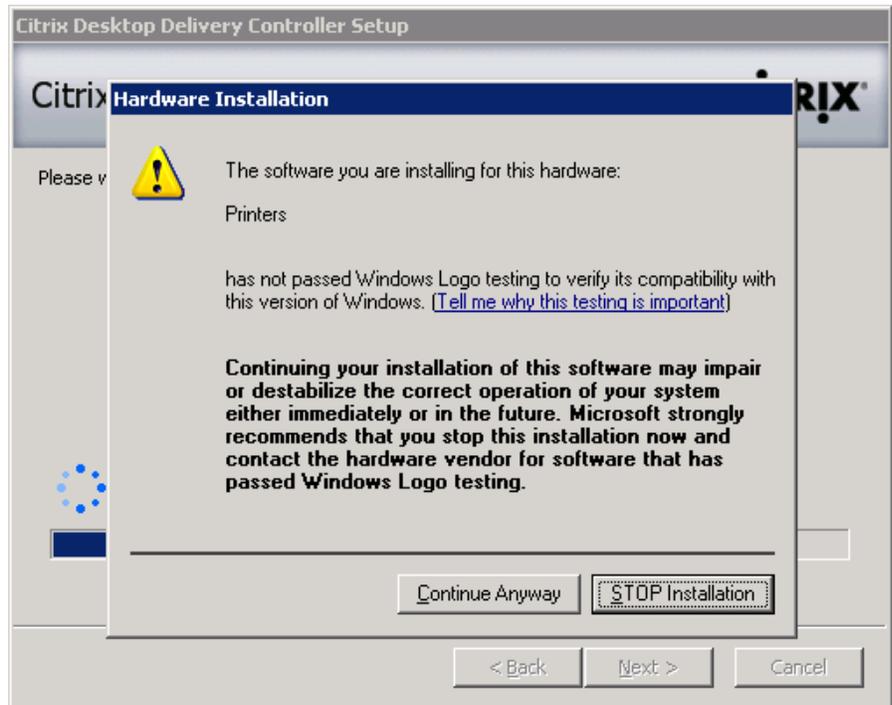
Start the install.

You will likely need to reboot as part of the installation process.

Note: After reboot, you may need to launch the DDC installer again, to resume installation of remaining components.

DDC Install:

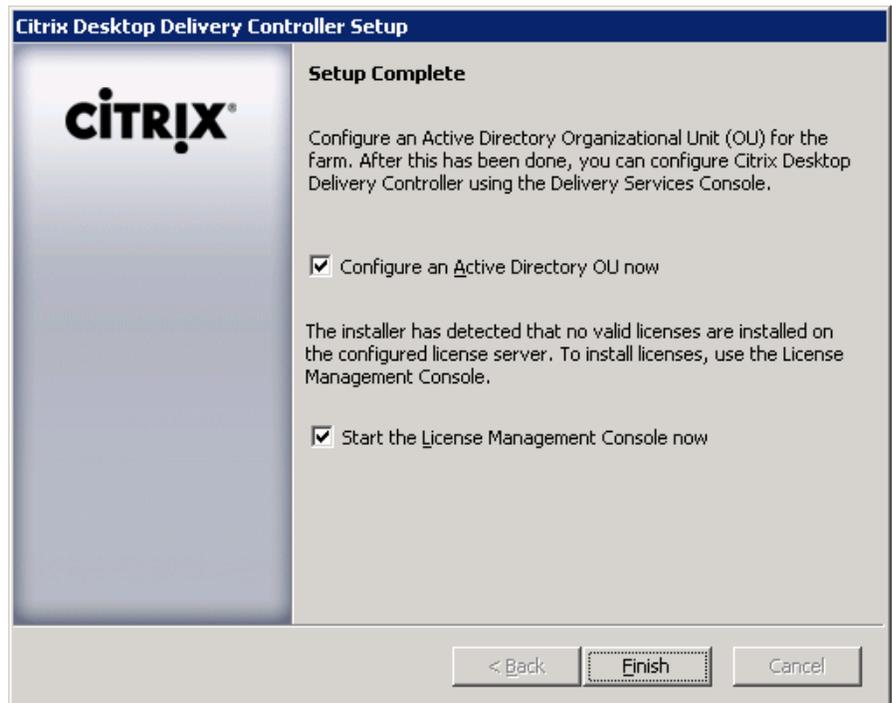
Ignore the driver warnings, select Continue Anyway.



DDC Install:

When setup completes, leave both boxes checked to create the Active Directory Organizational Unit (OU).

Select Finish.

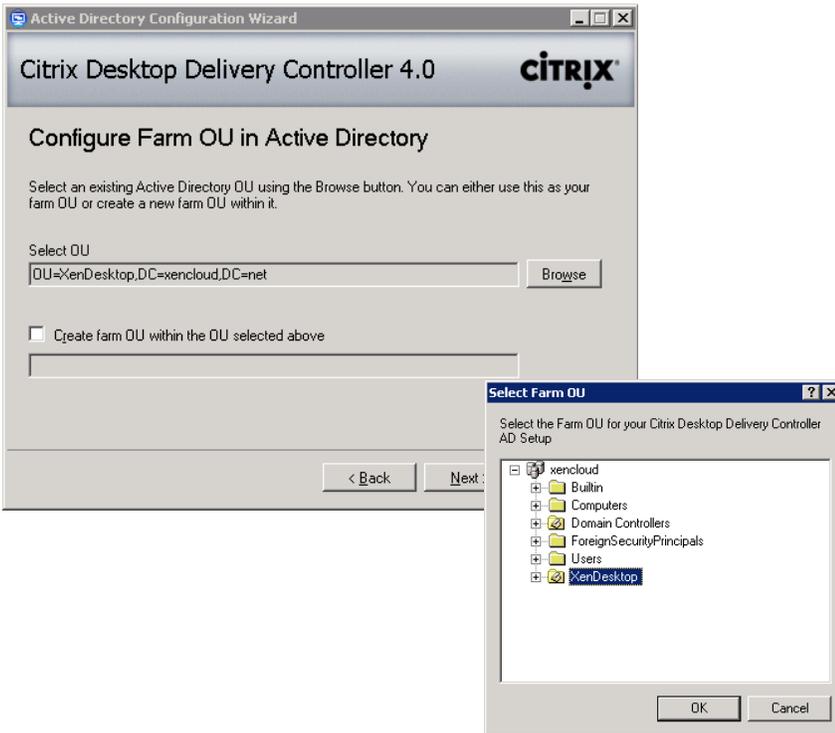




DDC Install:

The Active Directory Configuration Wizard starts.

Note the AD Configuration Wizard can also be run from the Windows Start menu.



DDC Install:

Select the Active Directory OU configure in a previous step.

Licensing:

Open a Command window and find out what the hostname is by typing in 'hostname'.

It is important to specify the case sensitive hostname when activating your license from MyCitrix.com.

Activate and download the Citrix XenDesktop license from MyCitrix.com.

```

c:\Command Prompt
Microsoft Windows [Version 5.2.37901]
(C) Copyright 1985-2003 Microsoft Corp.

C:\Documents and Settings\Administrator.XENCLOUD>hostname
vDesktopDDC

C:\Documents and Settings\Administrator.XENCLOUD>_
  
```

Licensing:

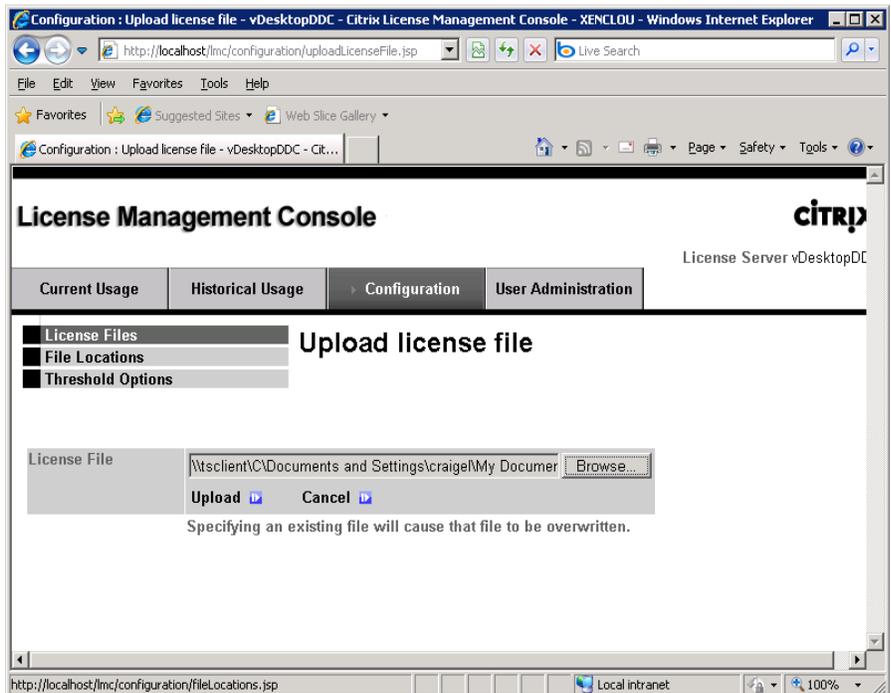
Launch the License Management Console:

Start -> Citrix -> Management Consoles -> License Management Console.

Select Configure License Server.

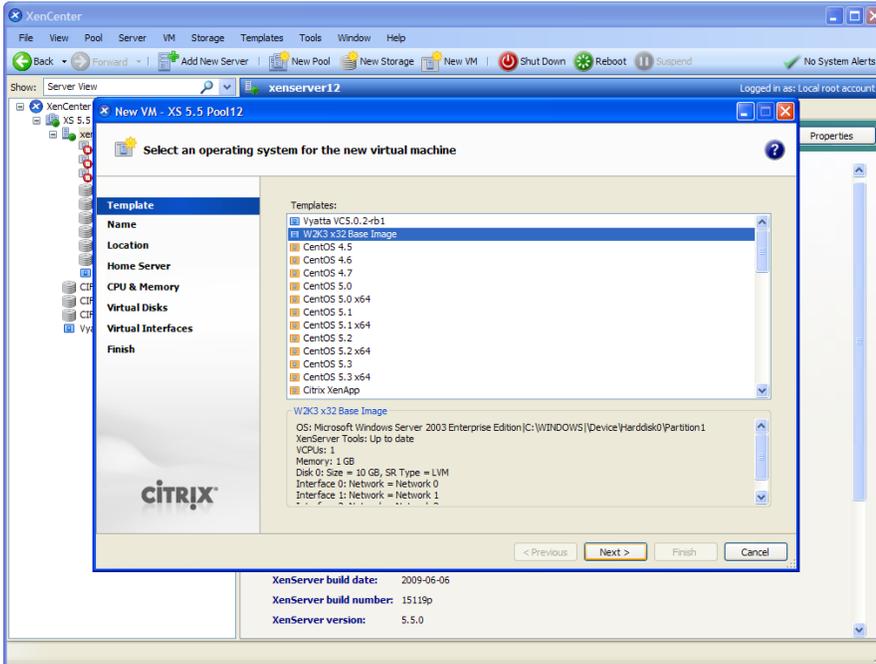
Select Copy license file to this license server.

Browse and Upload the license file.



Provisioning Server - vDesktopPVS

Create the Provisioning Server.



Provisioning Server:

From XenCenter select -> VM -> New VM.

Select the W2K3 x32 Base Image created in the previous step.

Name: vDesktopPVS

vCPUs: 2

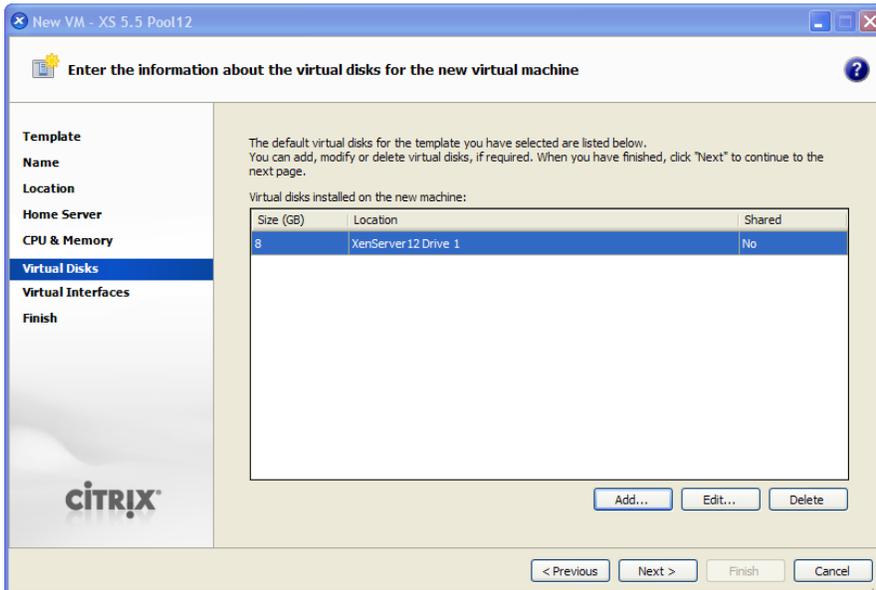
Memory: 2048 Mb

Network: Interface 0 (minimum)

Follow the prompts to complete the sysprep install.

Don't join the Domain yet.

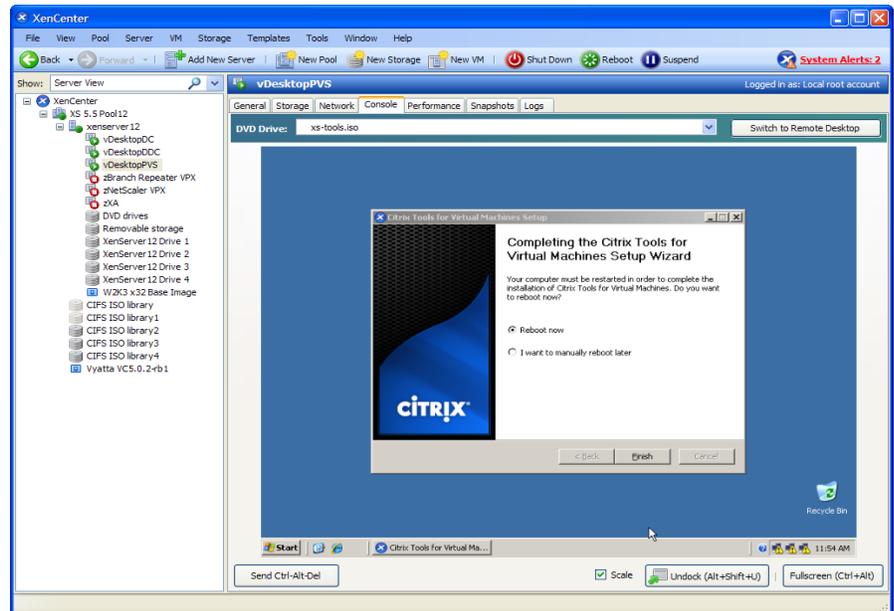
Login as the local Administrator.



XenTools:

Install XenTools.

Select the vDesktopPVS from XenCenter left panel -> Right-Click -> Install XenServer Tools.



Network Settings:

Open the Network Settings in the Control Panel.

Assign a static IP Address to the Network Interface.

In this example:

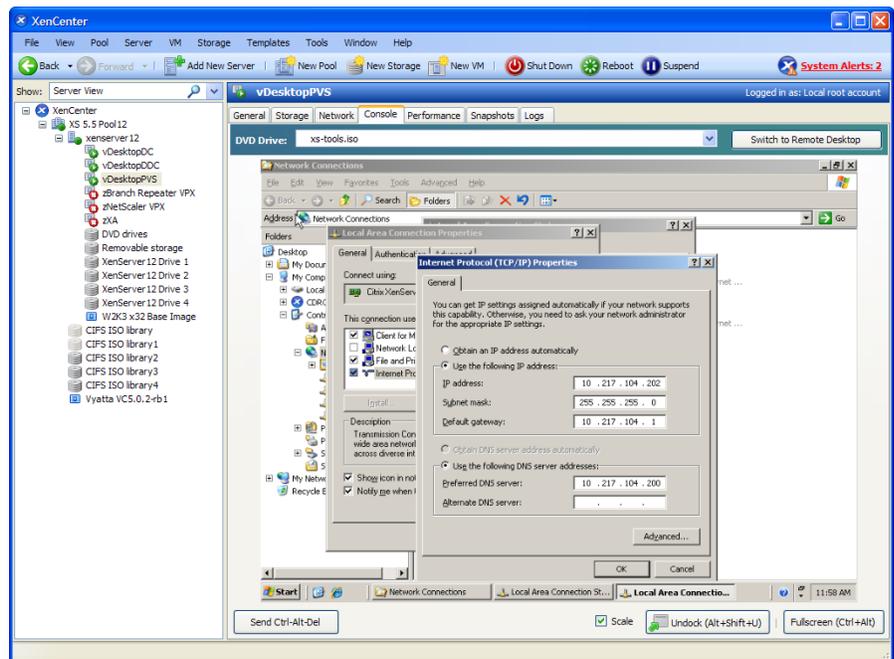
IPA: 10.217.104.202

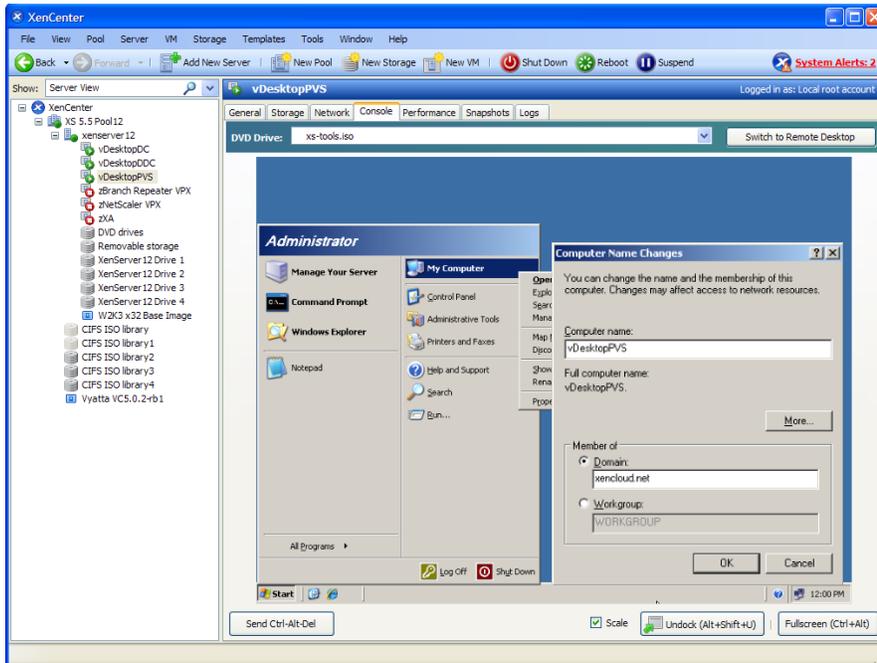
NMK: 255.255.255.0

GWY: 10.217.104.1

DNS: 10.217.104.200

Note: Disable the firewall.





Join Domain:

Join the Domain.

Start -> My Computer -> Right-Click -> Properties -> Computer Name -> Domain:

xencloud.net

Reboot the server.

vDisk Storage:

You will need to 'Add' additional storage to the Provisioning Server to store the vDisk images.

To calculate how much storage to allocate, start by estimating the size of the Operating System that will be installed on the vDisk. For example: Windows XP = 10 Gb, Windows 7 = 25 Gb.

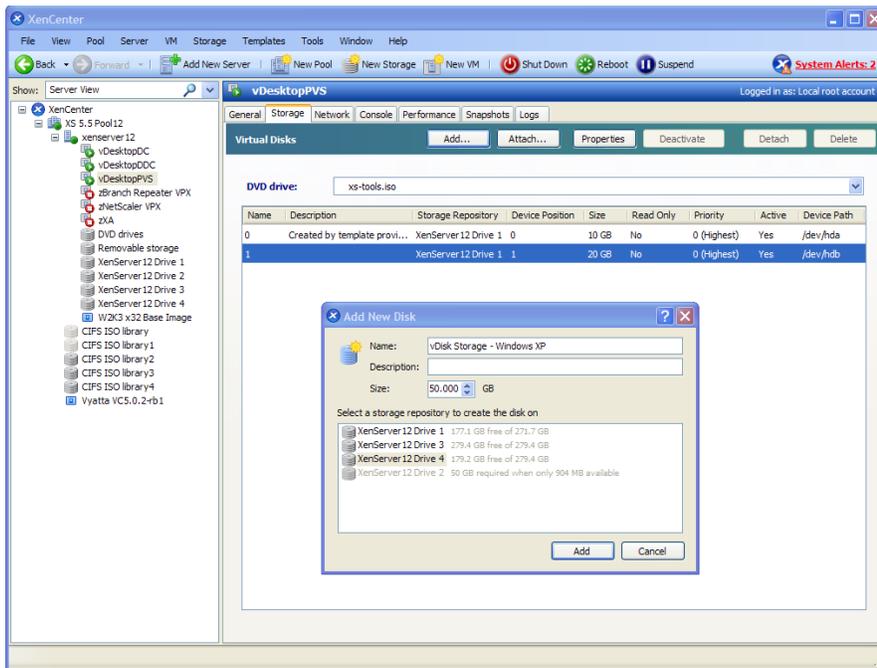
A rule of thumb is to make 3 vDisks to hold 3 copies of each Operating System for 1) Currently being used vDisk 2) A previously working vDisk 3) A new vDisk to add upgrades, patches, hotfixes, etc.

So for a Windows XP Desktop environment we will add 10Gb x 3 = 30 Gb minimum.

For a Windows 7 Desktop environment, we will add 35 Gb x 3 = 105 Gb minimum.

Select the Storage tab in XenCenter for vDesktopPVS and Add.

In this example we added an additional 150 Gb for Windows 7 vDisks.



Remote Desktop:

Connect to the PVS using RDP.

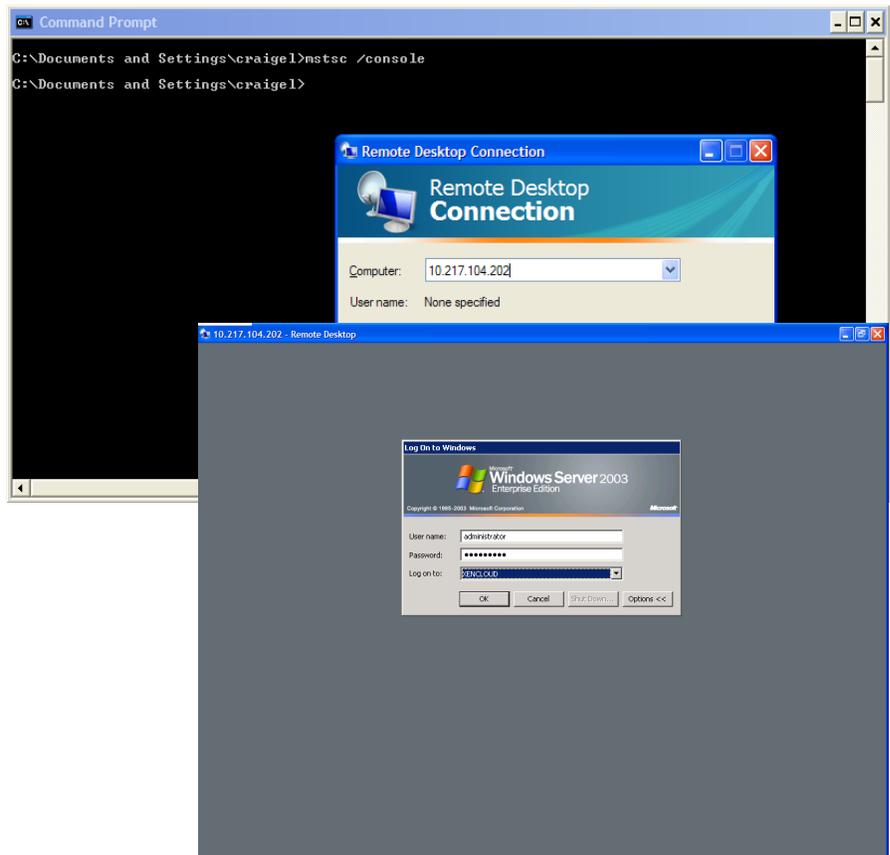
From the XenCenter PC, Start
-> Run -> cmd.exe.

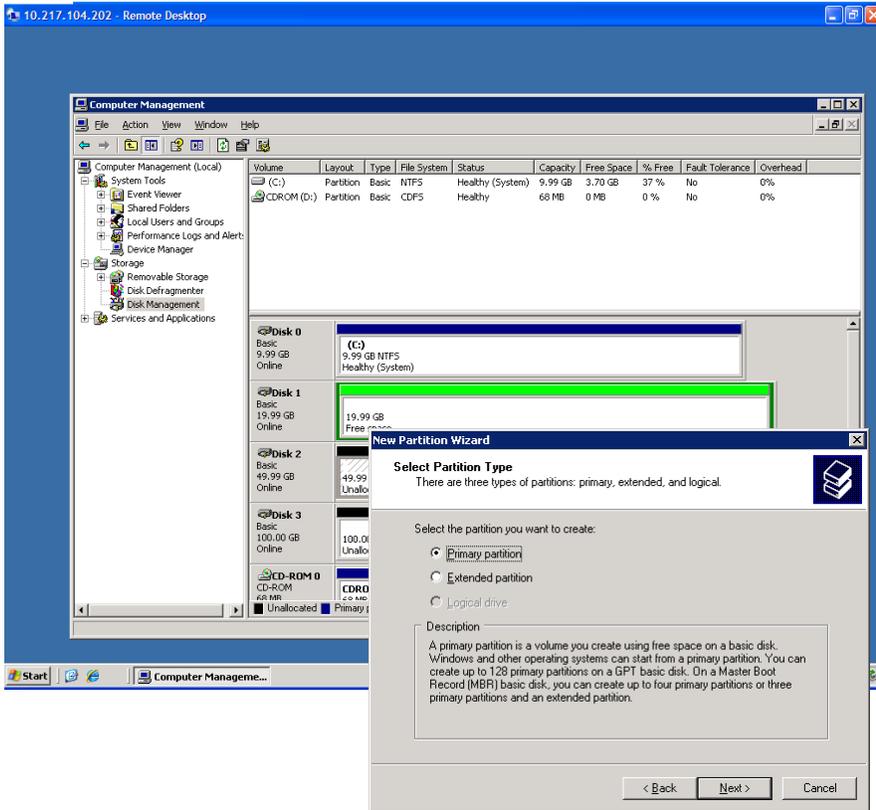
Within the command prompt
window, launch Microsoft
Terminal Services:

```
c:\mstsc /console
```

Enter the IP Address of the
PVS.

Note: Make sure you login to
the Domain, and not the local
computer account.





Initialize vDisk Partition:

Start -> Administrative Tools -> Computer Management.

Select Disk Management -> Right-Click the new disk -> New Partition.

This partition will hold the Windows 7 vDisks. (150 Gb).

Note: In this example, we also added another partition for Windows XP vDisks (50 Gb).

These partitions are added as separate volumes, so that you can go back and extend them later.

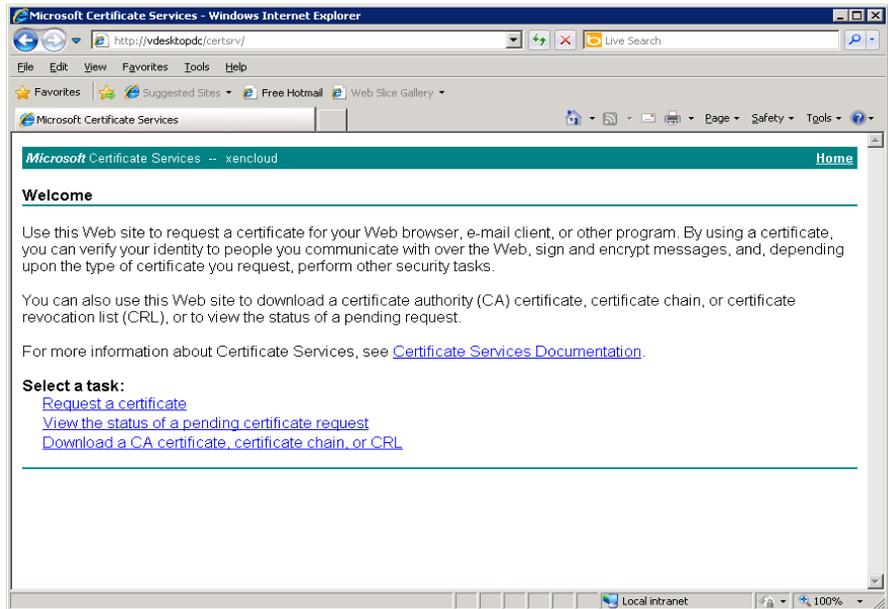
Certificates:

Install the Domain Controller certs on the PVS.

Open an Internet Browser.

Navigate to <http://vDesktopDC/certsrv>

Select Download CA Certificate, Certificate Chain or CRL.

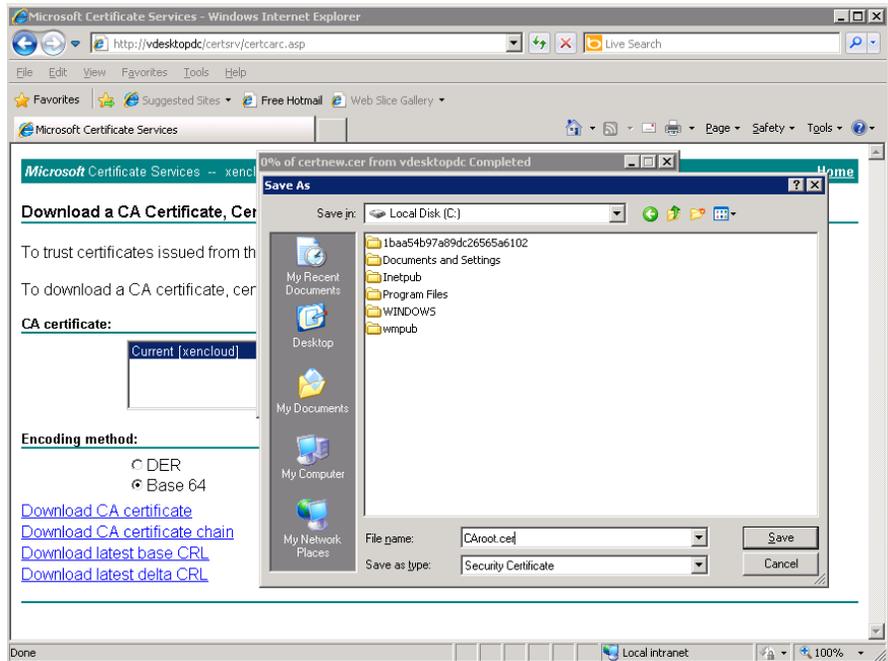


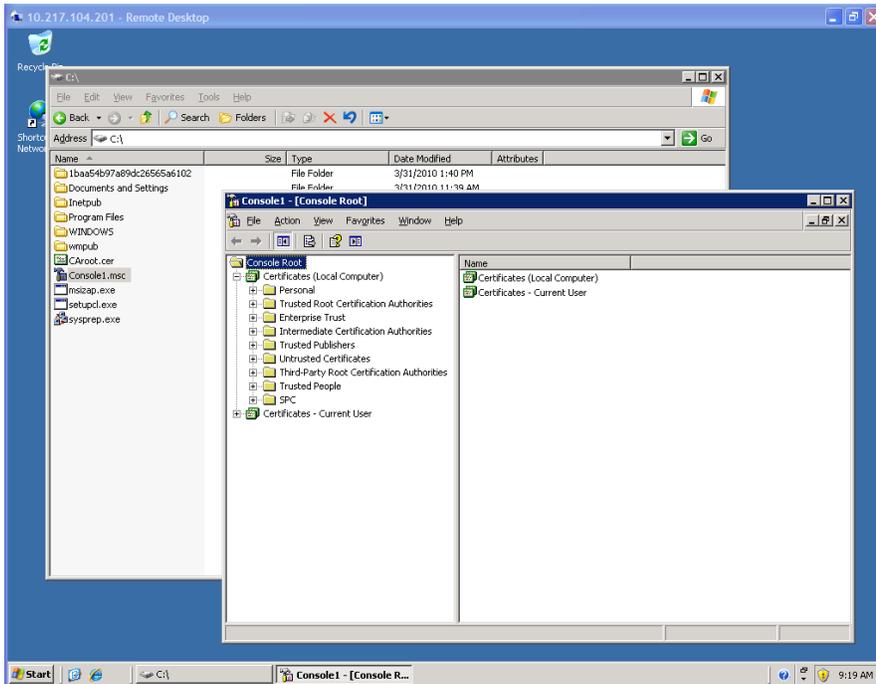
Certificates:

Select the Base 64 radio button.

Download CA Certificate.

Save it to a directory on the C:\drive.





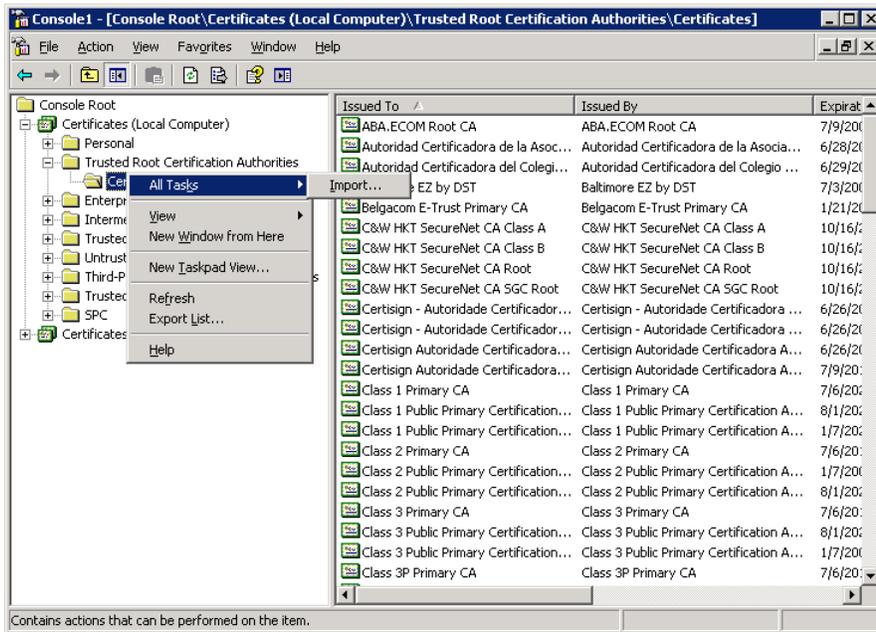
Import Certificate:

Run the Certificate MMC Console created in the base image.

c:\console1.msc.

The Certificates console can also be accessed by the following:

- Start -> Run -> mmc.exe ->
- File -> Add/Remove Snap-In ->
- Add -> Certificates -> Add ->
- Computer Account -> Next ->
- Local Computer -> Finish ->
- Close.



Import Certificate:

Expand Console Root.

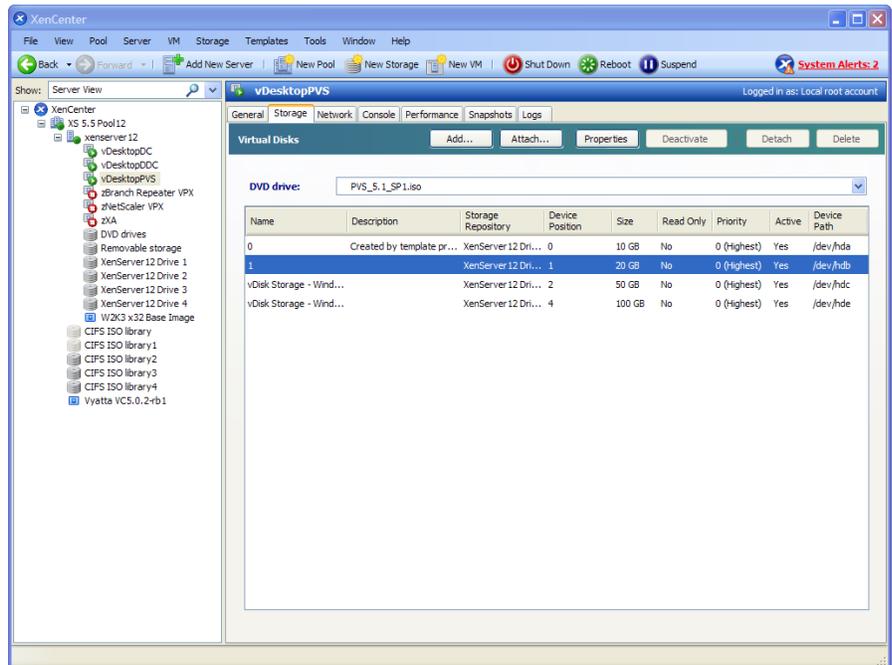
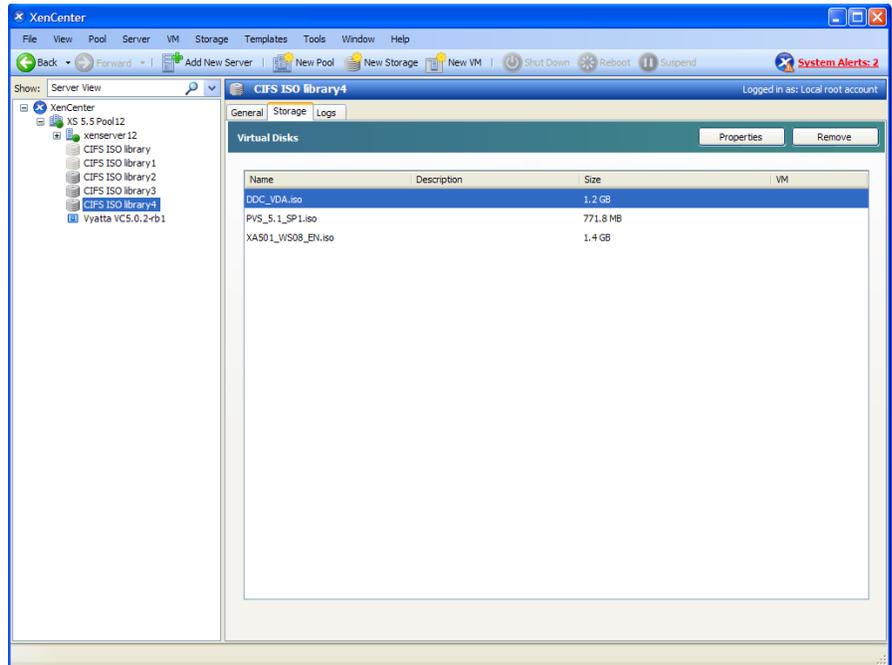
Select Trusted Root Certificates -> All Tasks -> Import.

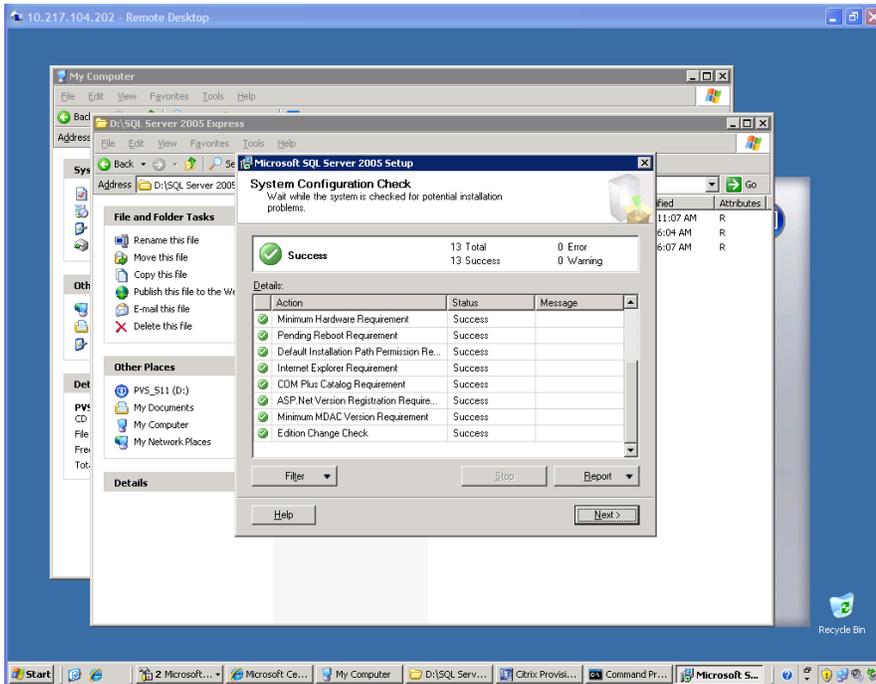
PVS Install:

Place the Provisioning Server installation media into the CD/DVD drive via the XenCenter console.

Note: In this example, we extracted the DDC and PVS ISO Images into a directory, and created a CIFS Storage Repository in XenCenter.

The PVS ISO Image can then be mounted in the XenCenter Console, in the PVS CD/DVD drive.





PVS Install:

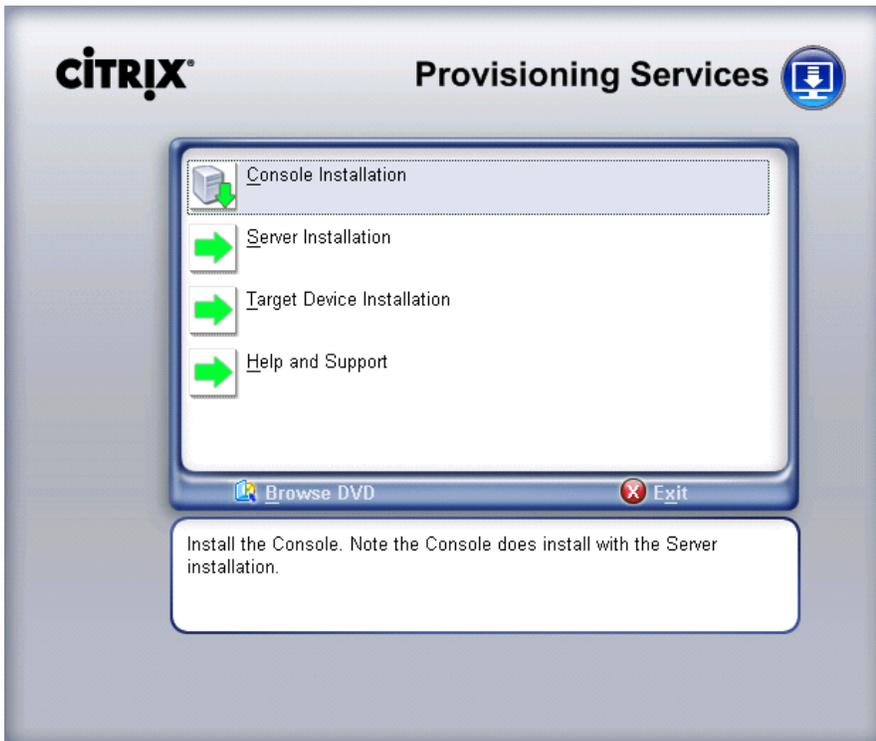
From the PVS, navigate to d:\SQL Server 2005 Express on the PVS Installation media.

Install SQL Server Express.

Use the defaults.

Restart before continuing.

Install the Console

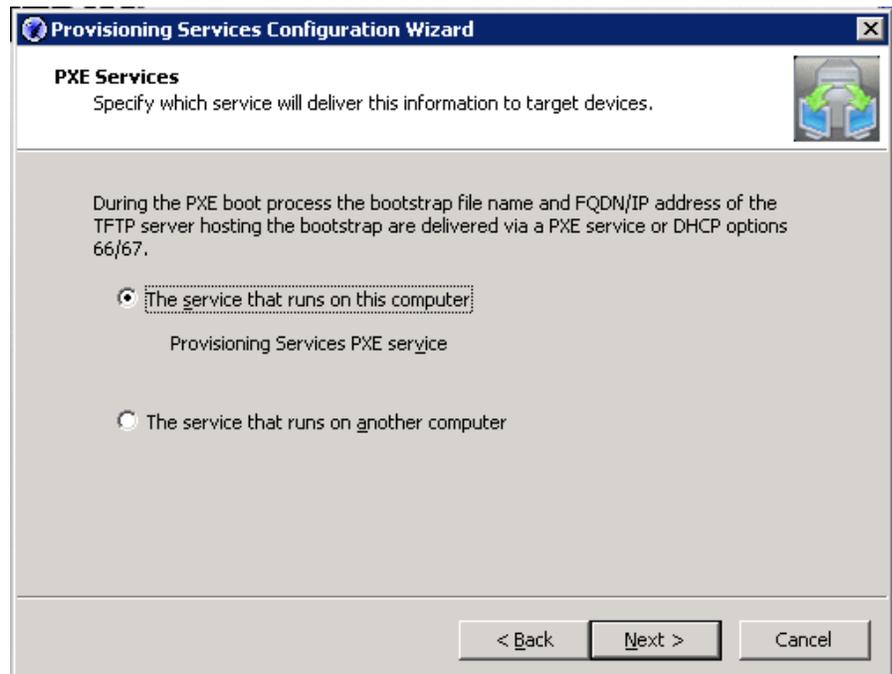
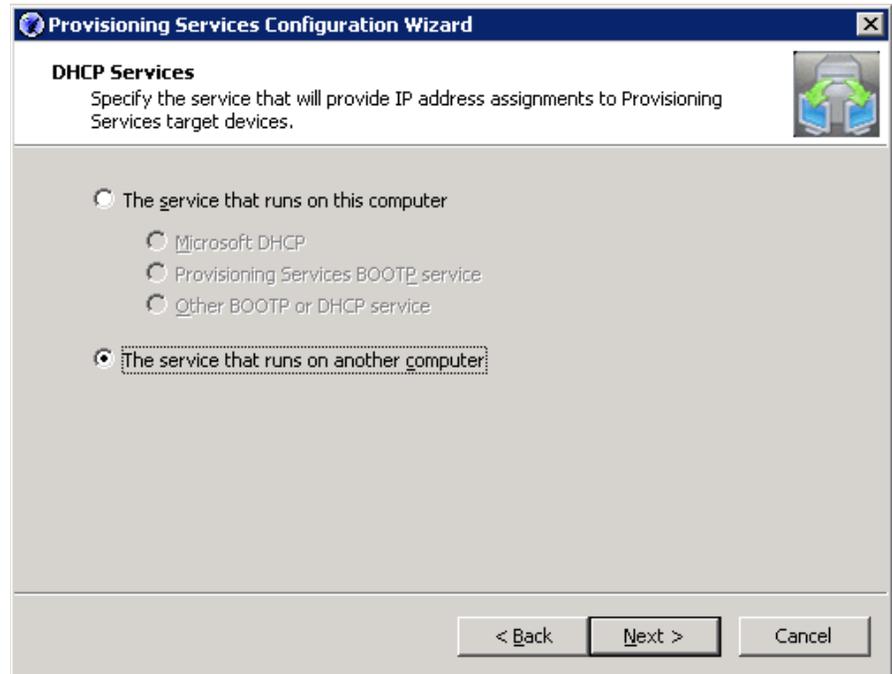


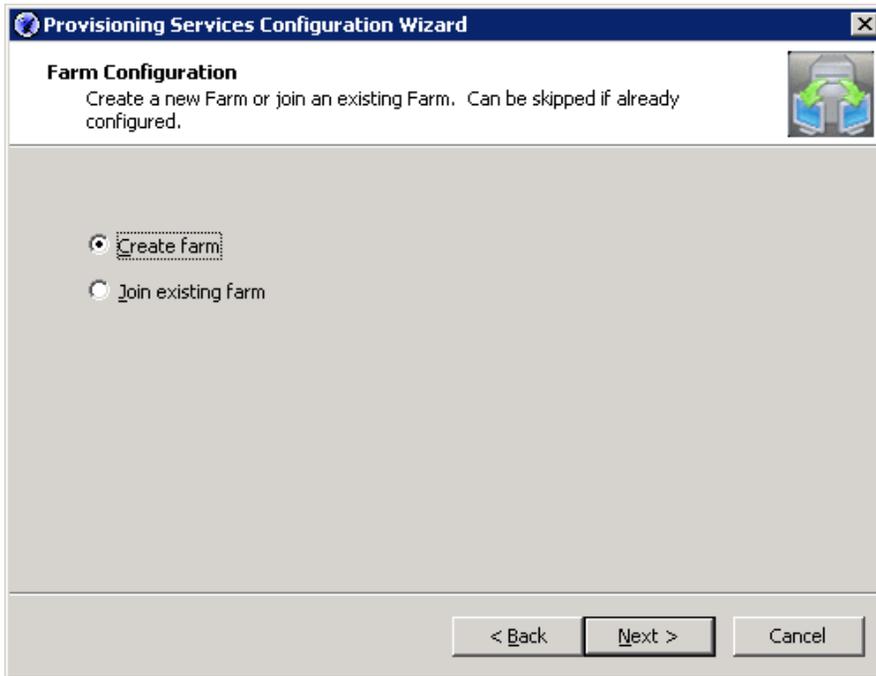
PVS Install:

Install the Server.

When the wizard prompts for DHCP services, select The service that runs on another computer.

When the wizard prompts for PXE services, select The service that runs on this computer.





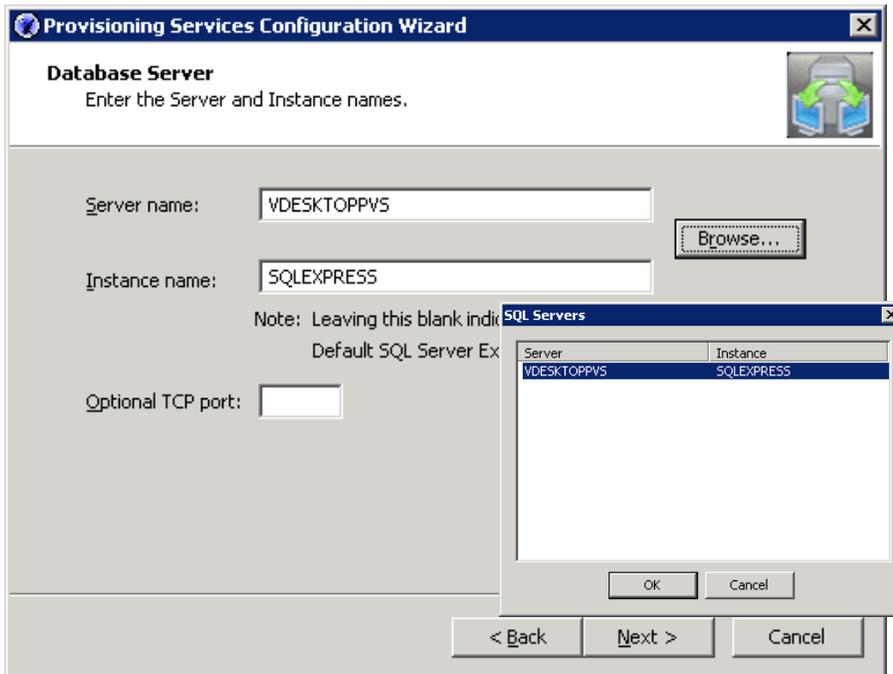
PVS Install:

Create a Farm.

When prompted for Database Server:

Click on Browse, select VDESKTOPPVS, and Ok.

Click Next.



PVS Install:

When prompted for New Farm:

The Farm Name is a different farm than the one created on the DDC.

Provisioning Services Configuration Wizard

New Farm
Enter the new Database and Farm names.

Database name:

Farm name:

Site name:

Collection name:

Use Active Directory groups for security
 Use Windows groups for security

Farm Administrator group:

< Back Next > Cancel

PVS Install:

When prompted for License Server:

Enter the name of the DDC server.

Provisioning Services Configuration Wizard

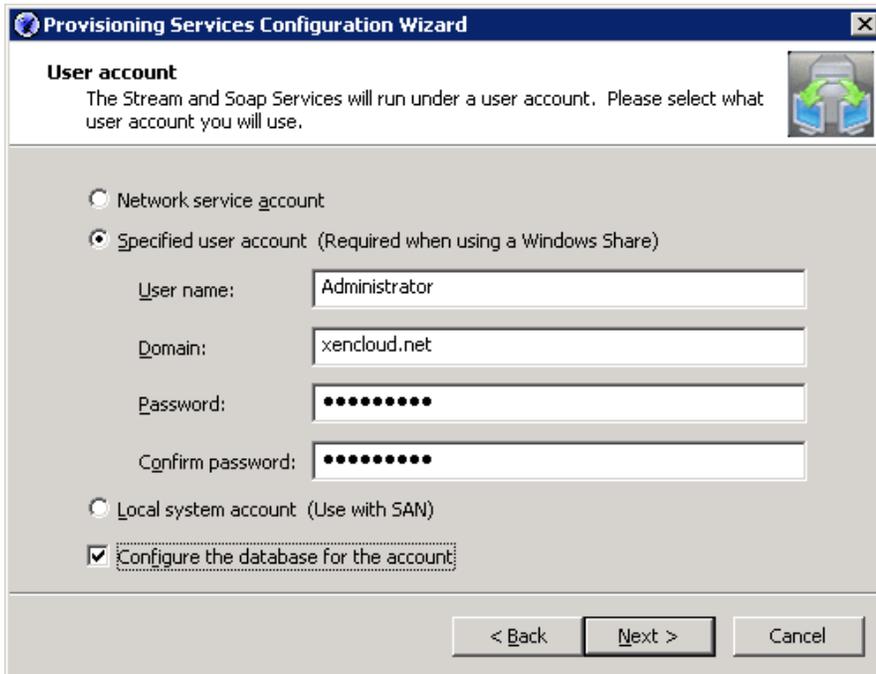
License Server
Enter the license server hostname and port.

License server name:

License server port:

Use Datacenter licenses for desktops if no Desktop licenses are available

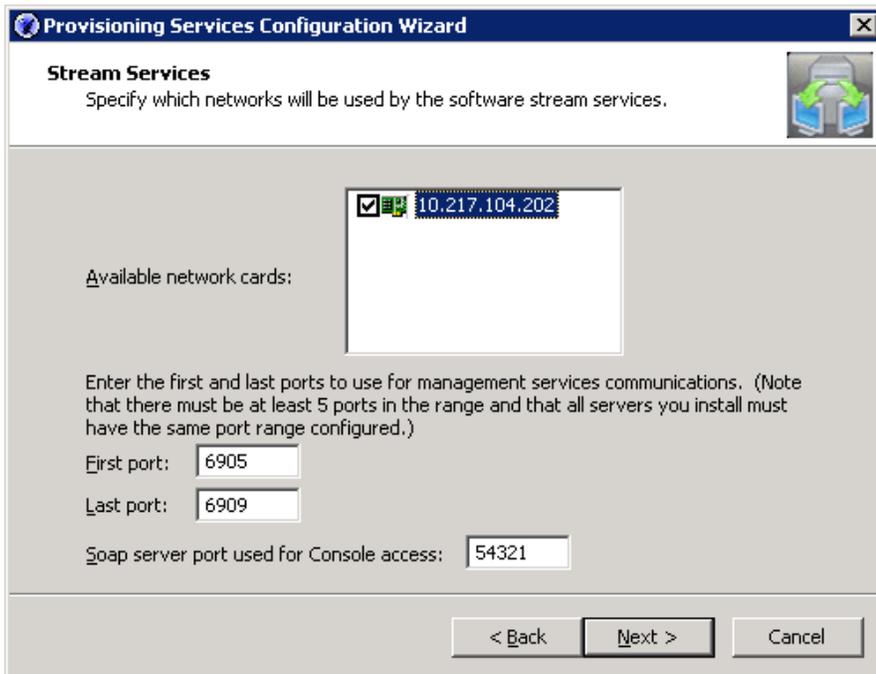
< Back Next > Cancel



PVS Install:

When prompted for User Account:

Use the Administrator account and check the box for Configure the database for the account.



PVS Install:

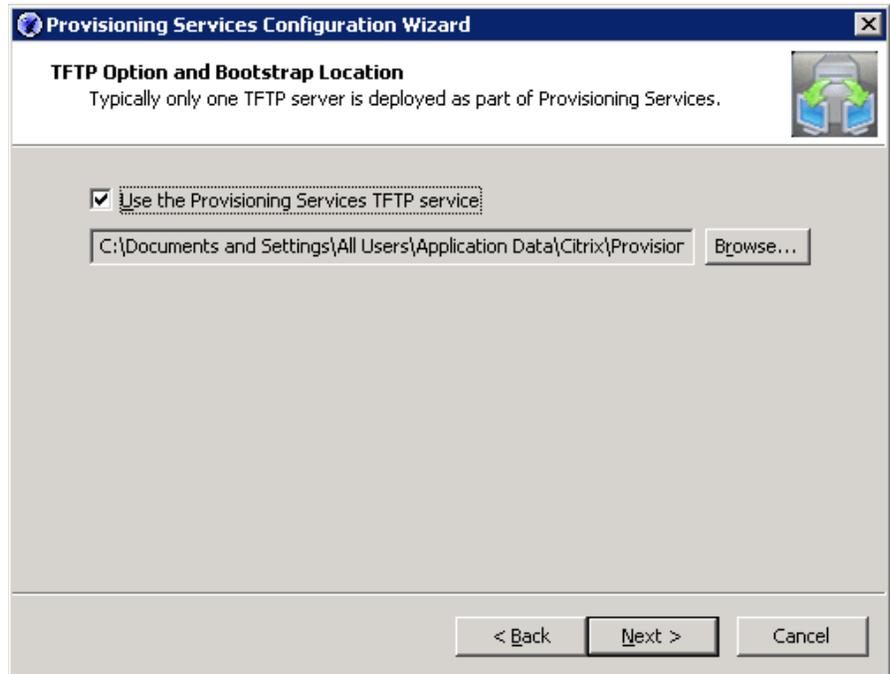
When prompted for Stream Services:

Select the network card and ports - use the defaults.

PVS Install:

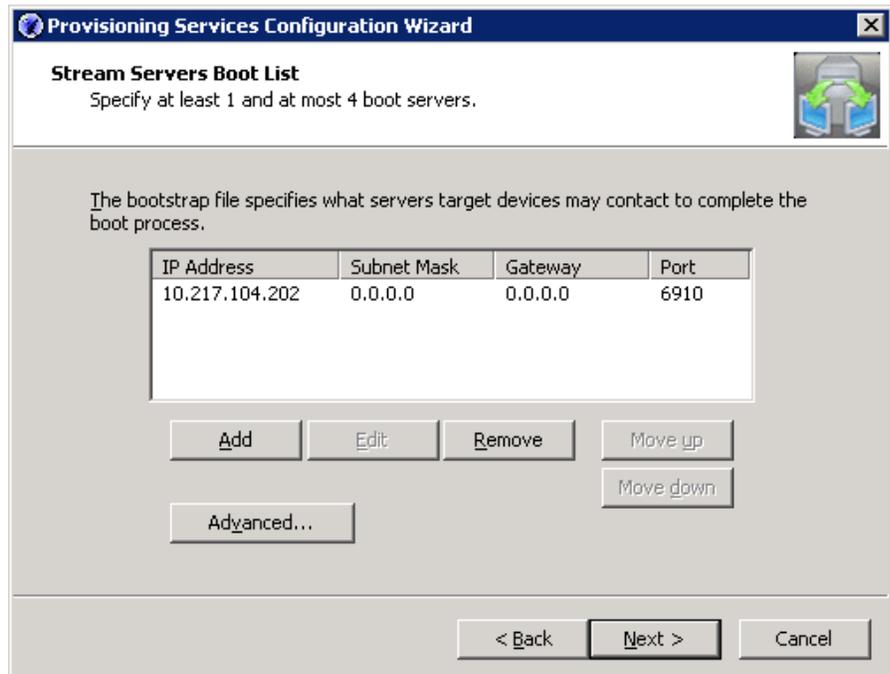
When prompted for TFTP Option:
 Option:

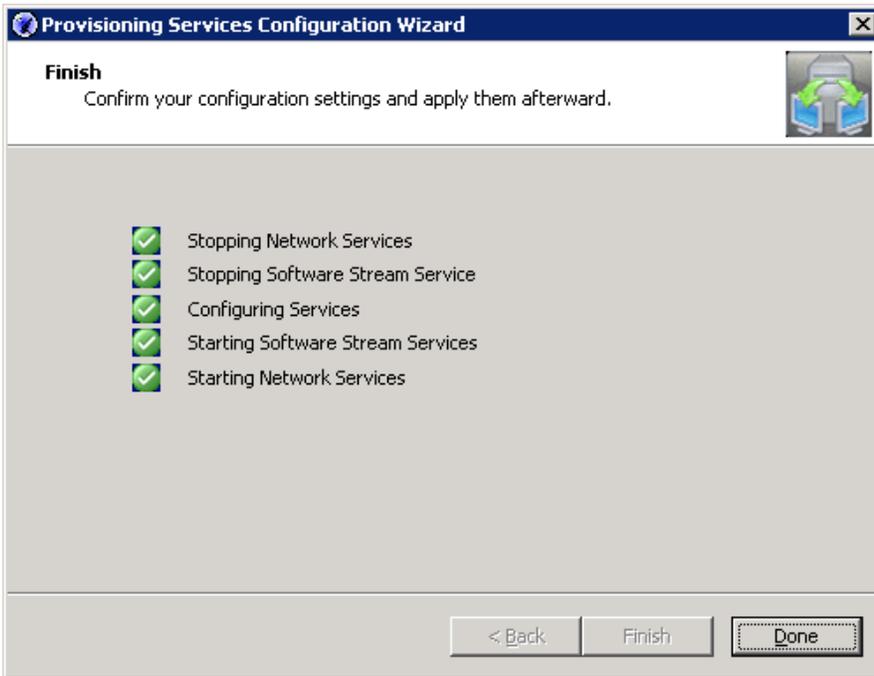
Select Use the Provisioning Server TFTP service.



PVS Install:

Boot List:
 Use the default.



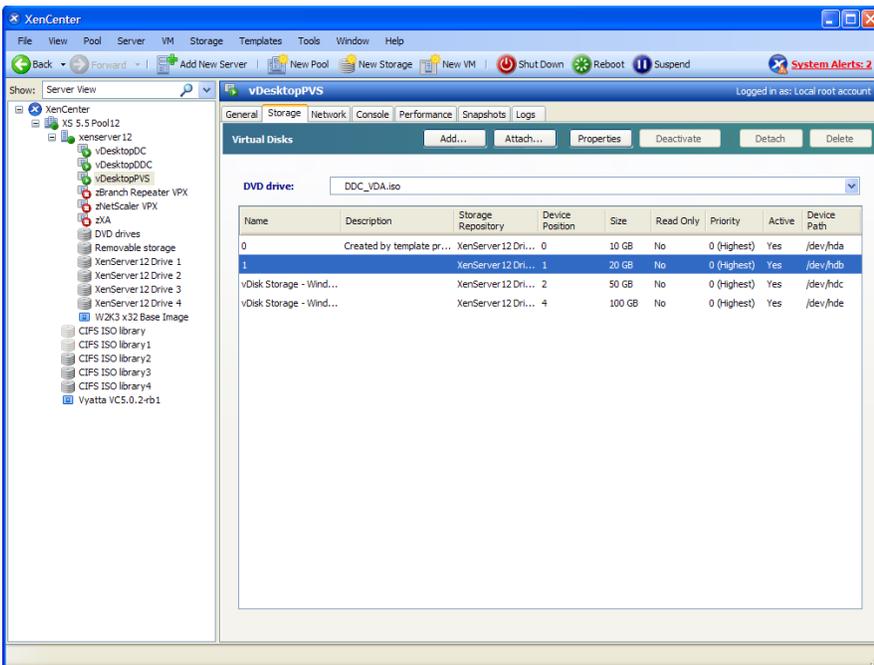


PVS Install:

Finish.

The log file can be found in:

c:\Documents and Settings\All Users\Application Data\Citrix\Provisioning Services\Log\ ConfigWizard.log



vDisk creation:

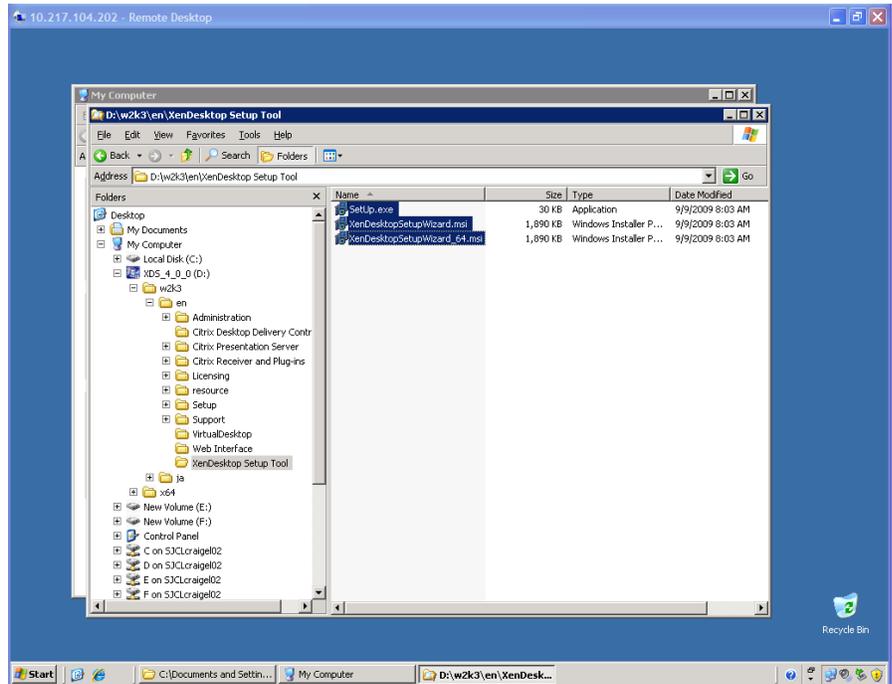
From the XenCenter Console, select vDesktopPVS, and mount the DDC Installation media in the CD/DVD drive.

vDisk creation:

From vDesktopPVS, navigate on the DDC installation CD to d:\w2k3\en\XenDesktop Setup Tool.

Copy these files from the CD/DVD to the vDesktopPVS server.

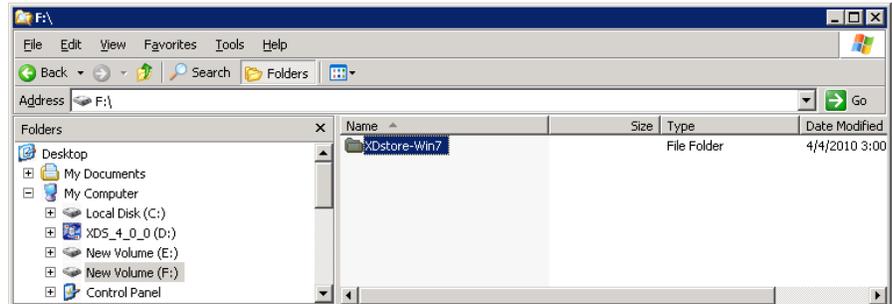
Run Setup.exe and Install.

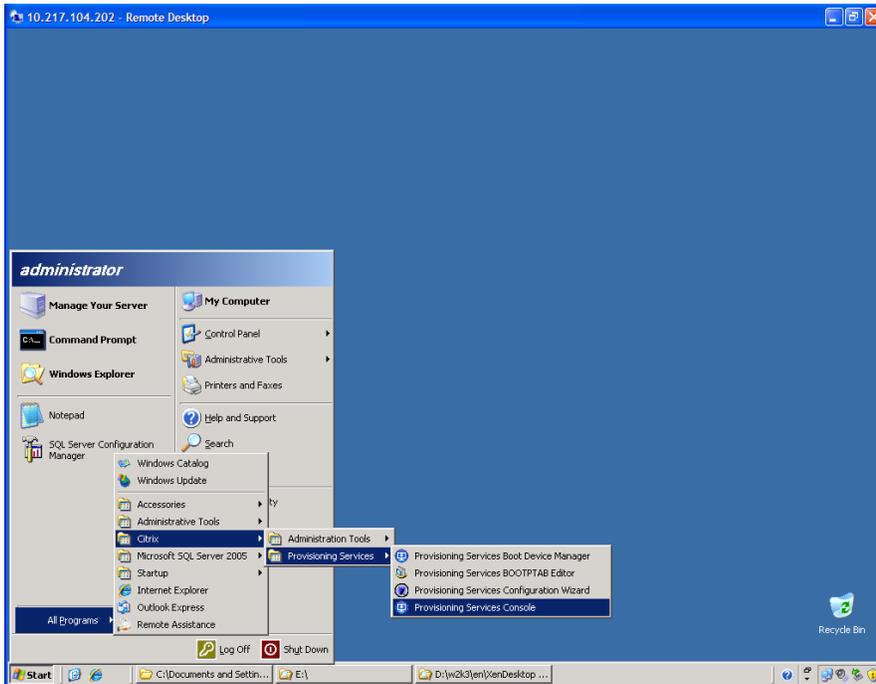


vDisk creation:

On the additional disk added to vDesktopPVS to store vdisks, add a subdirectory.

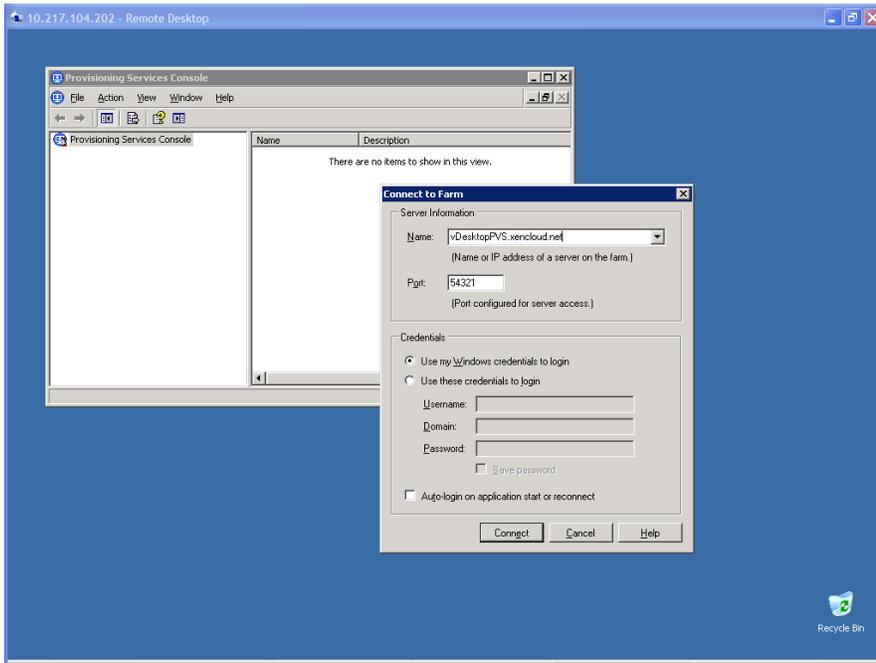
f:\XDStore-Win7





vDisk creation:

From the Start Menu -> Citrix
-> Provisioning Services ->
Provisioning Services Console.



vDisk creation:

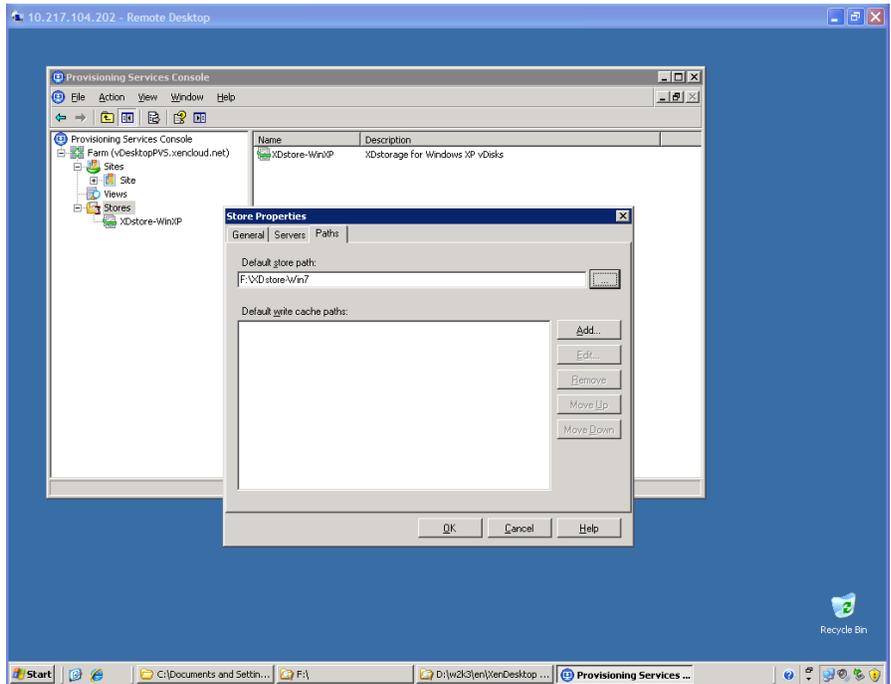
Right-Click -> Connect to Farm.

Specify the FQDN of the PVS server. ex: vDesktopPVS.xencloud.net.

vDisk creation:

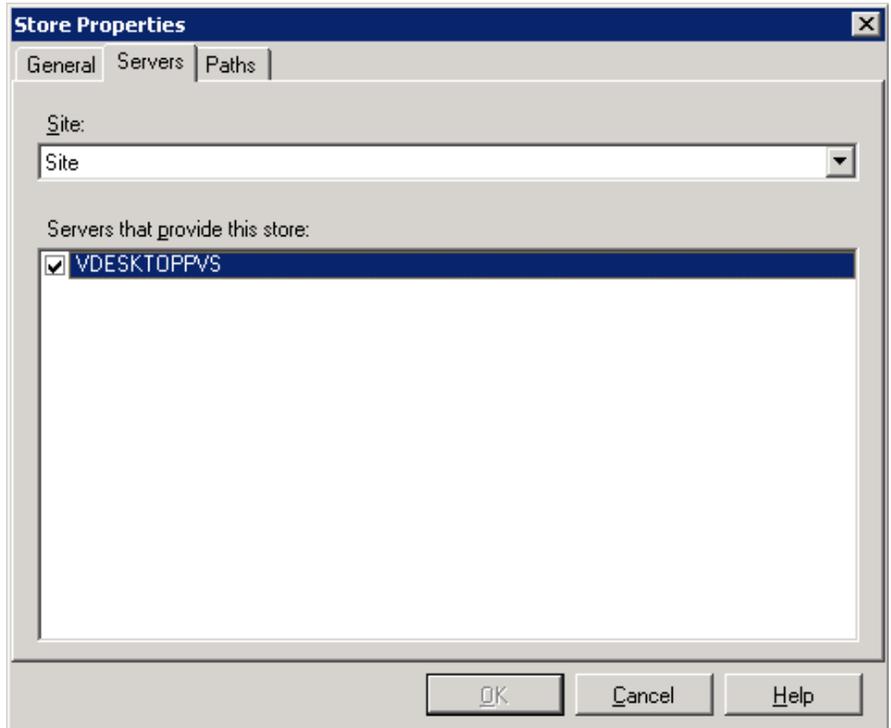
Expand the tree, Right-Click on Stores -> Create Store.

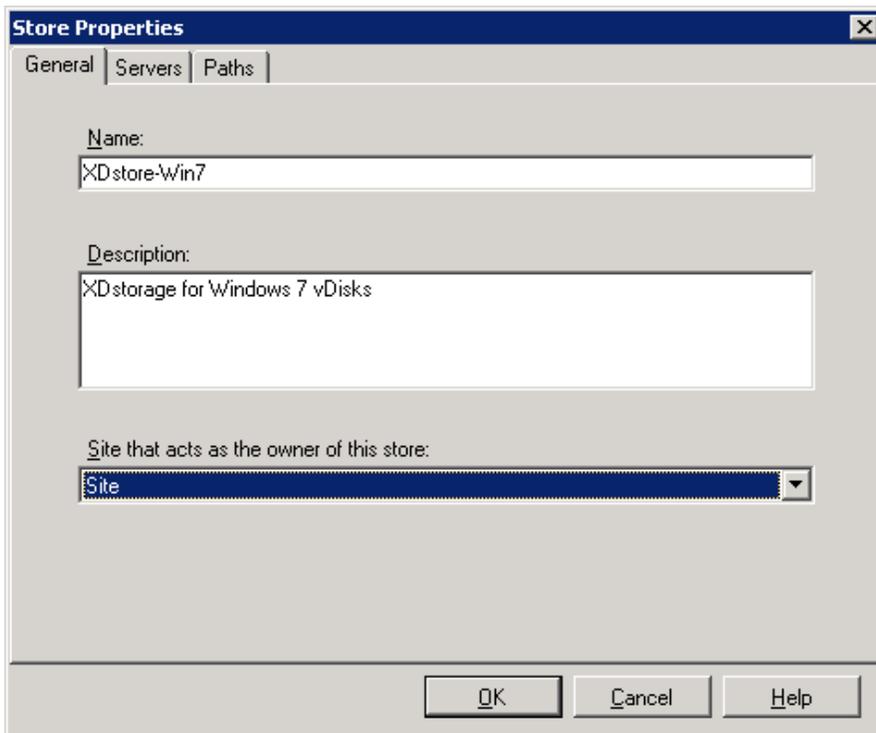
Select the Paths tab, and enter the location of the directory store. F:\XDstore-Win7



vDisk creation:

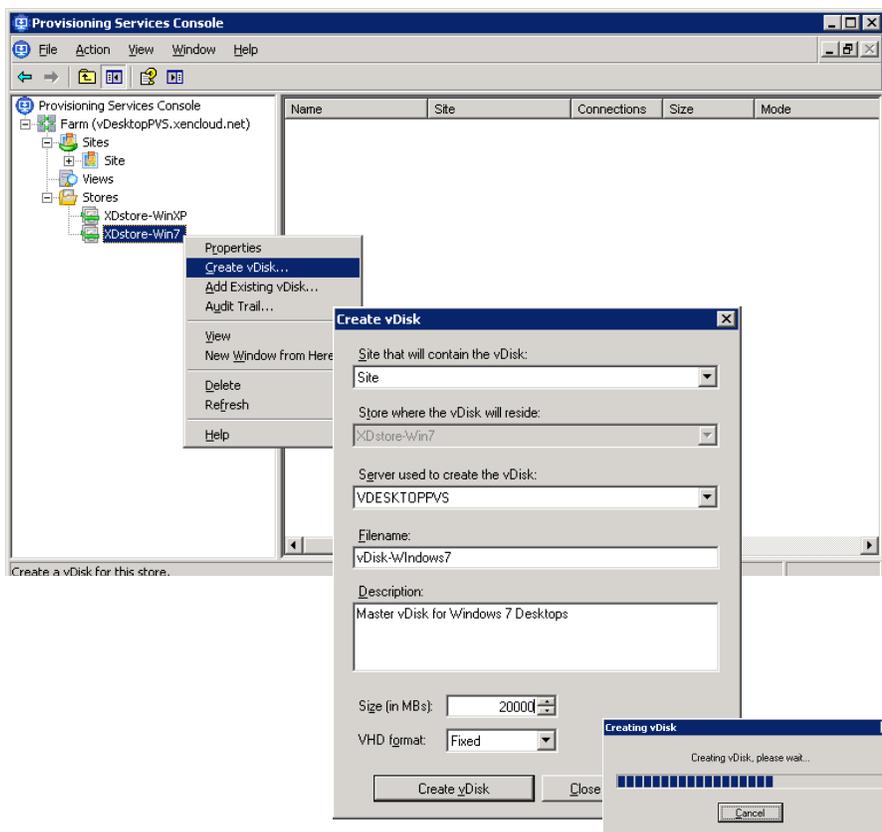
Select the Servers tab.
Select VDESKTOPPVS.





vDisk creation:

Under the General tab give the store a name, and select 'Site' as the owner.



vDisk creation:

Select XDstore -> Create vDisk...

Site: Site

Store: XDstore

Server used to create vDisk:

VDESKTOPPVS

Filename: vDisk-Windows7

Desc: Master vDisk for Windows 7 Desktops

Size: 36000 MB

VHD Format: Fixed

Note: Create the vDisk with 1~2 Gb more than the size of the Windows 7 Virtual Machine. Ex: Our Win7 VM = 35 GB, so our vDisk = 36 Gb.

vDisk creation:

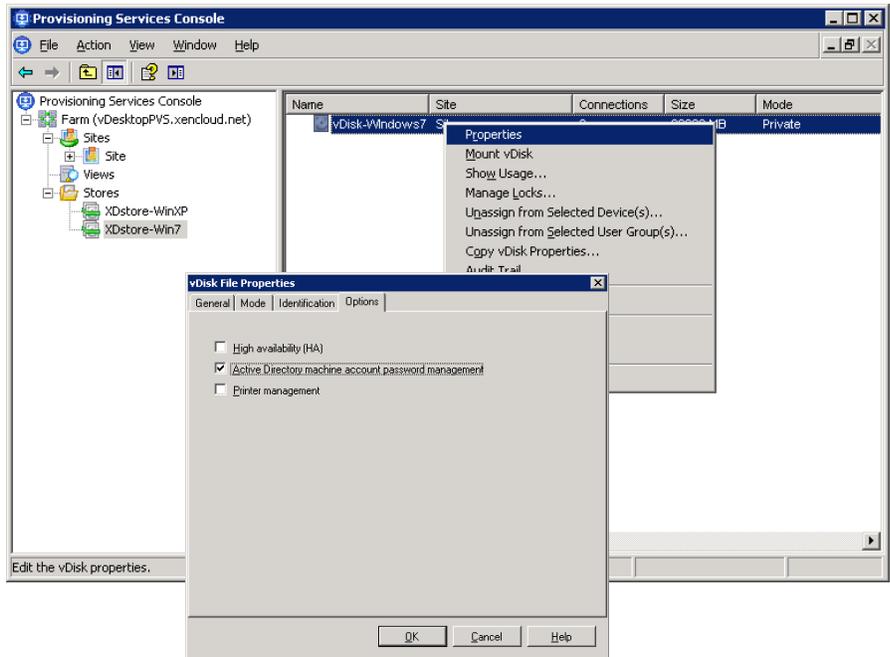
In the right panel of Provisioning Services Console, Right-Click the newly created vDisk.

Select Properties -> Edit File Properties.

Check the box for Active Directory machine account password management.

Ok.

Ok.



vDisk creation:

In the left panel, expand Sites.

Select the Servers object.

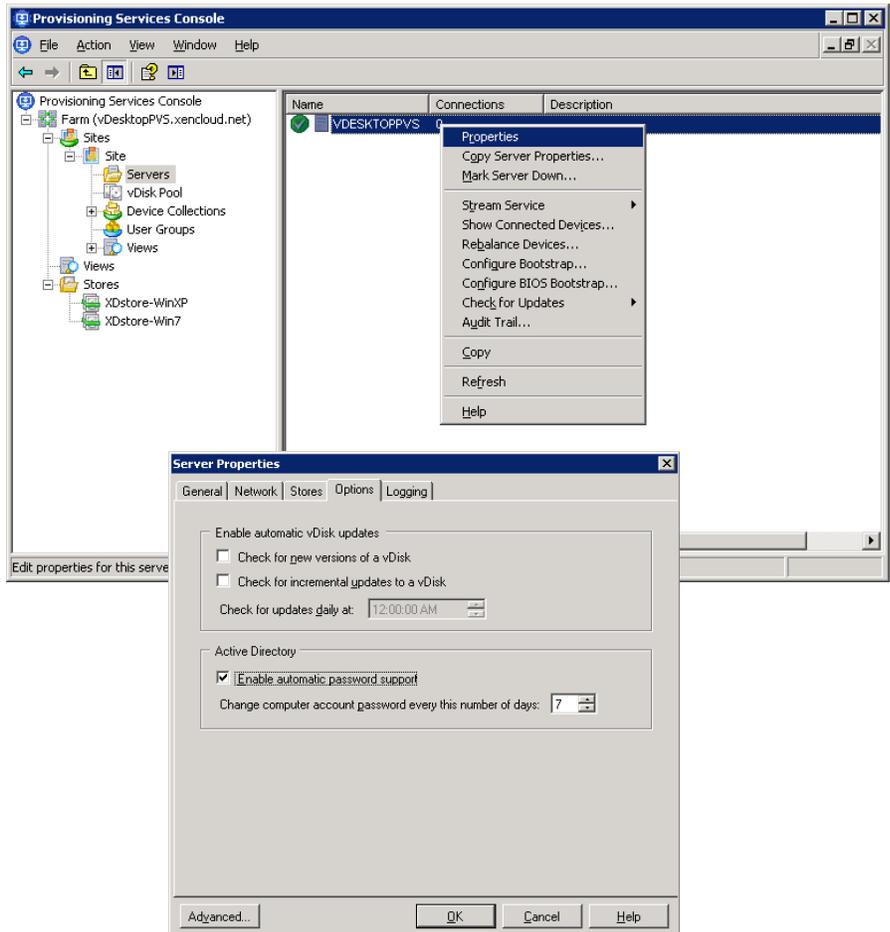
In the right panel, Right-Click VDESKTOPPVS.

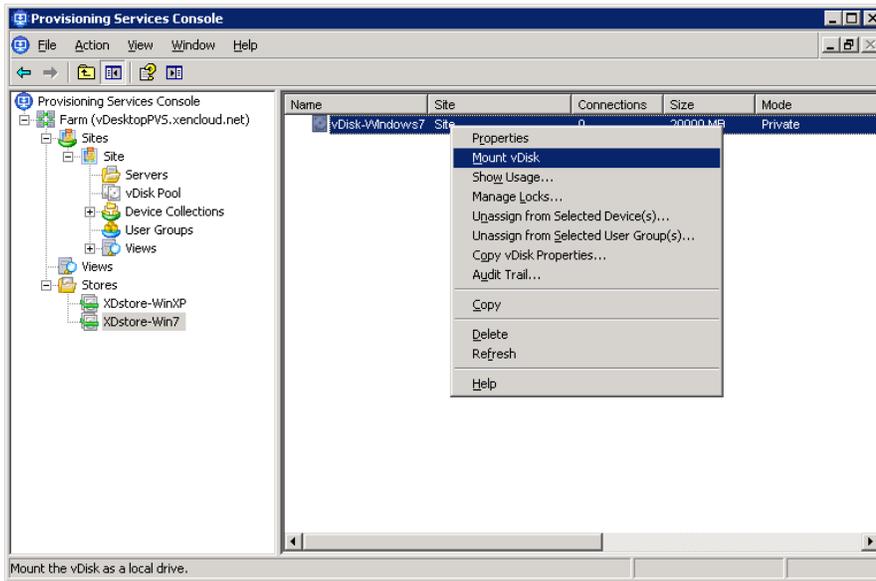
Select Properties -> Options.

Check the box to Enable automatic password support.

Ok.

Restart the stream service.

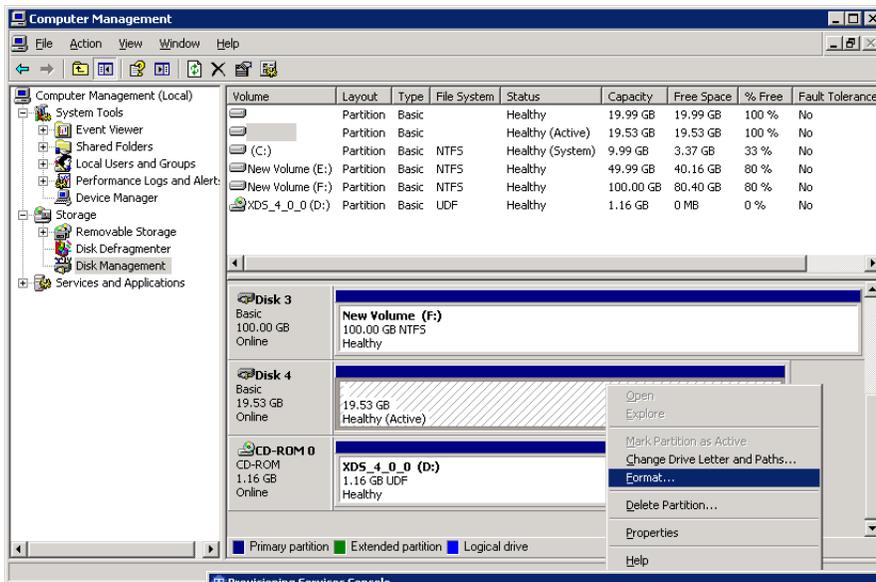




vDisk creation:

In the left panel of the Provisioning Service Console select XDstore-Win7.

In the right panel Right-Click the vDisk-Windows7 -> Mount vDisk.



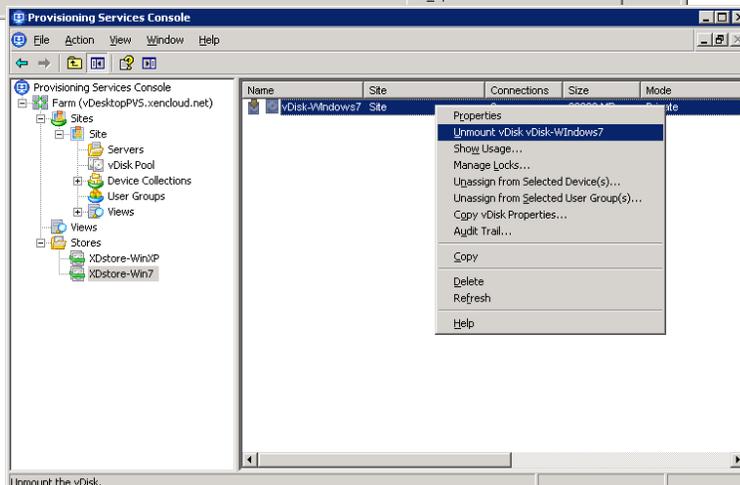
vDisk creation:

Open Disk Management from the Computer Management Console in vDesktopPVS.

Right-Click -> Format.

Note: Assign a drive letter before formatting. ex: V:

When finished, go back to the PVS Console and Unmount the vDisk.



Virtual Desktop

To create the Virtual Desktop, a base Windows 7 image will be created. This will be used to create the Windows 7 vDisk.

vBaseDesktop1:

Create a new VM of Windows 7.

Note: The OS can be installed from the XenServer CD/DVD Drive or an ISO image.

Name: Win7 Base Image

vCPUs: 4

Memory: 4096 Mb

Disk: 32 Gb

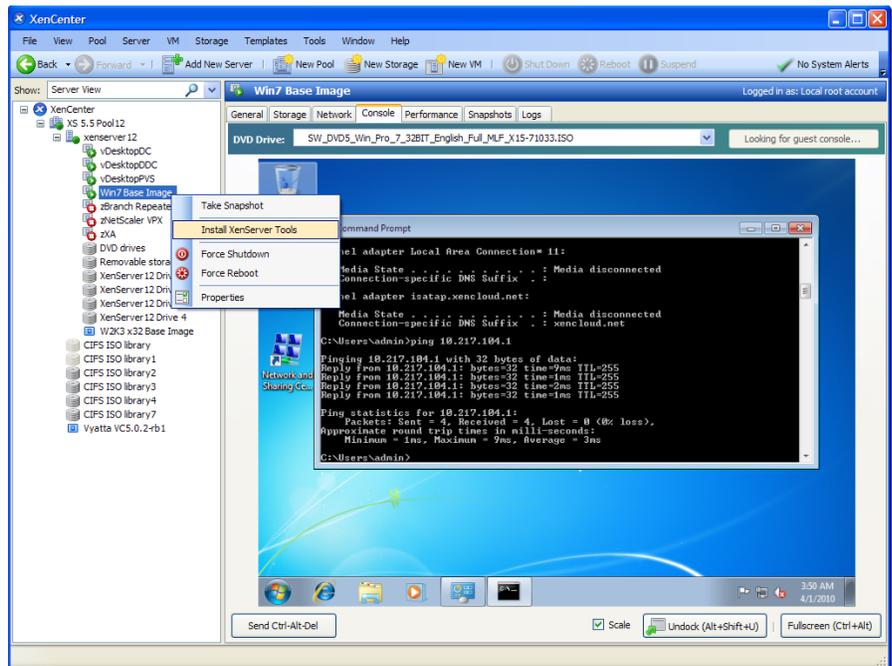
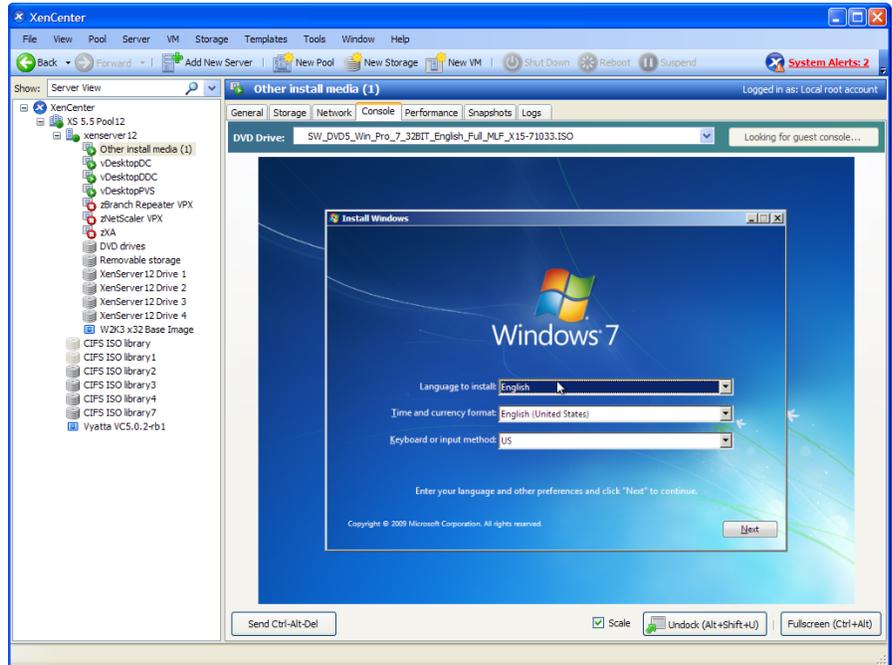
Network: Interface 0 (minimum)

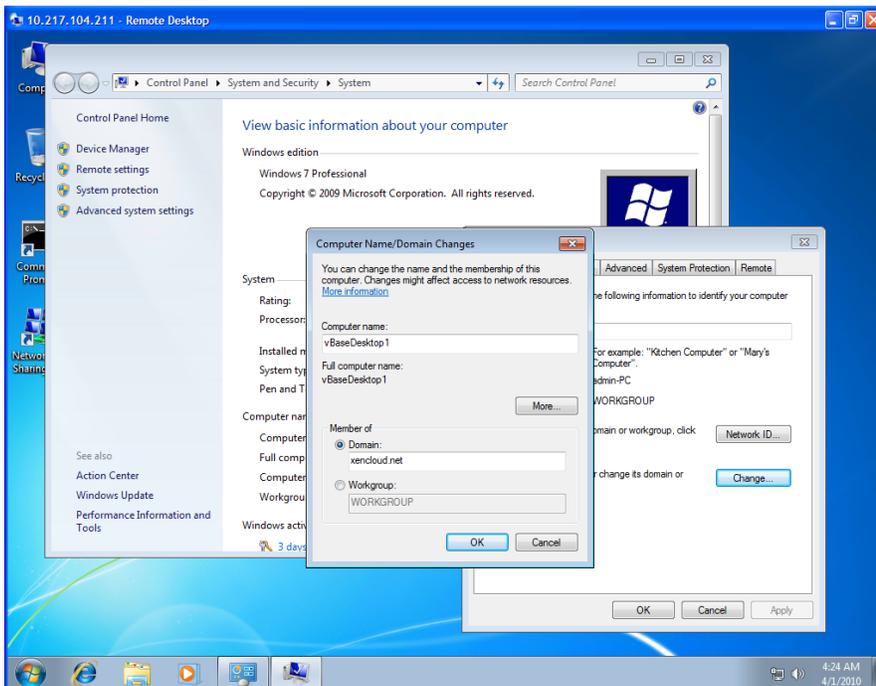
Right-Click Win7 Base Image in the left panel of XenCenter.

Install XenServer Tools.

Log into the win7 Base Image and launch the installer from the CD drive.

Reboot.





vBaseDesktop1:

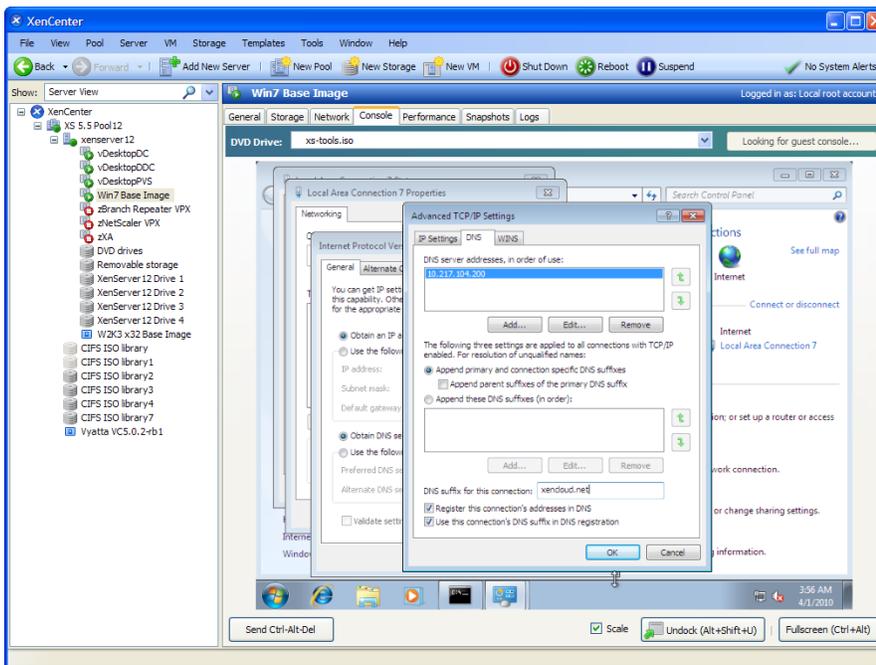
Join the XenCloud.net Domain.

My Computer -> Right-Click -> Computer Name -> Change.

Computer Name:
vBaseDesktop1

Domain:
xencloud.net

Restart.



vBaseDesktop1:

Add the Xencloud.net domain to the DNS suffix option.

Open Network Settings -> Local Area Connection properties -> IPv4 -> Advanced -> DNS.

Set the DNS suffix for this connection to xencloud.net.

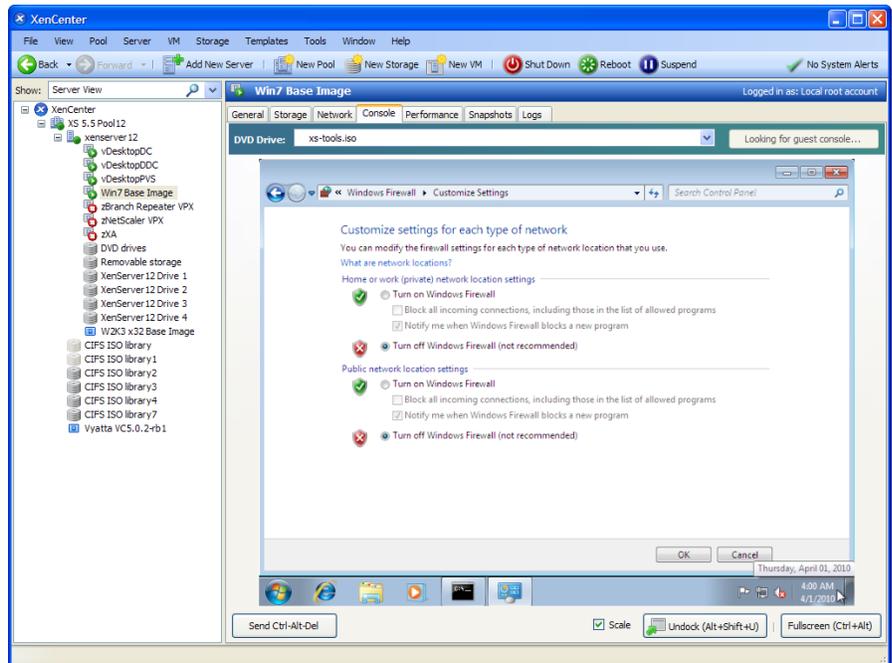
Ok.

Ok.

Close.

vBaseDesktop1:

Disable the Firewall.



vBaseDesktop1:

Launch the MMC.

From the File menu select Add/Remove Snap-In.

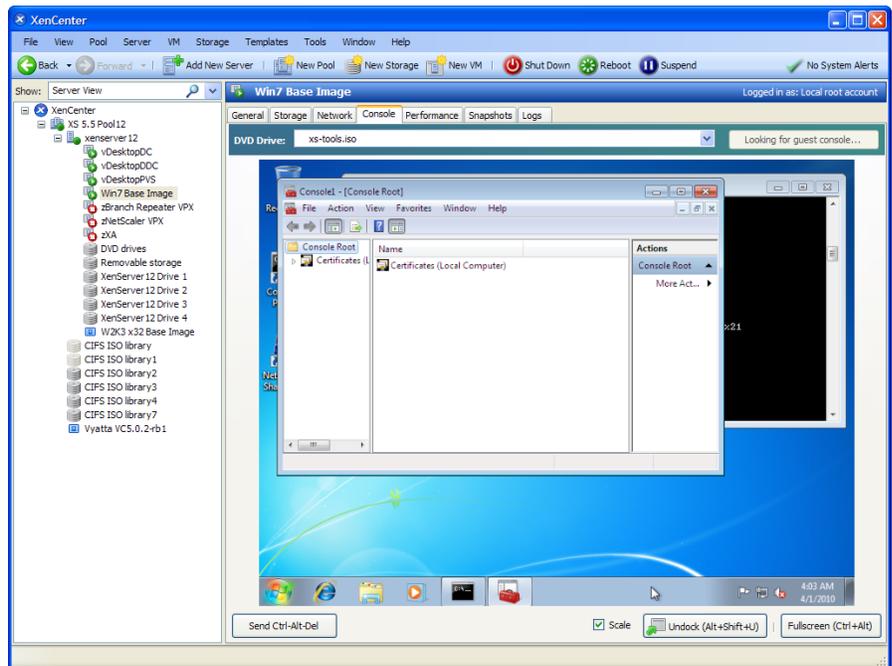
Add.

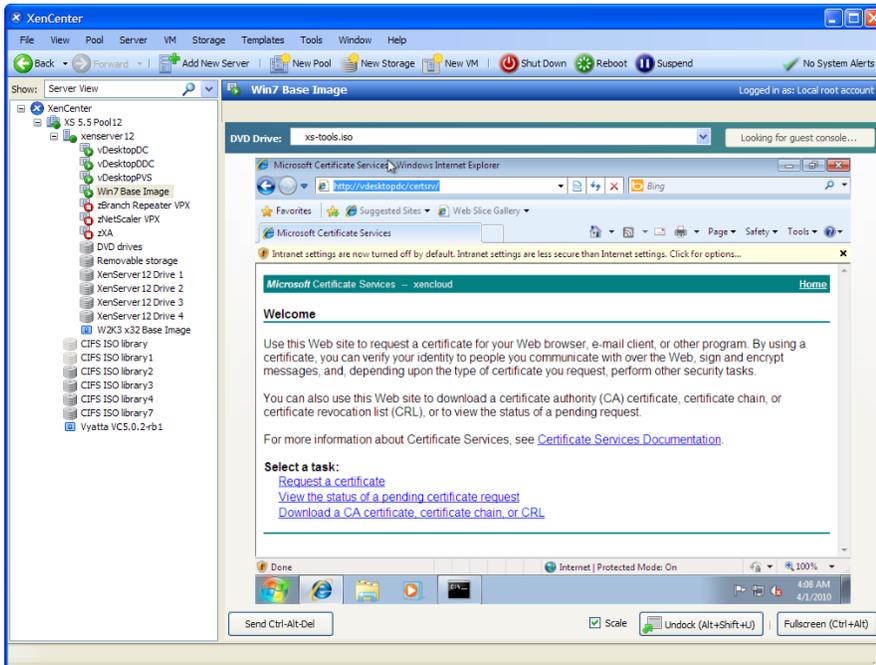
Certificates.

Add.

Select Computer Account, Local Computer.

Close the MMC and save to the C:\ drive.





vBaseDesktop1:

Install the Domain Controllers Root certificate.

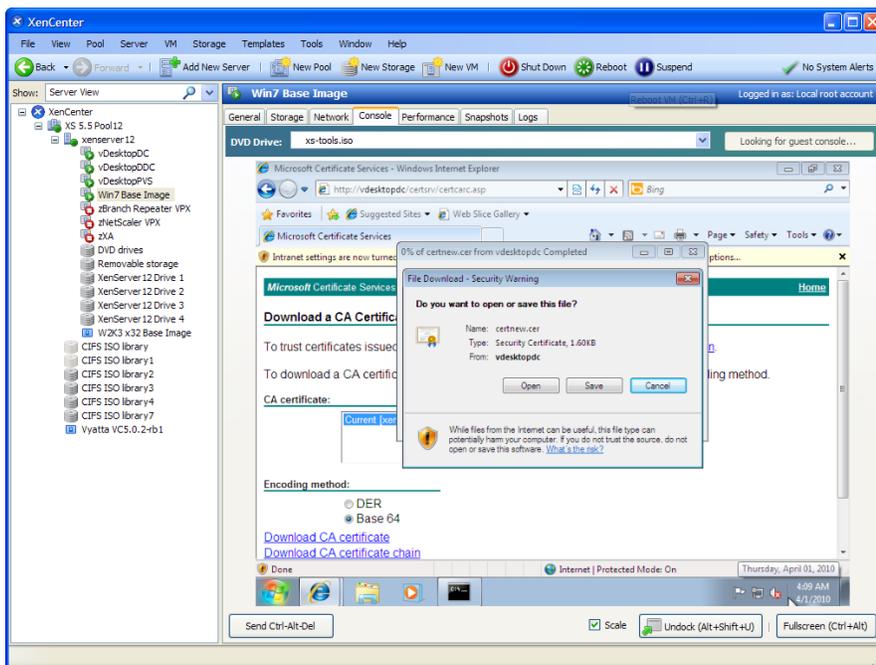
Open a browser to <http://vDesktopDC/Certsrv>

Login with domain credentials:

User: `xencloud\administrator`

Pass: `<password>`

Select Download CA certificate, certificate chain or CRL.



vBaseDesktop1:

Select Base 64.

Download CA Certificate.

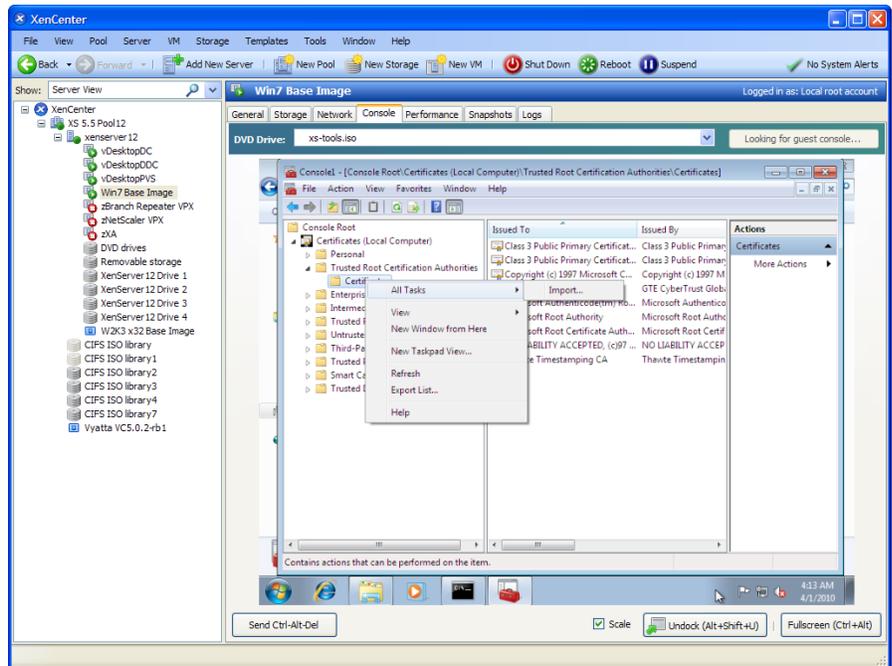
Save to a convenient location.

vBaseDesktop1:

Open the MMC Console saved earlier.

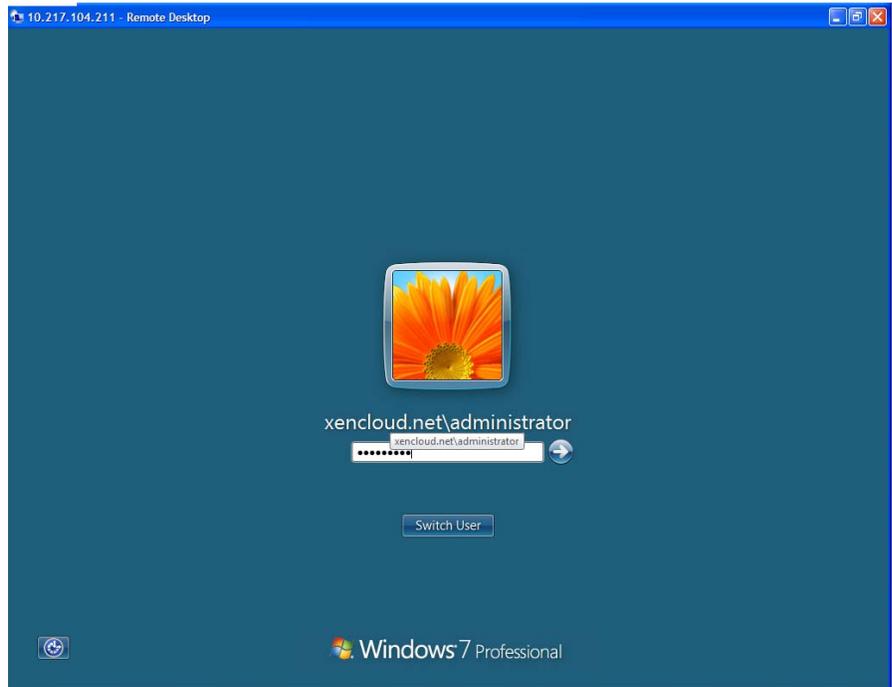
Expand Certificates -> All Tasks
-> Import.

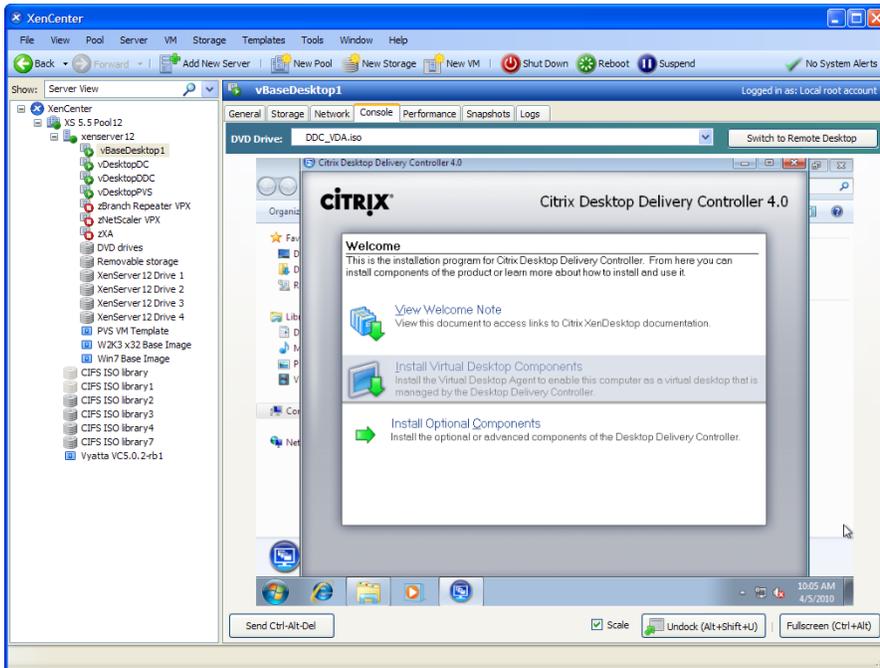
Import the Domain Controllers
Root Certificate.



vBaseDesktop1:

Login to vBaseDesktop1 in the
Domain account.





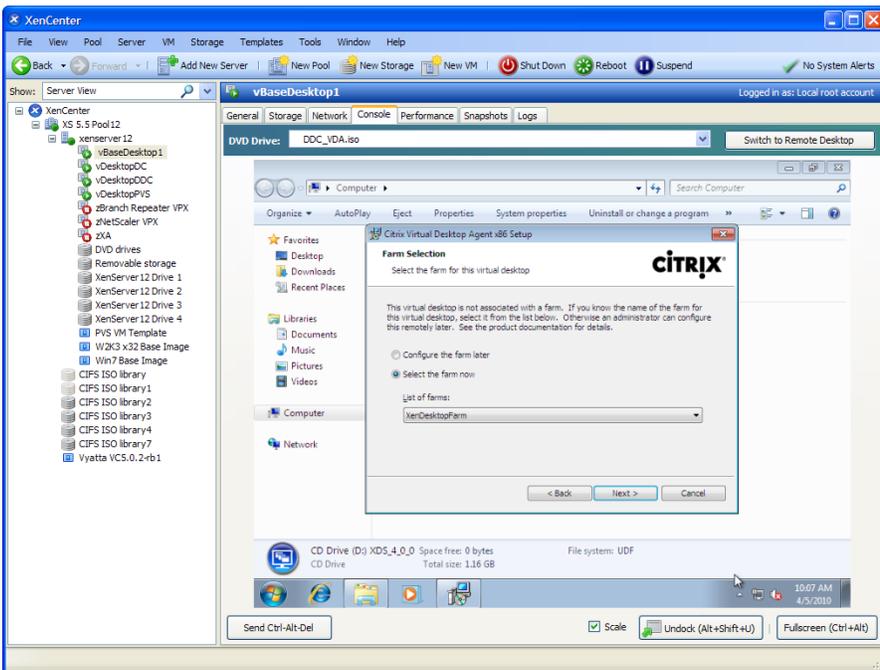
vBaseDesktop1:

In the XenCenter Console, load the Desktop Delivery Center installation media into the CD/DVD drive of the Windows 7 VM.

Launch the installer.

Install Virtual Desktop Components.

This installs the Virtual Desktop Agent.



vBaseDesktop1:

Use the defaults.

Select the Farm created earlier.

Install.

Restart.

vBaseDesktop1:

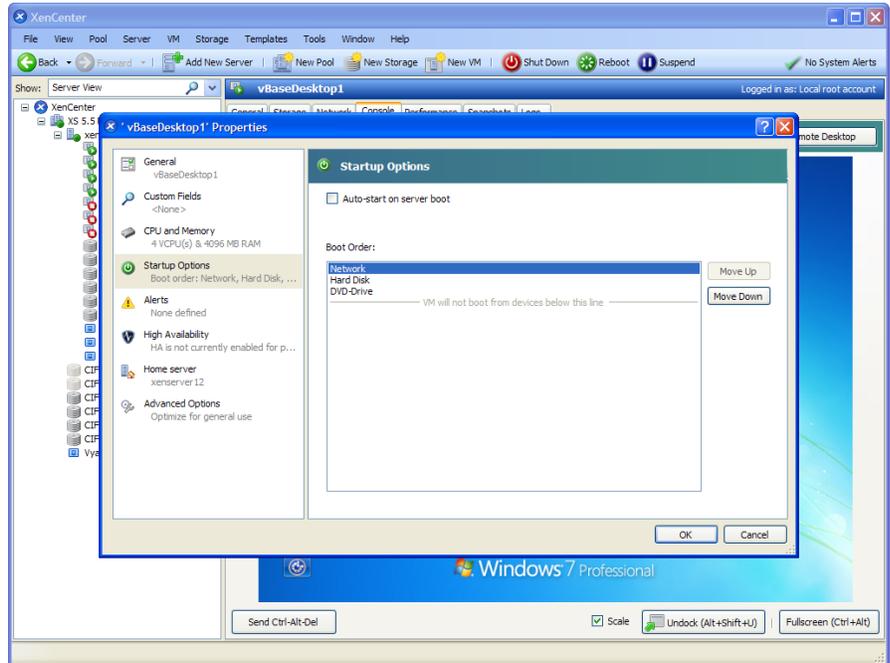
In the left panel of the XenCenter Console, select the vBaseDesktop1 object.

Right-Click -> Properties.

Select Startup Options.

Move Network to the top of the list.

Ok.



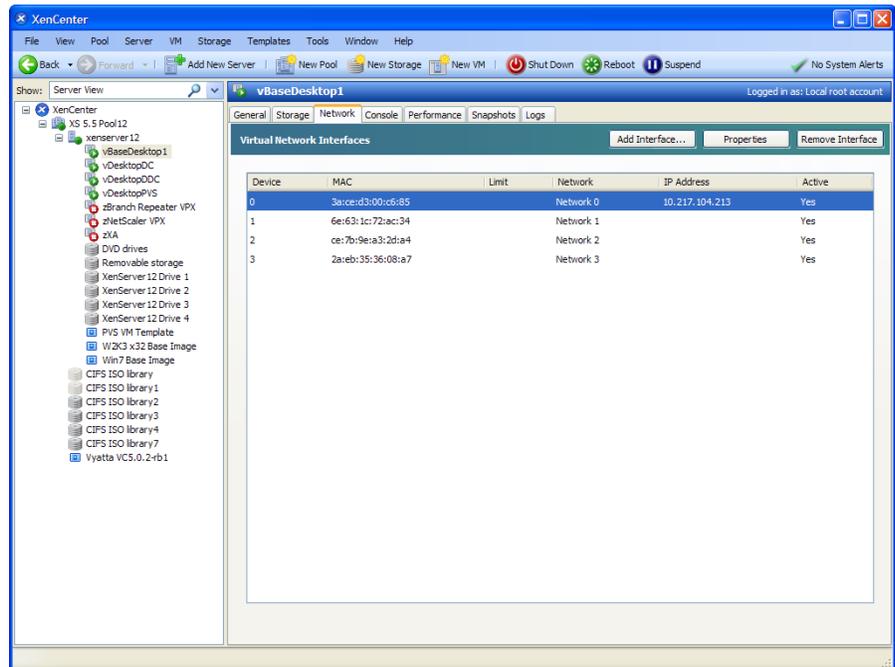
vBaseDesktop1:

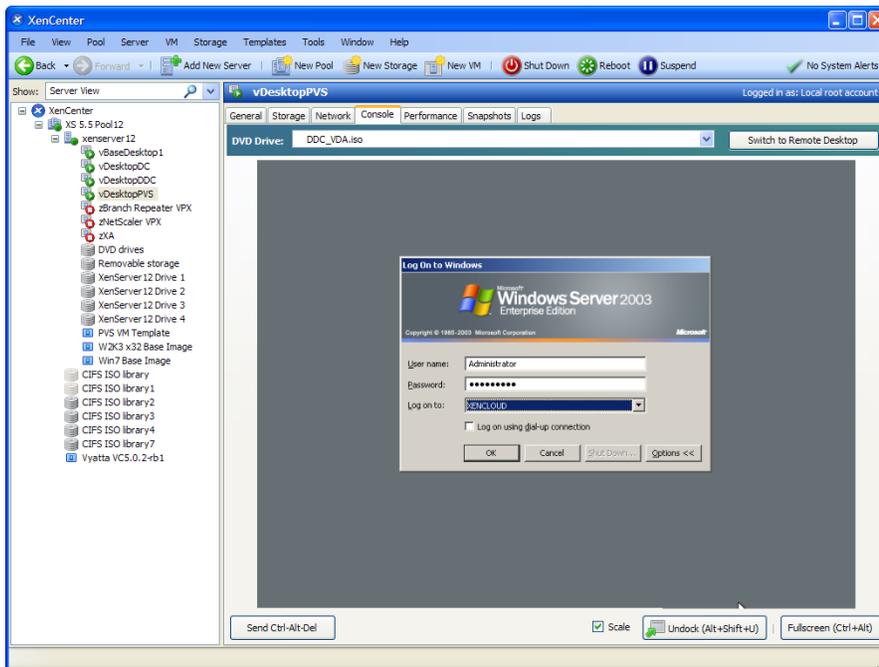
Select the Network tab.

Write down the MAC Address of the Network.

In this example:

3a:ce:d3:00:c6:85

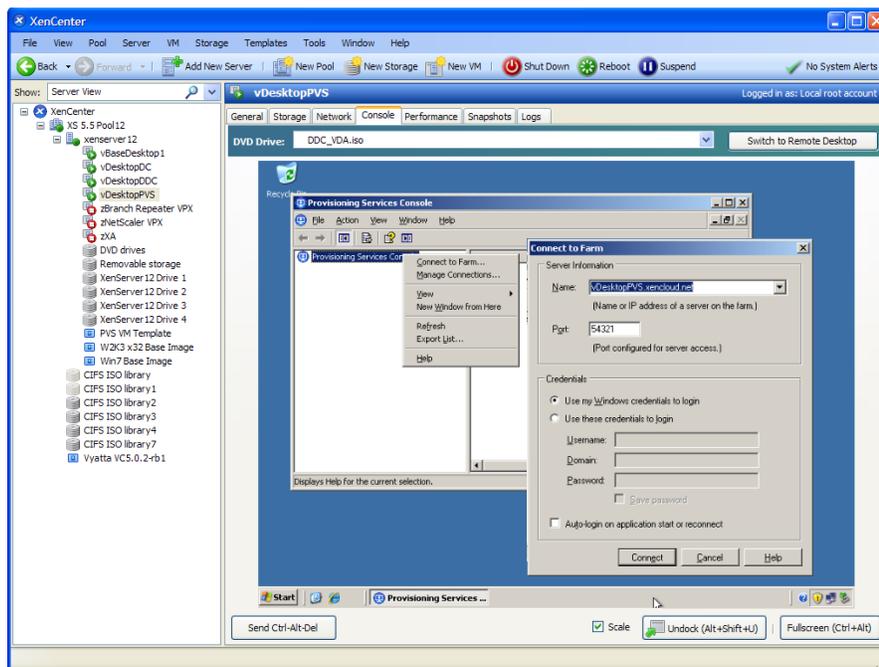




vDesktopPVS:

In the XenCenter Console, left panel, Select the vDesktopPVS object (Provisioning Server).

Note: Make sure you login to the Domain, and not the local computer account.



vDesktopPVS:

Launch the Provisioning Services Console.

Right-Click -> Connect to Farm:

Enter the FQDN of the provisioning server.

ex: vDesktopPVS.xencloud.net

vDesktopPVS:

Expand the tree, and select Create Device under Collections.

Provisioning Services Console
 -> Farm -> Sites -> Device Collections -> Collections -> Right-Click -> Create Device.

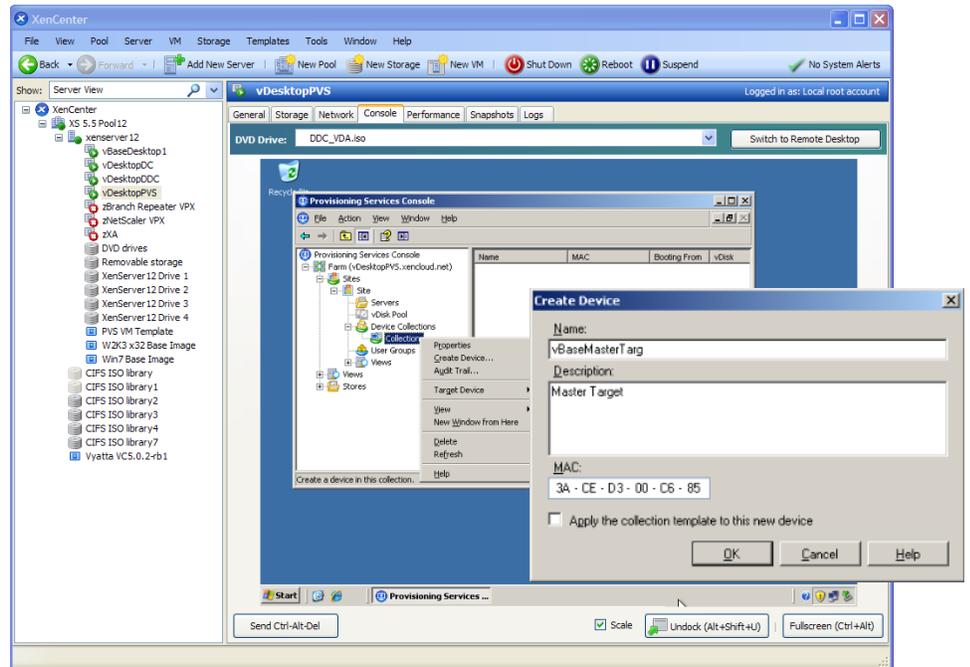
Name: vBaseMasterTarget

Desc: Master Image

MAC: <MAC Address recorded earlier>

ex: 3a:ce:d3:00:c6:85

Ok.



PVS VM Template:

In the right panel, select the new device, Right-Click -> Properties.

Select the vDisks tab.

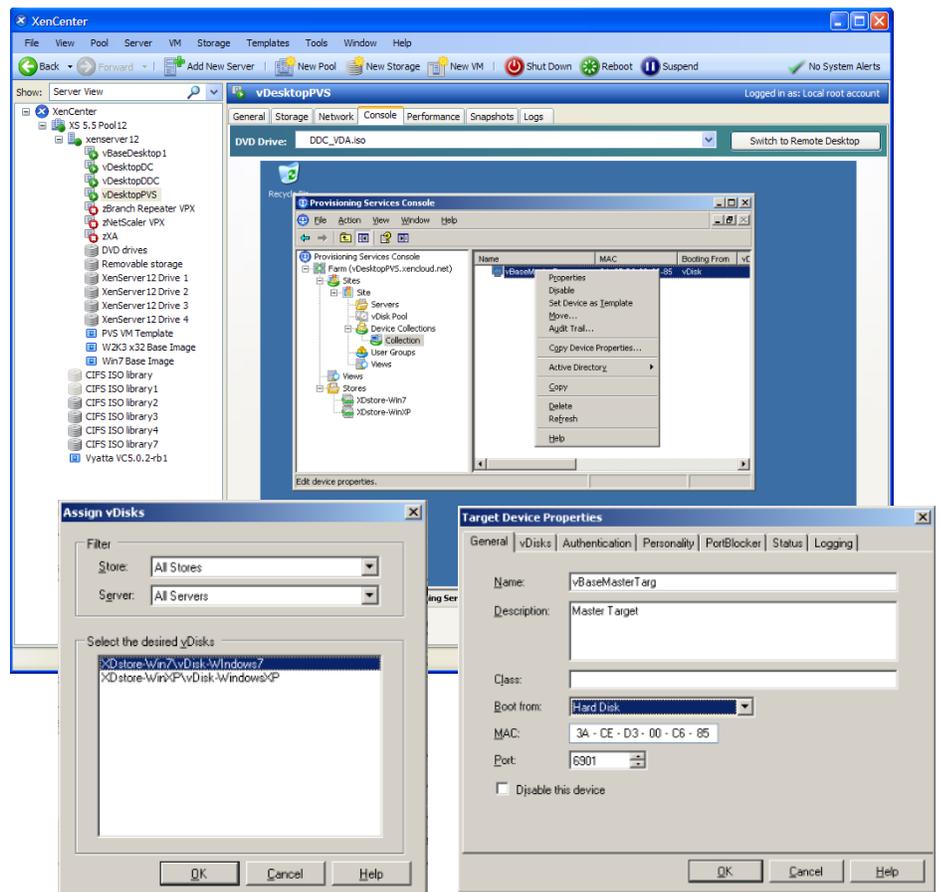
Click Add.

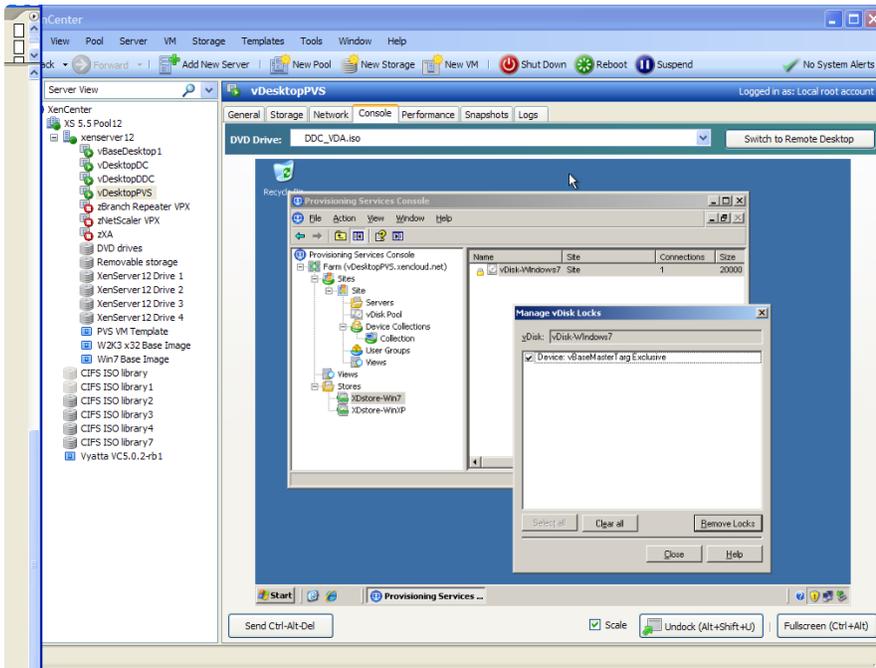
Select the XDstore-Win7/vDisk-Windows7 image.

Select the General tab.

Boot from: Hard Disk.

Ok.





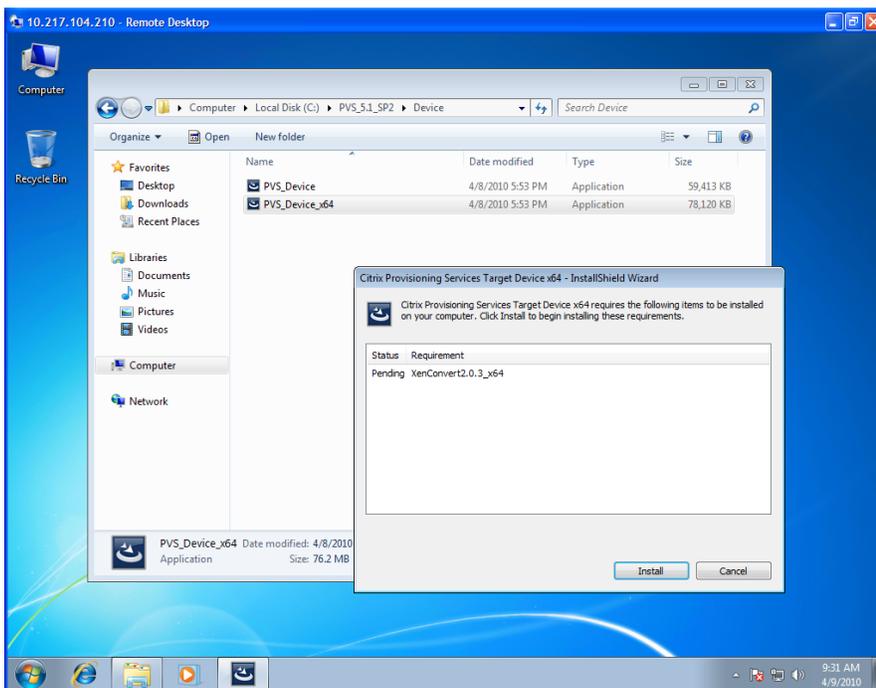
PVS VM Template:

Select the XDstore-Win7.

If the vDisk is locked, you must unlock it.

Shutdown vBaseDesktop1 from the XenCenter Console.

In PVS, Right-Click the vDisk -> Manage Locks -> Unlock.



vBaseDesktop1:

Install the Provisioning Services Target Device software.

Login to the vBaseDesktop1 from the XenCenter Console.

Note: Make sure you login as the Domain Administrator and not the local computer account.

For the vBaseDesktop1 VM, in XenCenter load the PVS installation media into the CD/ DVD drive.

Note: If using PVS 5.1 SP2, there is no ISO, you must copy the zip file to the vBaseDesktop1 and unzip the contents.

The Provisioning Services Target Device software is in the d:\Device directory.

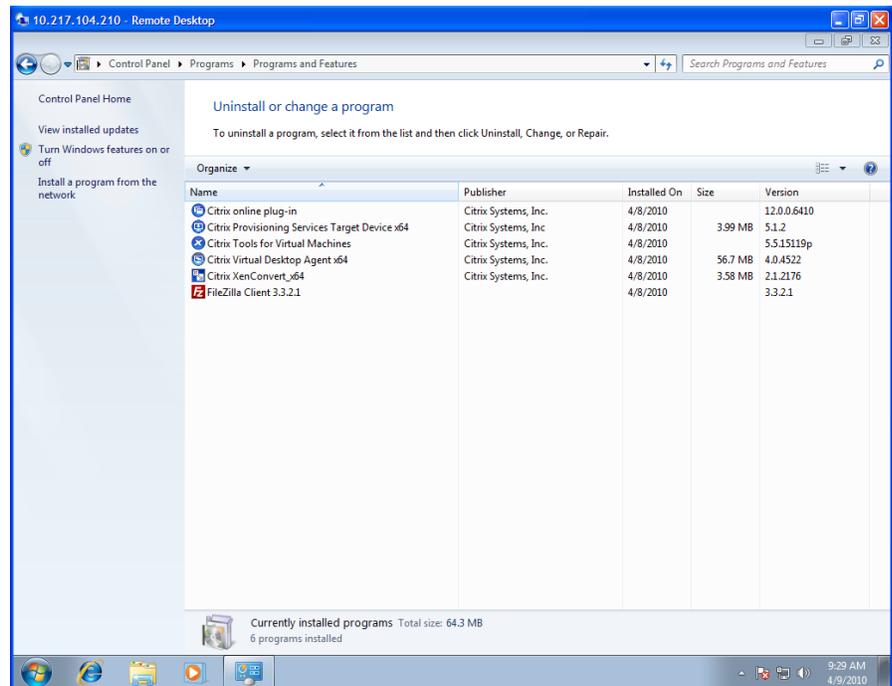
vBaseDesktop1:

When finished the vBaseDesktop1 should have the following installed.

- Citrix Provisioning Services Target Device
- Citrix Virtual Desktop Agent
- Citrix Tools for Virtual Machines
- Citrix XenConvert

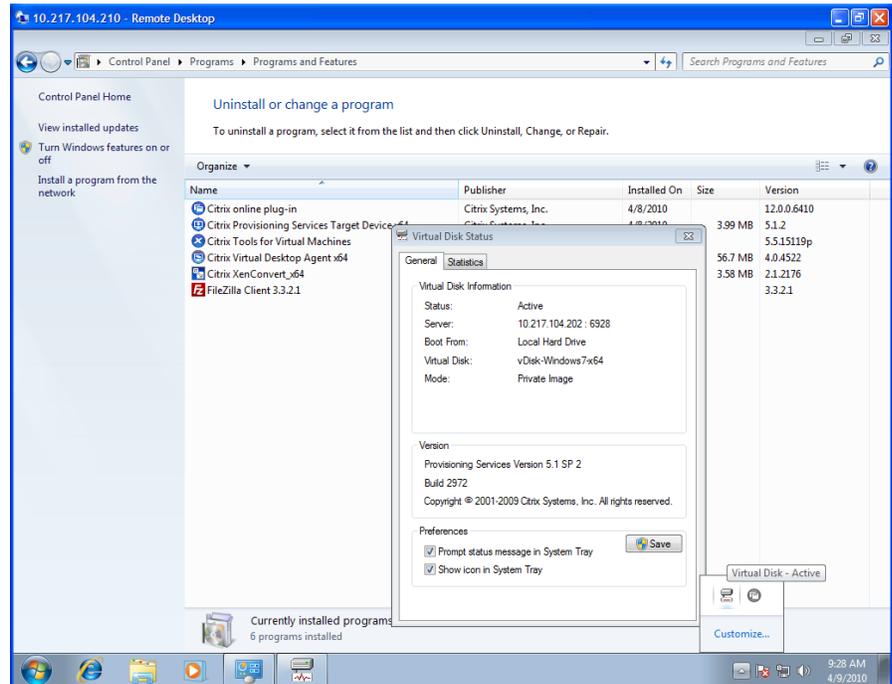
Optional:

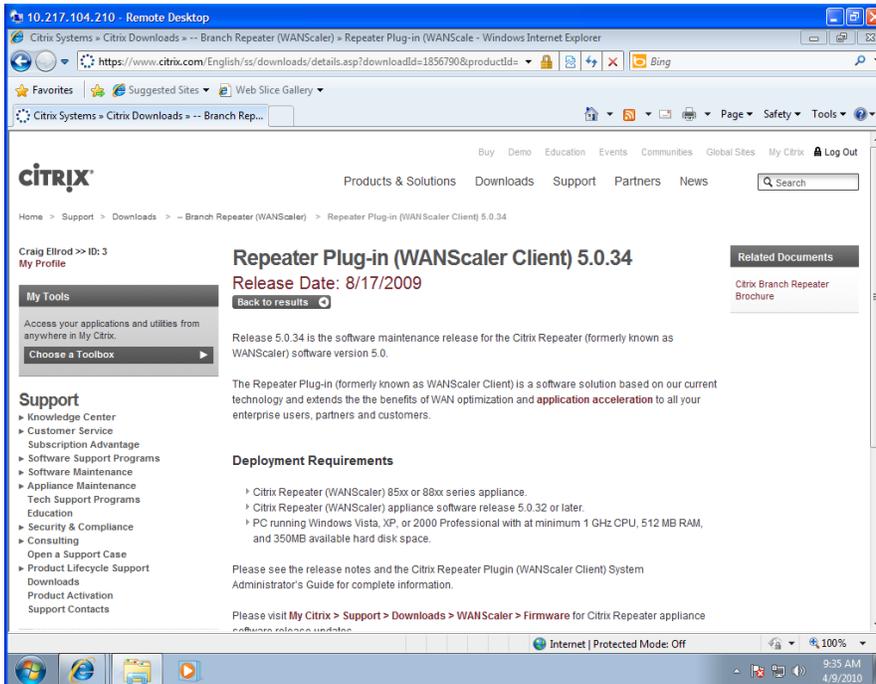
- Citrix Online plugin
- Citrix Branch Repeater



vBaseDesktop1:

Open the Virtual Disk icon in the system tray and confirm the vDisk status is Active.

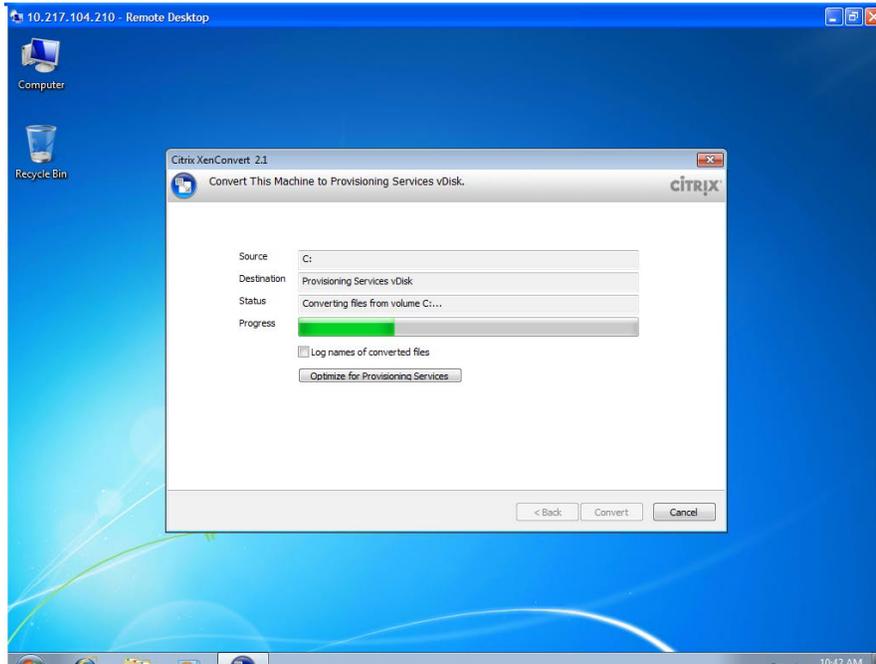




vBaseDesktop1:

If you are planning on using the Branch Repeater Client, then you must install it after installing the Provisioning Services Target Device software.

In this example, we have the BR VPX at both the Client and Server side doing the acceleration, so we don't load the BR Client software.



vBaseDesktop1:

Run XenConvert.

Note: Download and run the latest XenConvert software from citrix.com -> Downloads -> XenServer -> XenConvert.

From:

This Machine

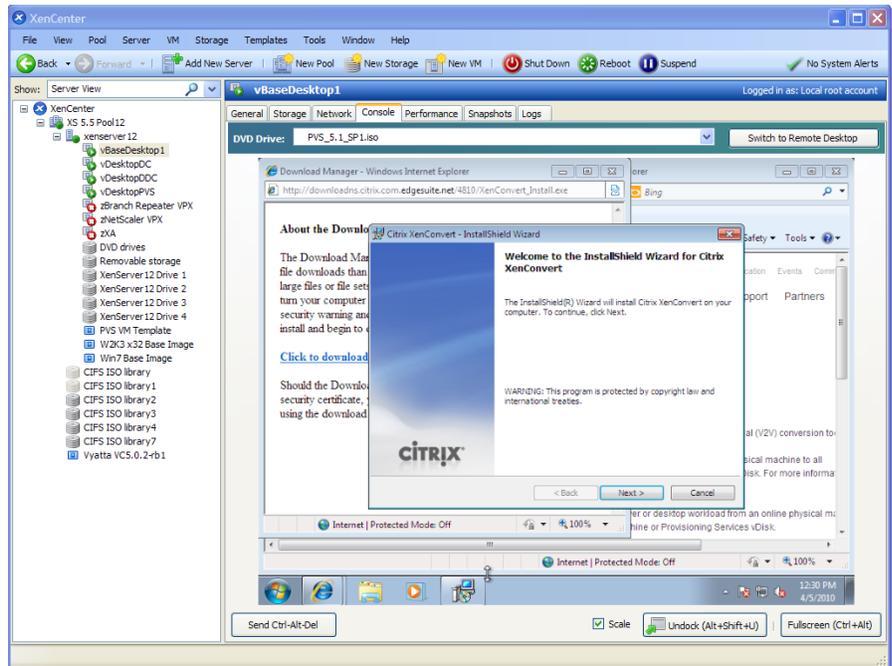
To:

Provisioning Services vDisk

vBaseDesktop1:

If you are going to use this Desktop in combination with a Branch Repeater solution, and you are going to use the Branch Repeater Client, now is a good time to install the Branch Repeater Client.

Shutdown the vBaseDesktop1 system from the XenCenter Console.



vBaseDesktop1:

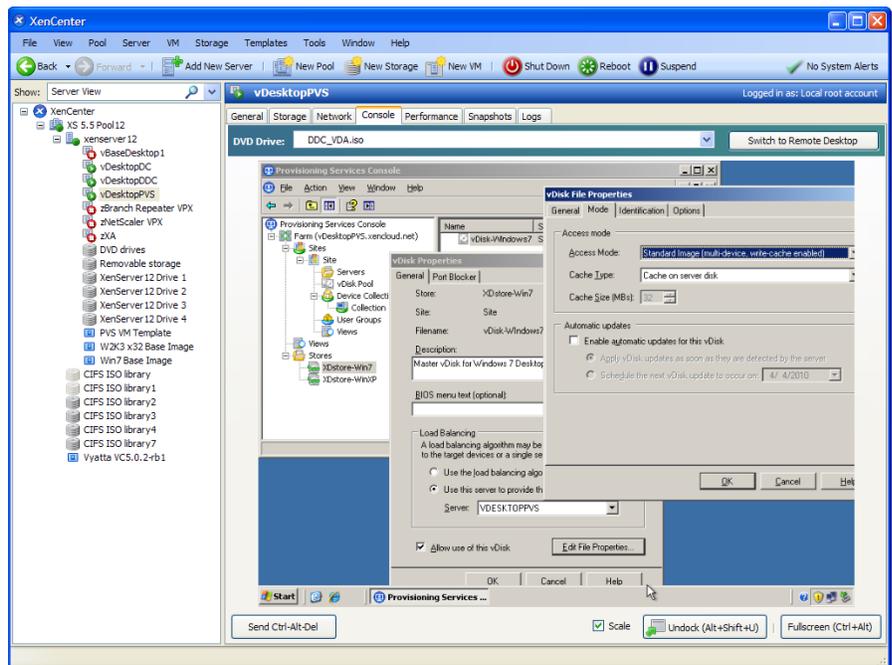
In the Provisioning Services Console on the vDesktopPVS system, navigate to the vDisk, select Properties, and click Edit Device Properties.

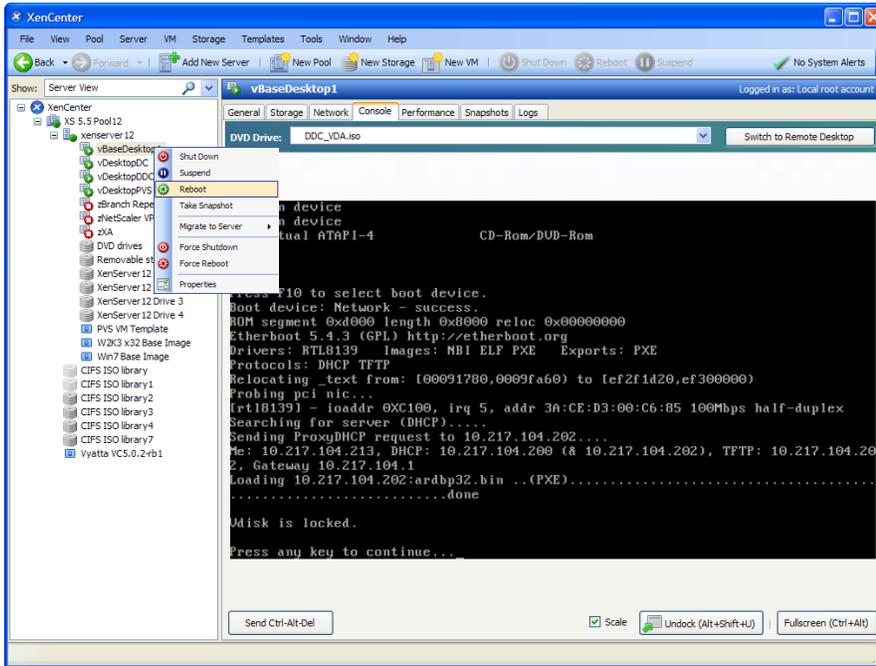
Select Mode.

Set Access Mode to Standard Image.

Ok.

Ok.





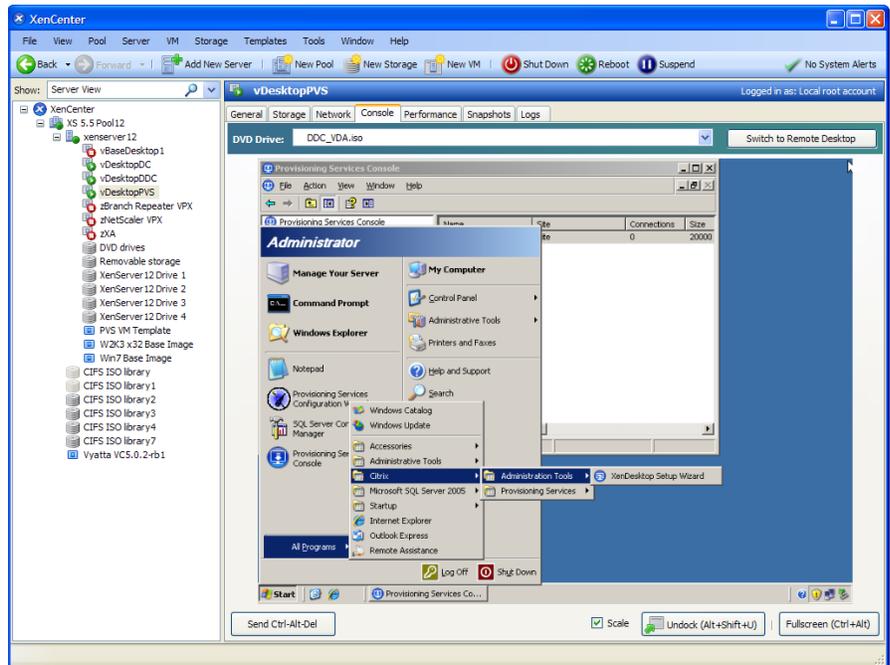
vBaseDesktop1:

Reboot the vBaseDesktop1 from XenCenter.

When the Master Target reboots, it should boot from the network.

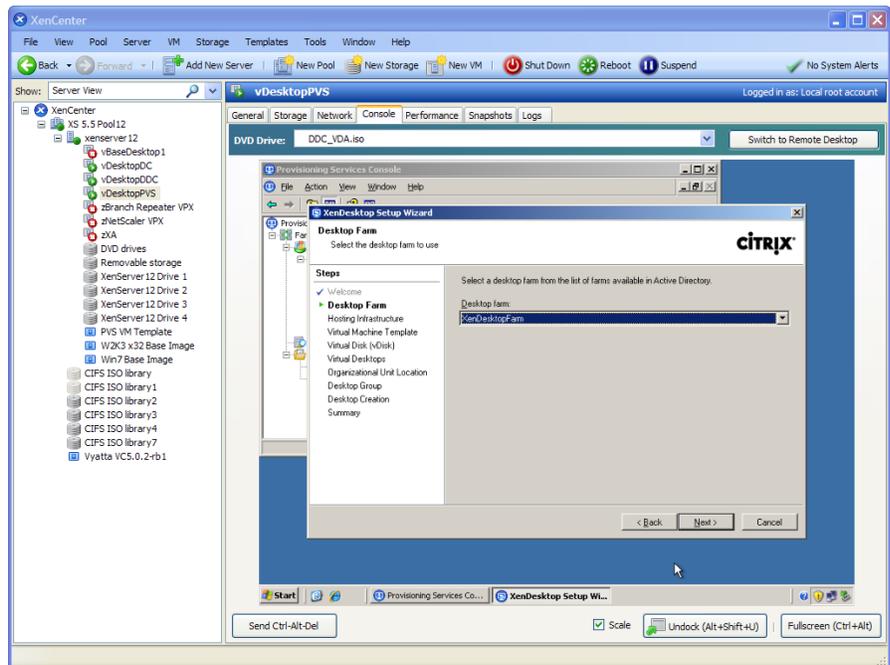
XenDesktop Setup:

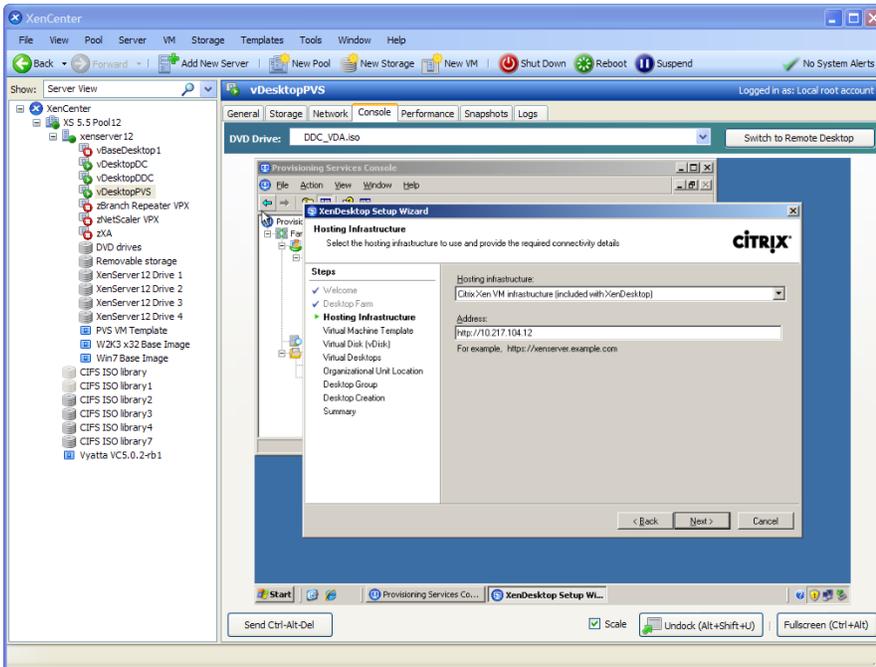
From the Provisioning Server (vDesktopPVS), launch the XenDesktop Setup Wizard.



XenDesktop Setup:

Desktop Farm:
XenDesktopFarm





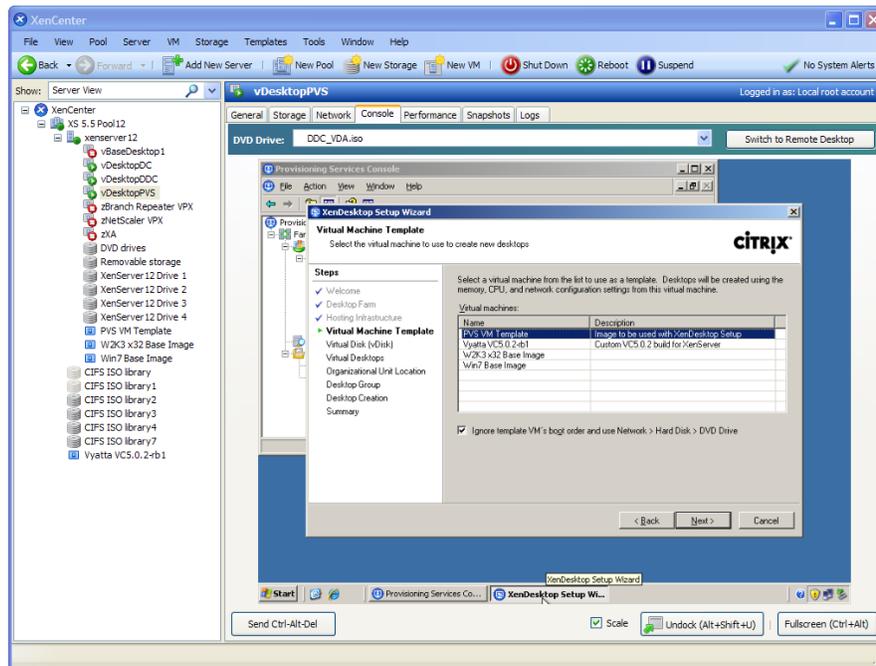
vBaseDesktop1:

Select Citrix Xen VM Infrastructure.

Set the Address field to your XenServer.

ex: <http://10.217.104.12>

Login to the XenServer that is hosting the Virtual Desktops.

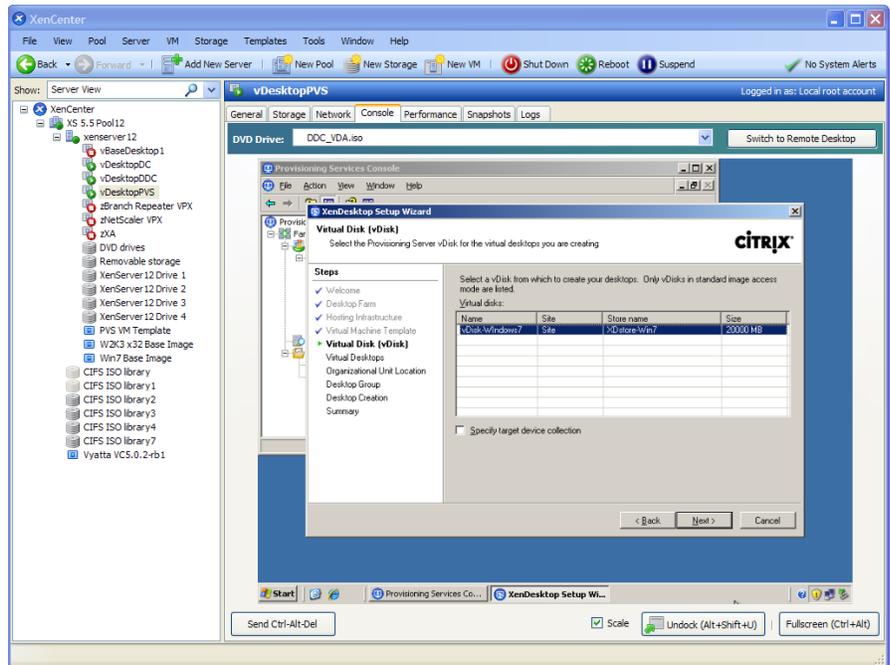


vBaseDesktop1:

Select the PVS VM Template.

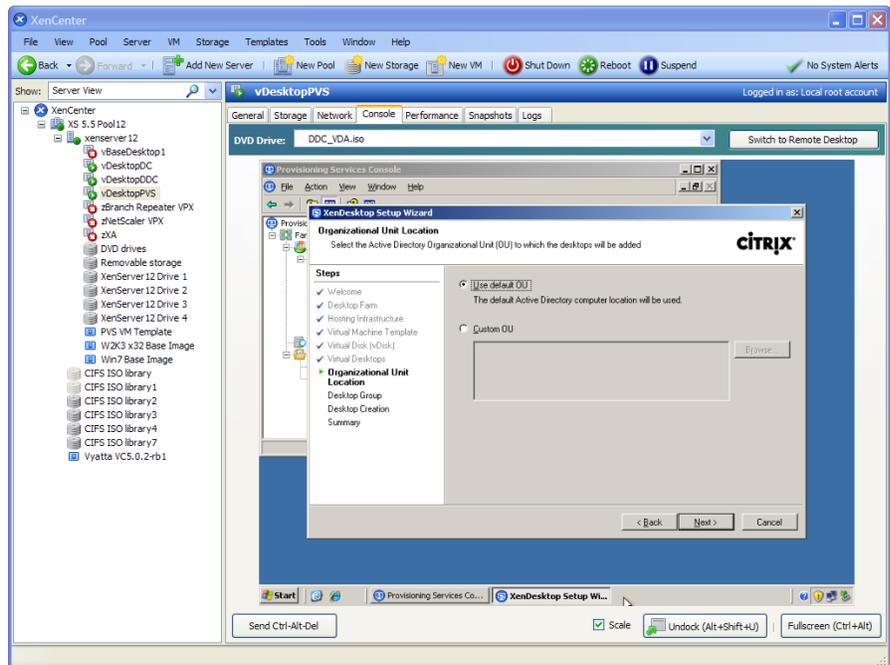
XenDesktop Setup:

Select the vDisk-Windows7.



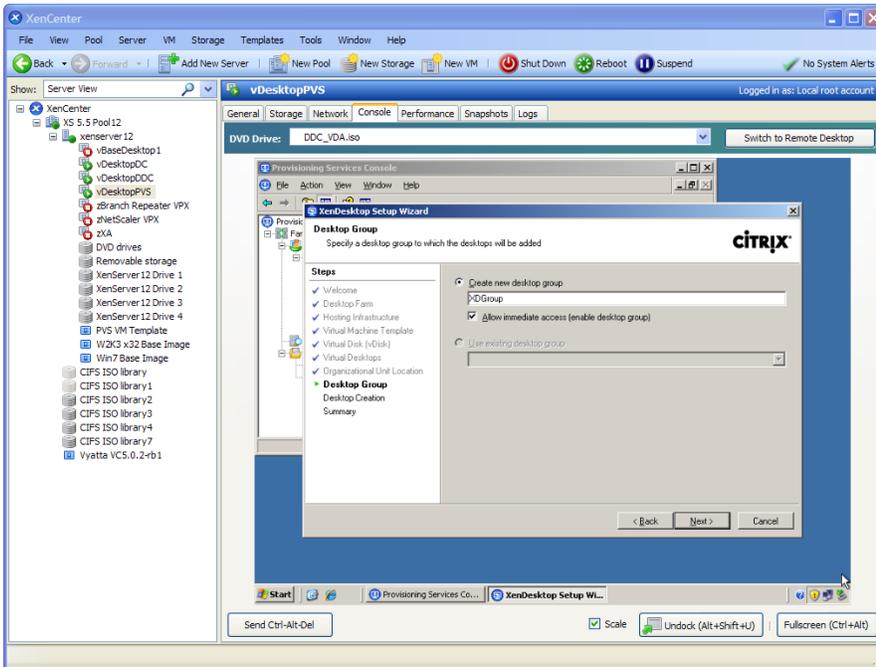
XenDesktop Setup:

Use the Default OU.



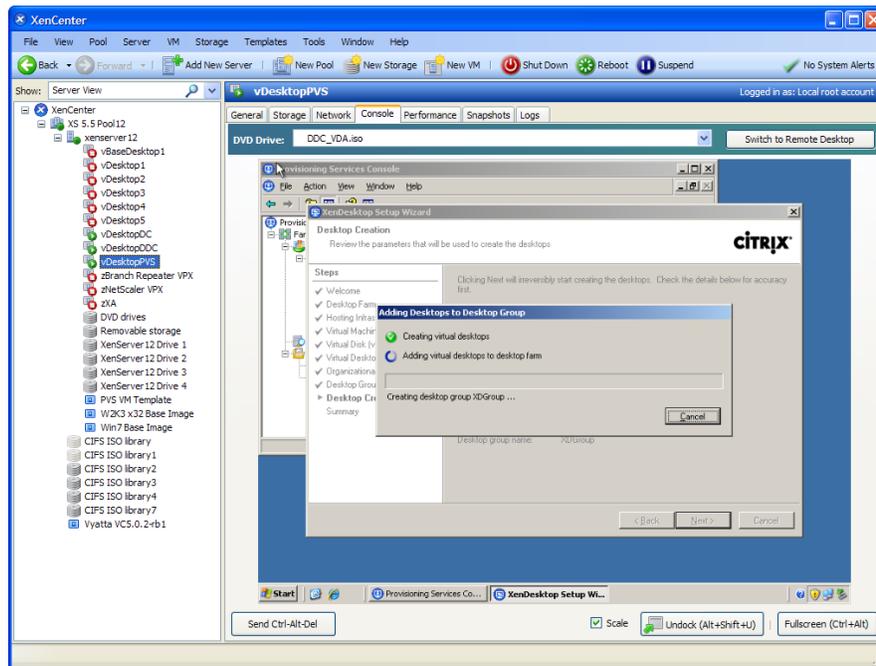
vBaseDesktop1:

Create a new desktop group.
XDGroup.



vBaseDesktop1:

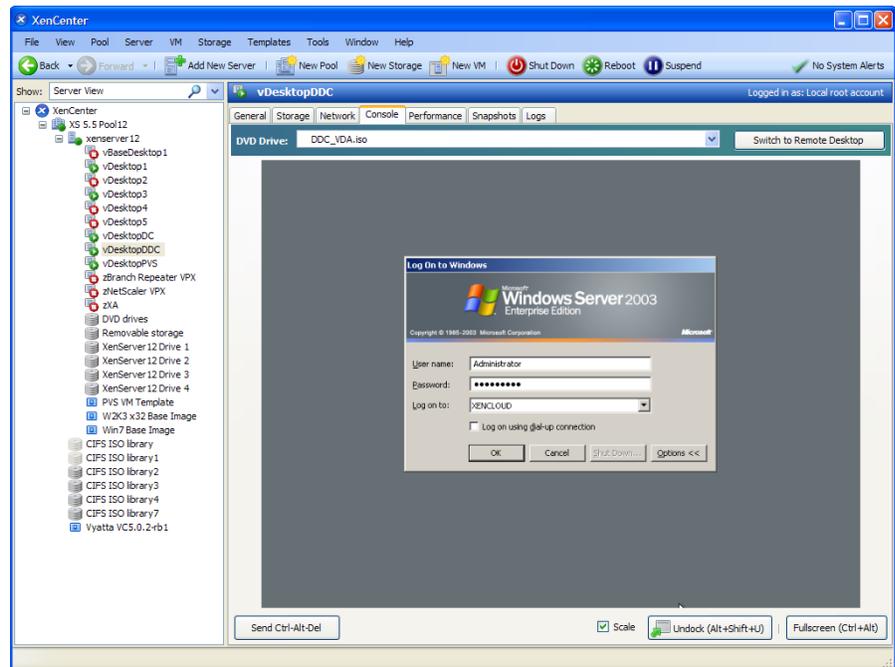
As you finish, you will see the virtual desktops being created in XenServer, in the XenCenter Console, left panel.



Delivery Services:

Login to the Desktop Delivery Controller (vDesktopDDC).

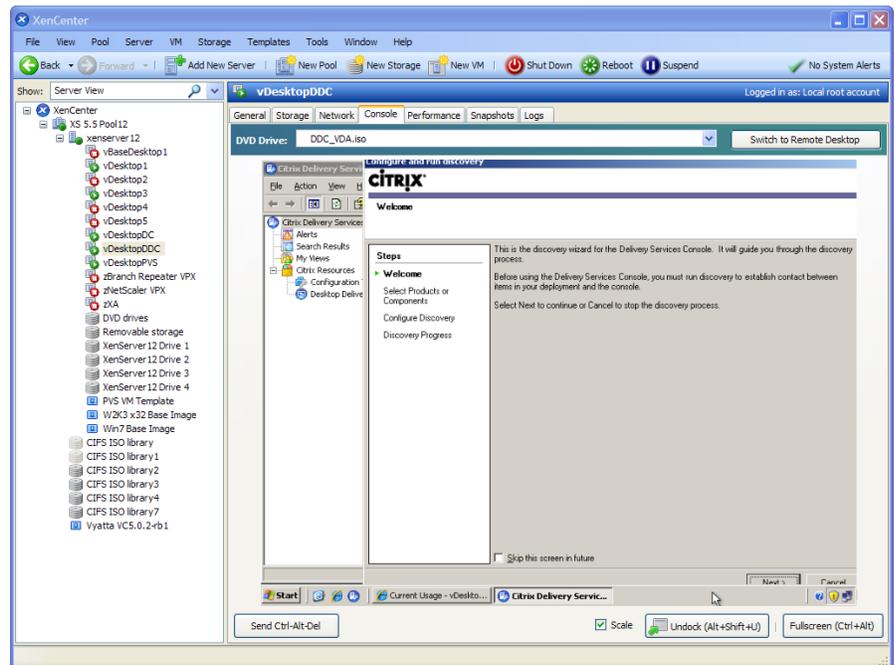
Note: Make sure you login as the Domain Administrator and not the local computer account.



Delivery Services:

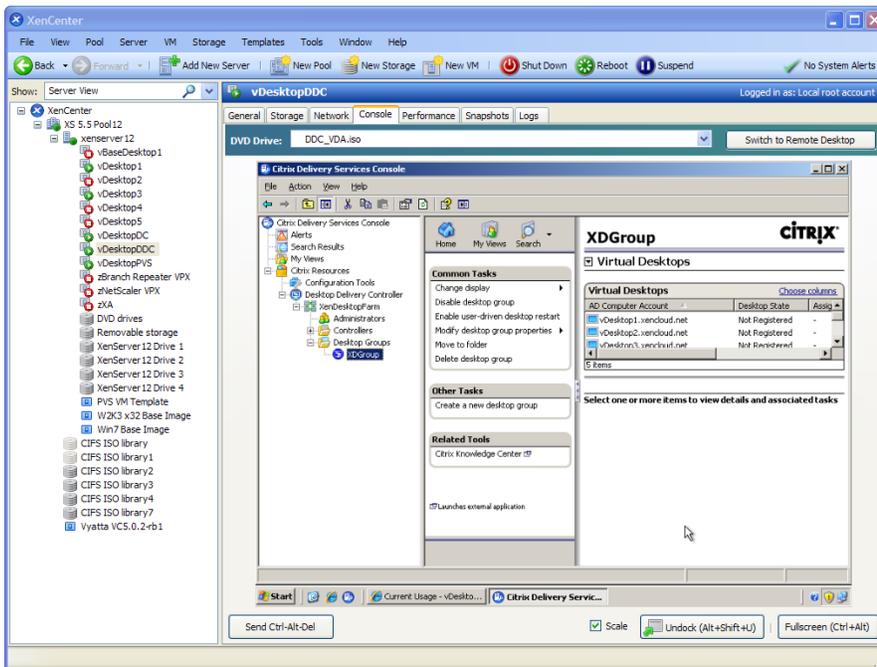
Run the Delivery Services Console.

Configure and run discovery.



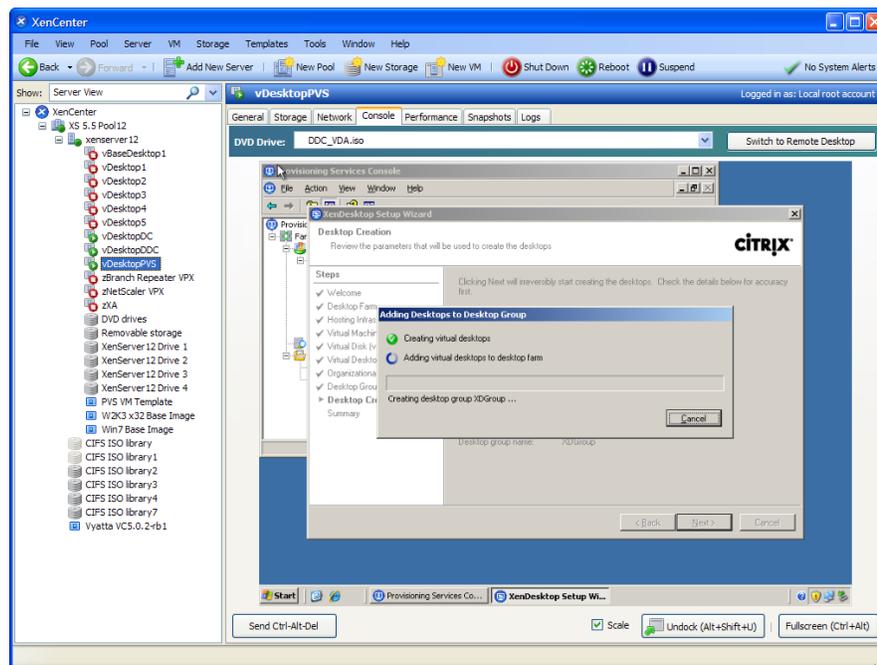
Delivery Services:

Expand the Desktop Groups and select the XDGroup created in an earlier step.



vBaseDesktop1:

As you finish, you will see the virtual desktops being created in XenServer, in the XenCenter Console, left panel.



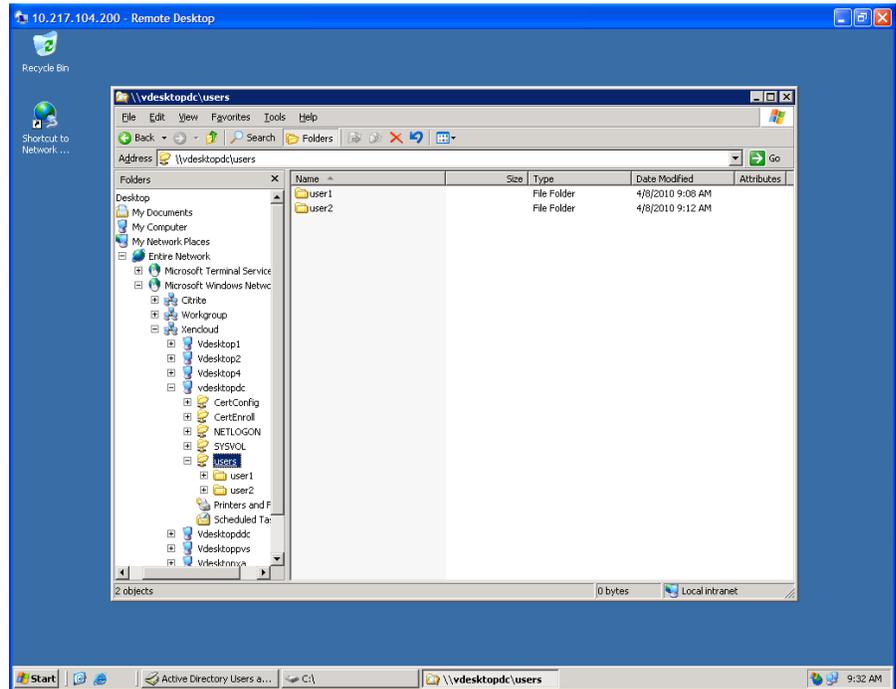
Mapping Network Drives

Because XenDesktop uses a shared image to deliver the operating system, users will need to save their data to a network drive. You set this up in the profile of the user, and in a policy on the DDC.

vDesktopDC:

On a File Server in the domain, create a users directory.

Turn on sharing for this directory.



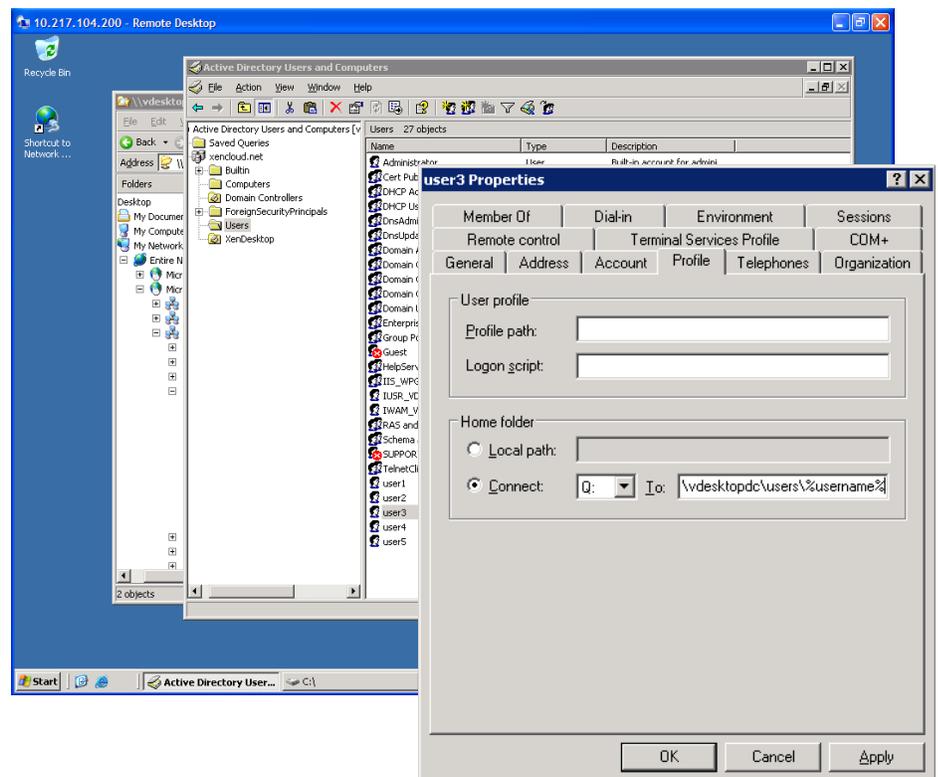
vDesktopDC:

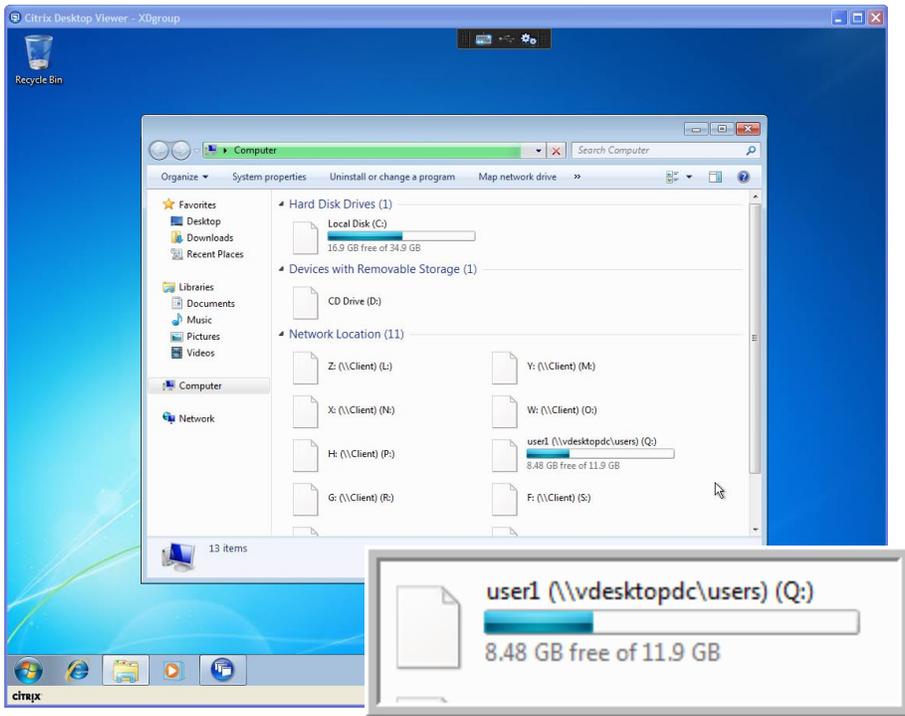
In Active Directory, open the users profile, under home folder, select Connect.

Use a drive letter that is not in use, and that will not conflict with XenDesktop or XenApp drive mappings.

Enter the location:

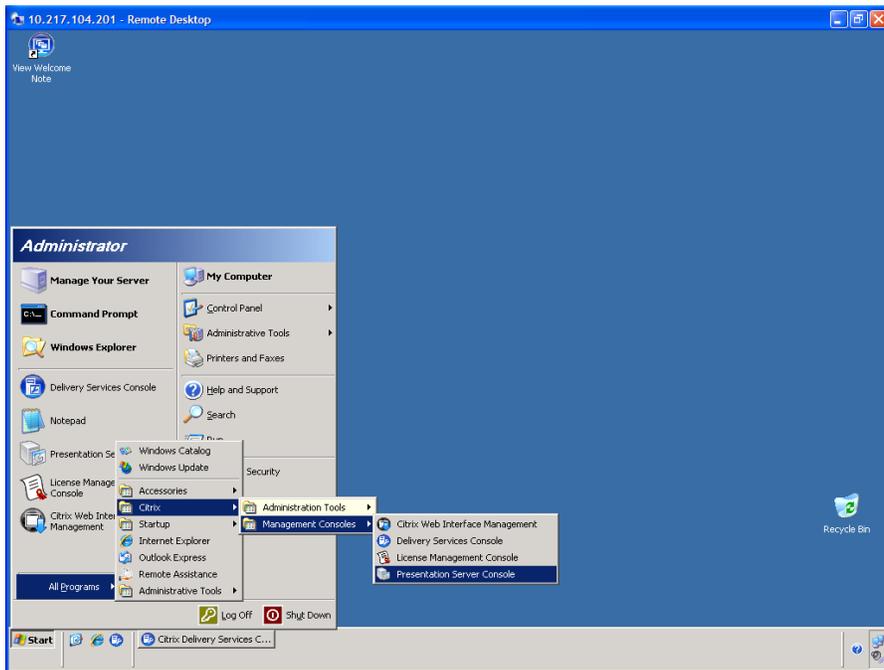
\\<file server>\users\%username%





vDesktopDC:

When the user logs into their Desktop, open Computer and you should see the network drive mapping.



vDesktopDDC:

From the vDesktopDDC, launch the Presentation Server Console.

Navigate to Policies.

Right-Click -> Create Policy.

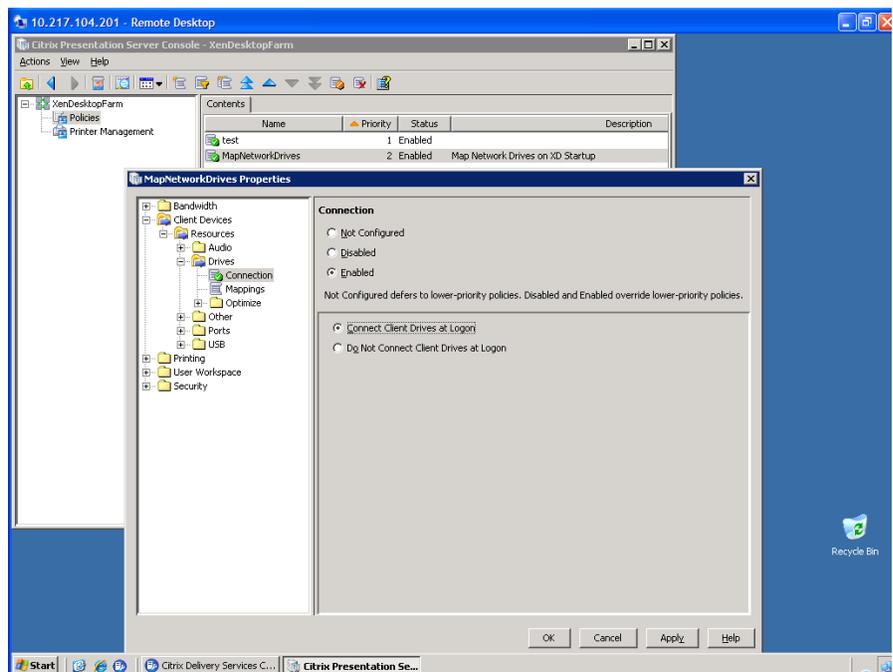
vDesktopDDC:

Open the newly created policy.

Navigate to Client Devices
-> Resources -> Drives ->
Connection.

- Enabled
- Connect Client Drives at Logon

Apply



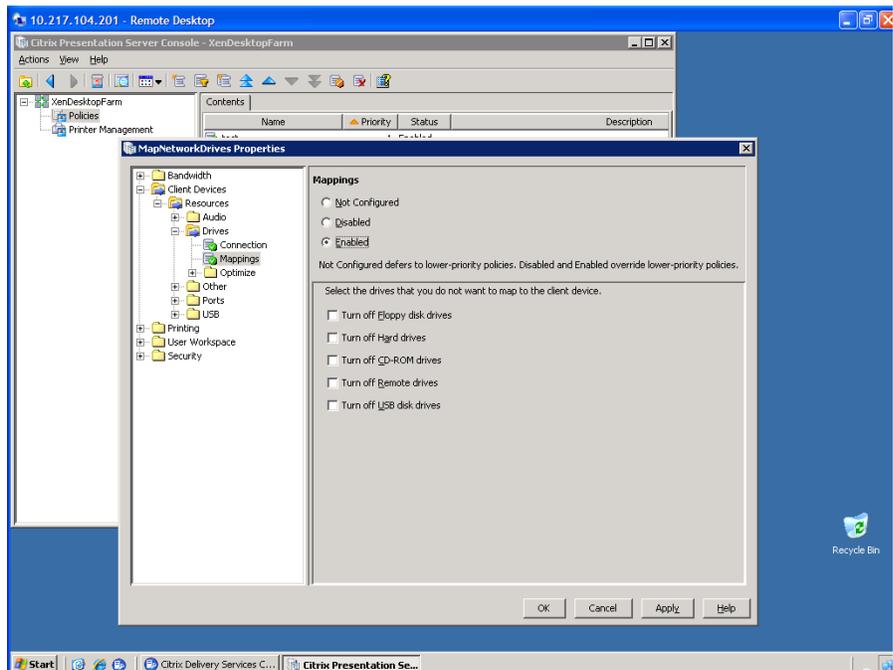
vDesktopDDC:

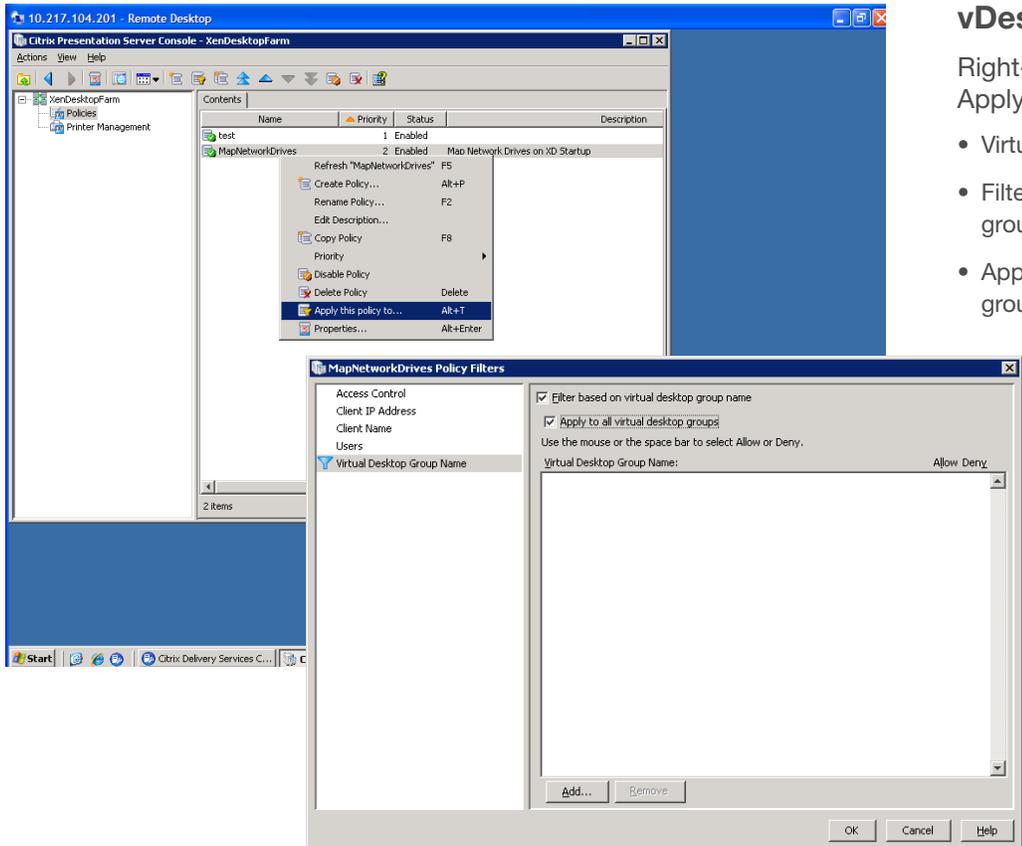
Navigate to Client Devices
-> Resources -> Drives ->
Mappings.

- Enabled

Apply

Ok





vDesktopDDC:

Right-Click the new policy -> Apply this policy to...

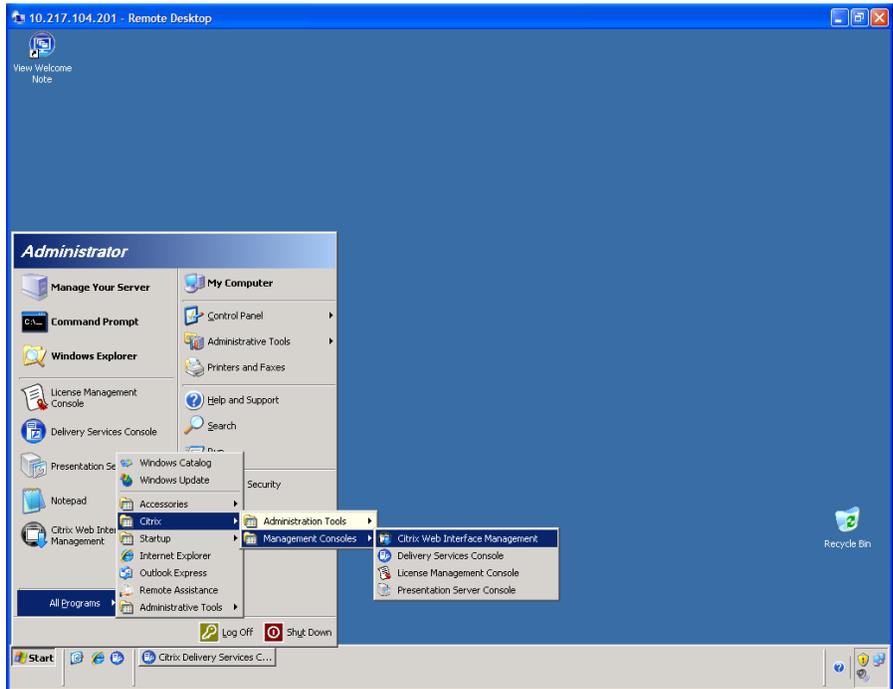
- Virtual Desktop Group Name
- Filter base on virtual desktop group name
- Apply to all virtual desktop groups

Testing XenDesktop

XenDesktop can be accessed through a Web Interface or through the Citrix Receiver. The Web Interface site and Receiver site is already configured in the DDC.

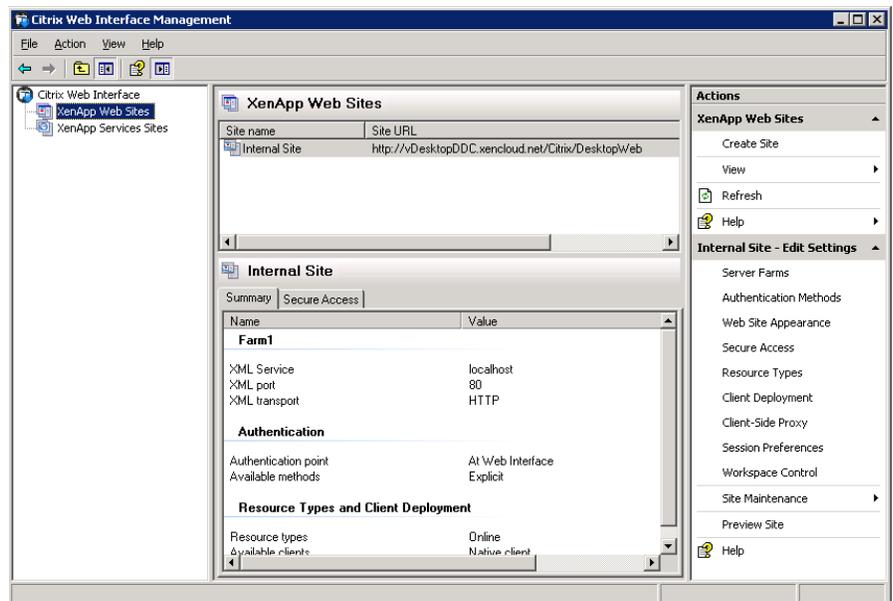
vDesktopDDC:

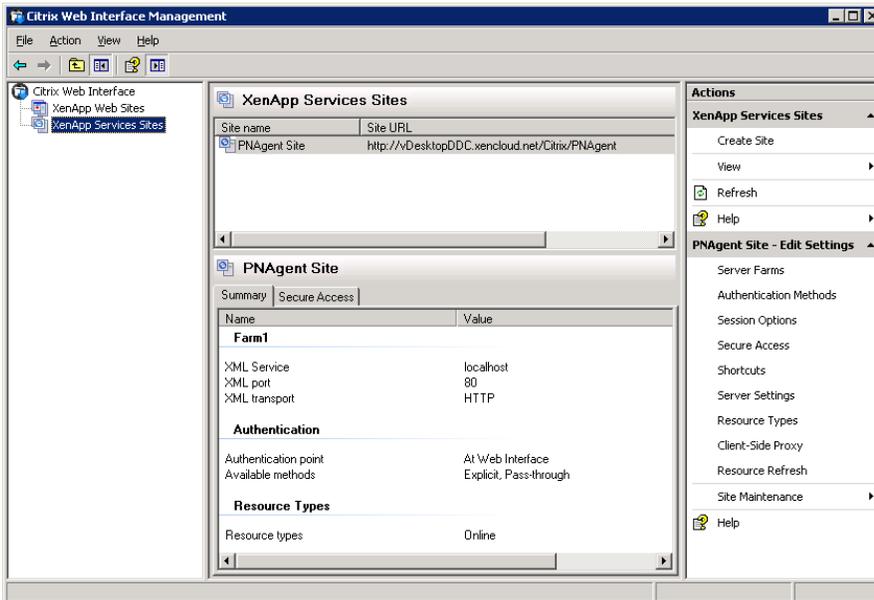
You can see these by opening the Citrix Web Interface console.



vDesktopDDC:

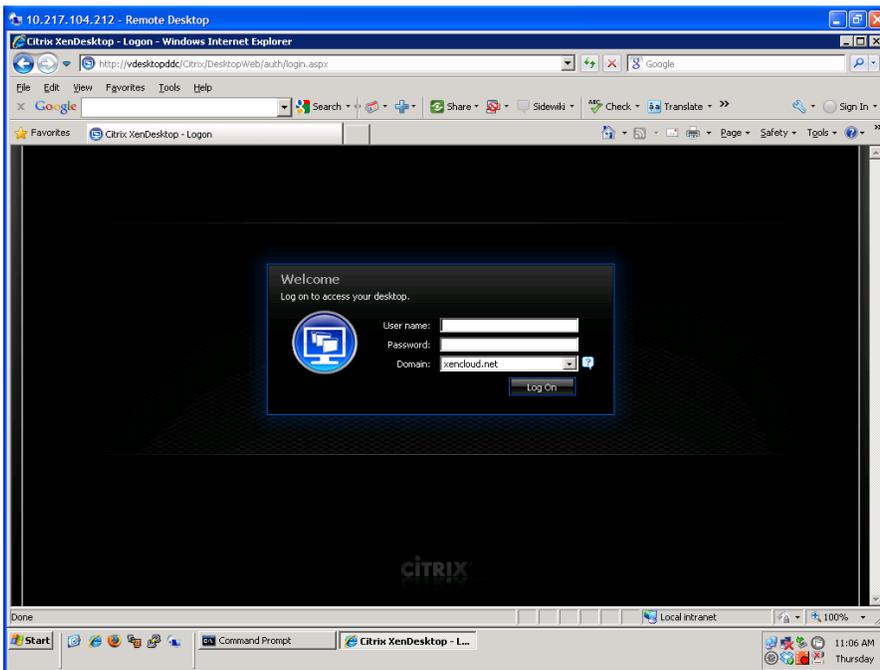
Web Interface users connect to the Internal Site.





vDesktopDDC:

Receiver users connect to the PNAgent Site.



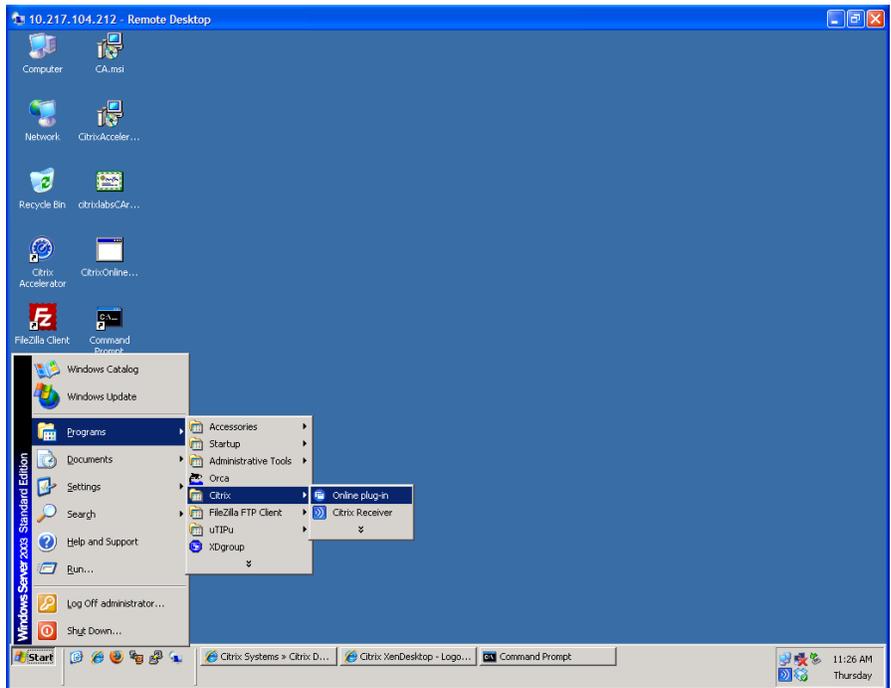
Client Device:

To test XenDesktop from a web browser, on the Client Device, open a web browser and type in this URL:

`http://vDesktopDDC.<your domain>`

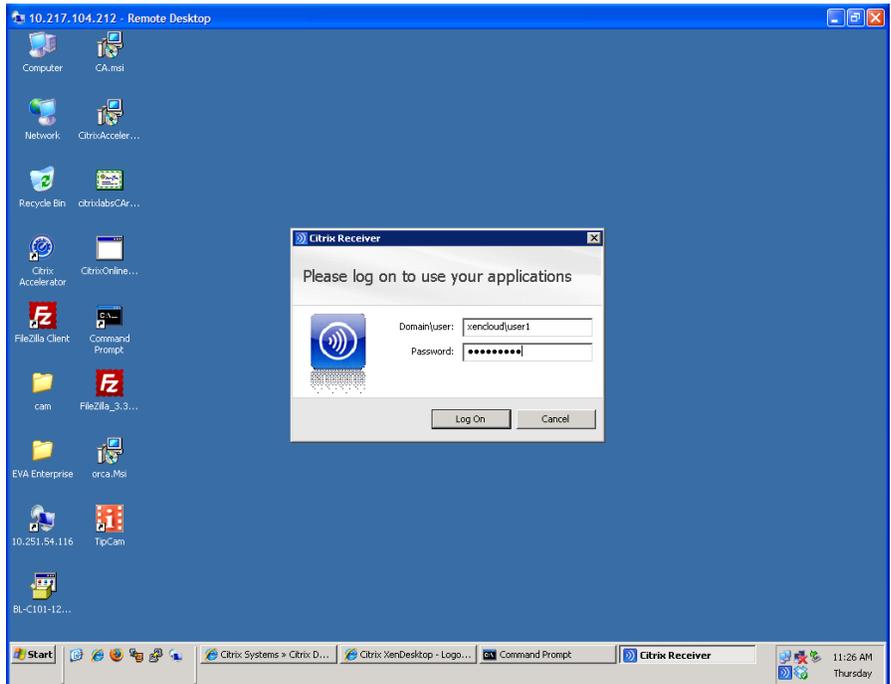
Client Device:

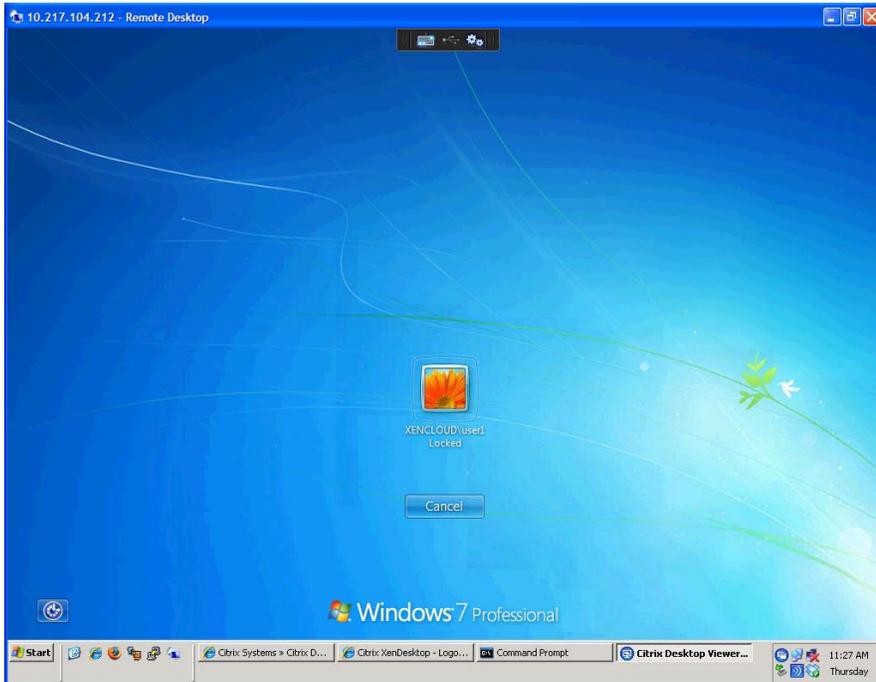
To test XenDesktop from the Online Plugin, install the Online Plugin on the Client Device.



Client Device:

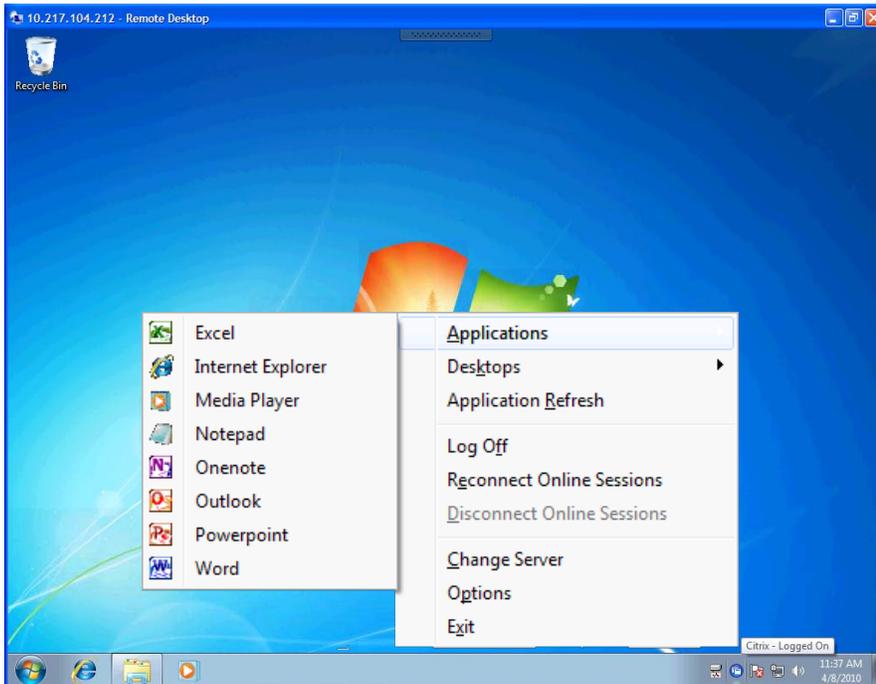
Enter Login Credentials.





Client Device:

Whether connecting through the Web Interface -or- Online Plugin, XenDesktop is delivered to the Client Device.



Client Device:

If you installed the Online Plugin into the base vDisk image, then you can run XenApp applications from within this Desktop, such as Microsoft Office.



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