

BladeBoot Windows 2008

Software-Based iSCSI Boot
For Windows 2008 on IBM Blades

Note

Before using this information and the product it supports, read the information in Notices on page 32.

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1 Windows 2008

1.1 Infrastructure Preparation

You will need:

1. IBM BladeCenter (chassis for Blades)
2. IBM Blade with BladeBoot Support
 - a. Latest BIOS Firmware Update
 - b. Latest BMC Firmware Update
 - c. Latest NIC Microcode Update
3. IBM iSCSI Configuration Manager (software utility)
4. iSCSI Target such as an IBM N3700 (storage appliance)

The following link can assist in locating some of the required items:

<http://www-03.ibm.com/servers/eserver/bladecenter/storage/iscsi.html>

1.1.1 iSCSI Target

1. Configure your iSCSI Target to provide a LUN
 - a. Preferably the LUN is cleared out when created (all zeros in the first sector at a minimum)

1.1.2 SAN Configuration

Run the IBM [iSCSI Configuration Manager](#) utility to configure the Blade with your SAN boot parameters.

1.2 Blade Configuration

1.2.1 Power On

Power on the Blade and press F1 when prompted.

```
IBM BIOS - (c) Copyright IBM Corporation 2007          CP: 26
Symmetric Multiprocessing System
Intel Xeon 3.2 GHz
1 Processor Installed

02048 MB Installed Memory

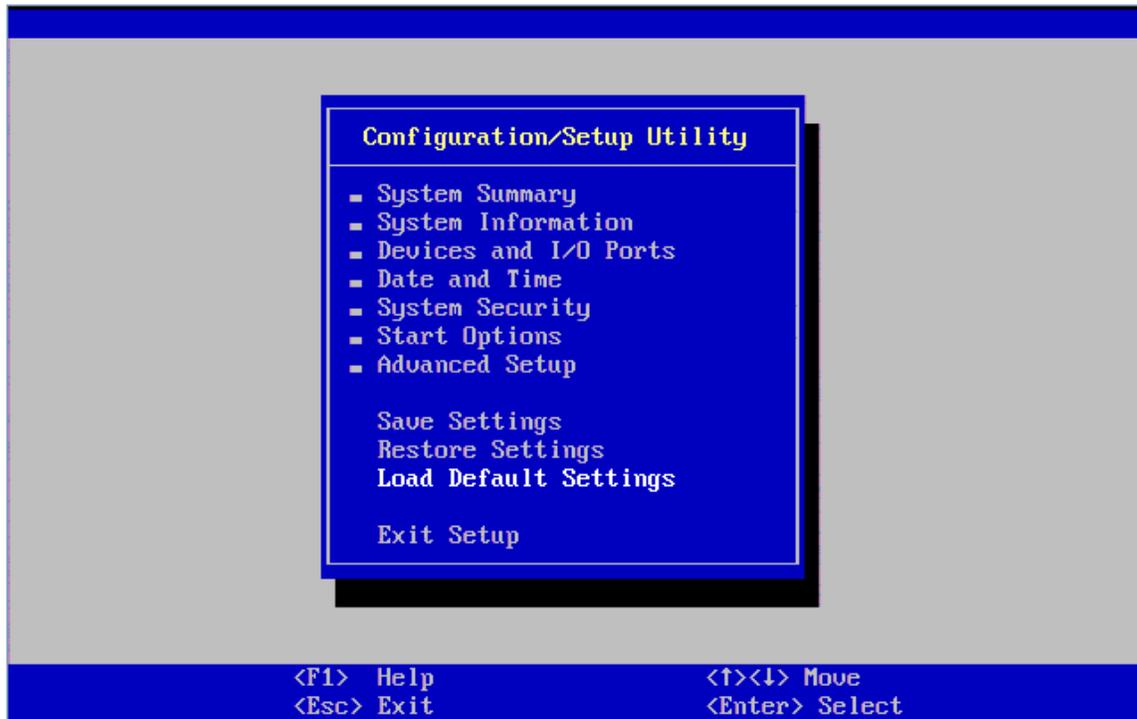


Press F1 for Configuration/Setup
Press F2 for Diagnostics
Press F12 for Boot Device Selection Menu

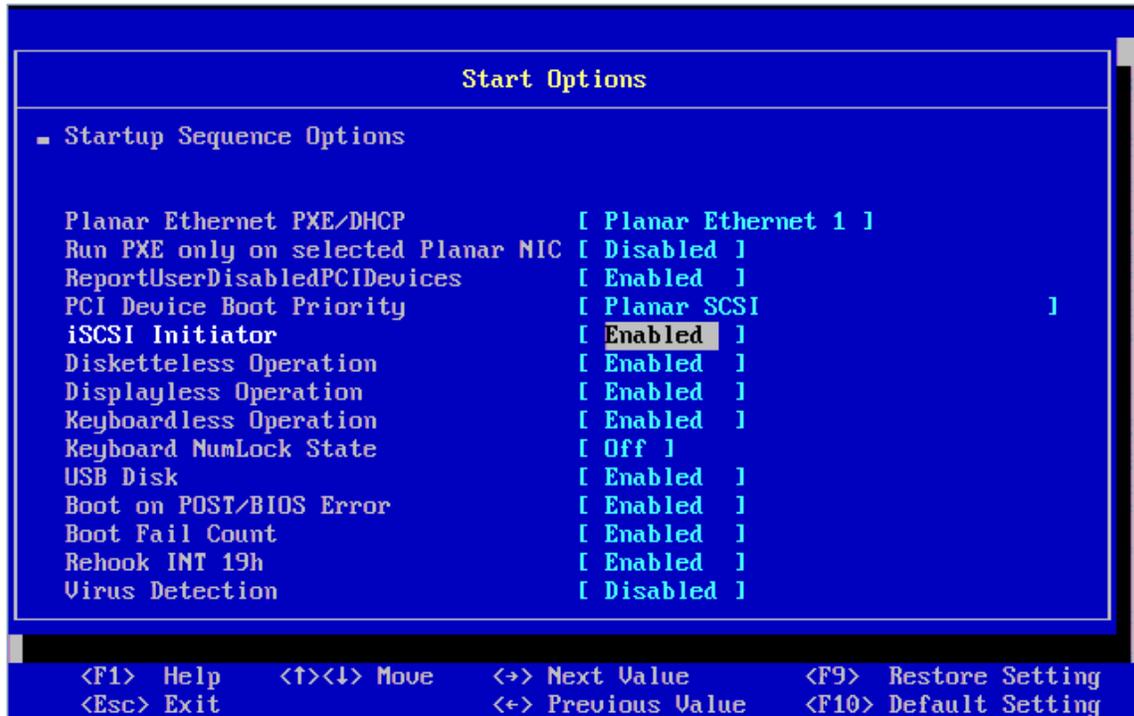
>> BIOS Version 1.11 <<
```

1.2.2 F1 Setup

1.2.2.1 Load Default Settings



1.2.2.2 Enable iSCSI Initiator



Note: If at some point you encounter an 1801 error you can enable “Run PXE only on selected Planar NIC” and select the NIC you are using for your SAN via the “Planar Ethernet PXE/DHCP” setting. This may eliminate the 1801 error.

Save your settings and exit F1 Setup.

1.2.3 Boot Check

During the boot-up process you must see this panel and “Login succeeded” to proceed. If you do not, check your SAN configuration and restart the operation.

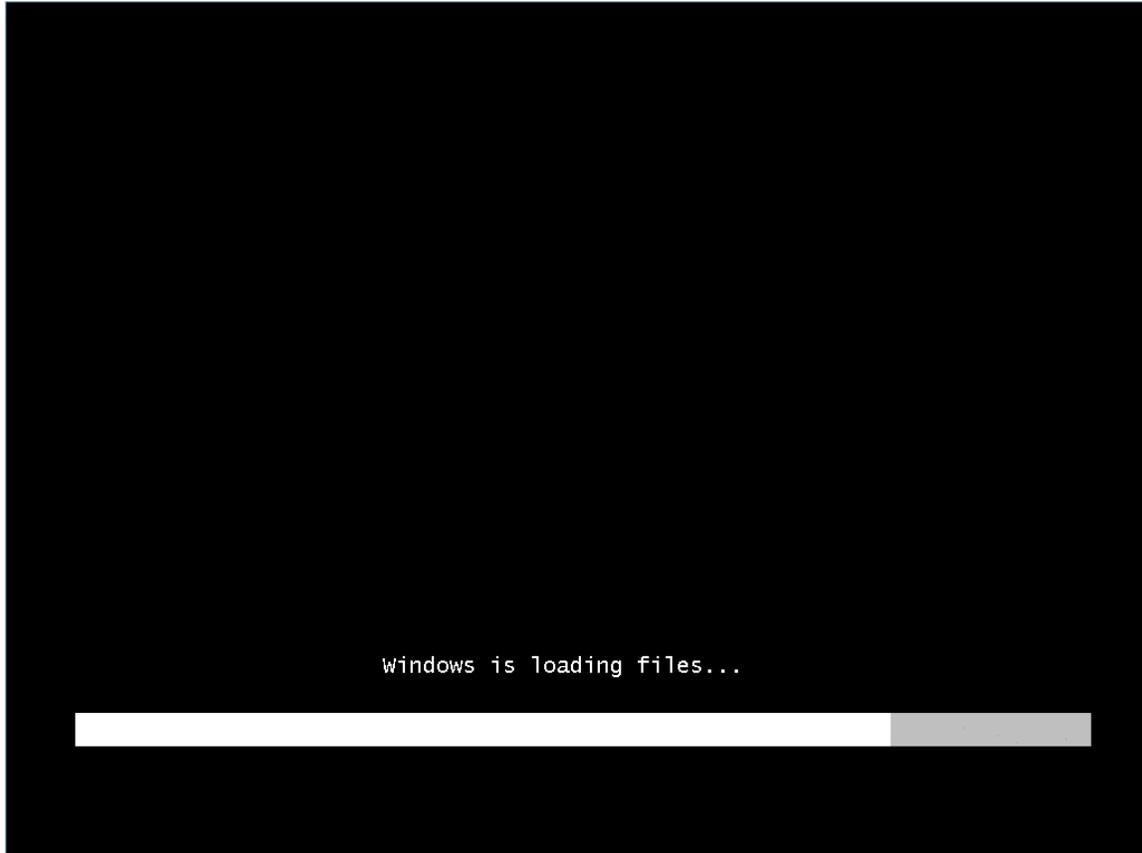
```
Attempting iSCSI connection CP: 49
IBM iSCSI Firmware Initiator v1.0.31.A
(C) Copyright IBM Corp. 2003, 2006 All Rights Reserved
Initiator
iqn : iqn.1986-03.com.ibm:kqkhg8y
IP : 192.168.70.241
Mask : 255.255.255.0
NIC : 00:14:5e:3d:20:53

Target
iqn : iqn.1986-03.com.ibm:sn.84251942
IP : 192.168.70.19
LUN : 0-0-0-0
Port : 3260
Login succeeded
```

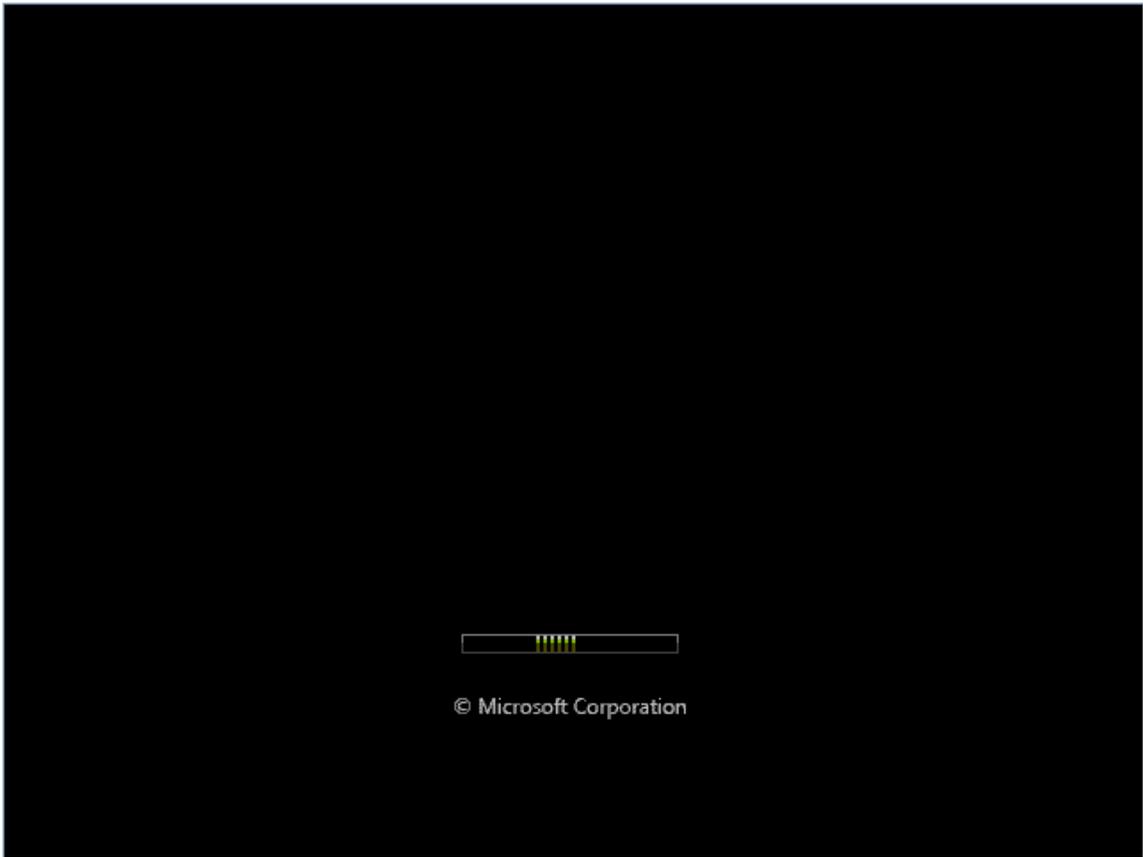
1.3 Windows 2008 DVD Install

Insert the Windows 2008 DVD in the DVD drive; assign the media tray and KVM to your Blade; and power up your Blade. Watch the boot-up process carefully and press a key if prompted to boot from DVD.

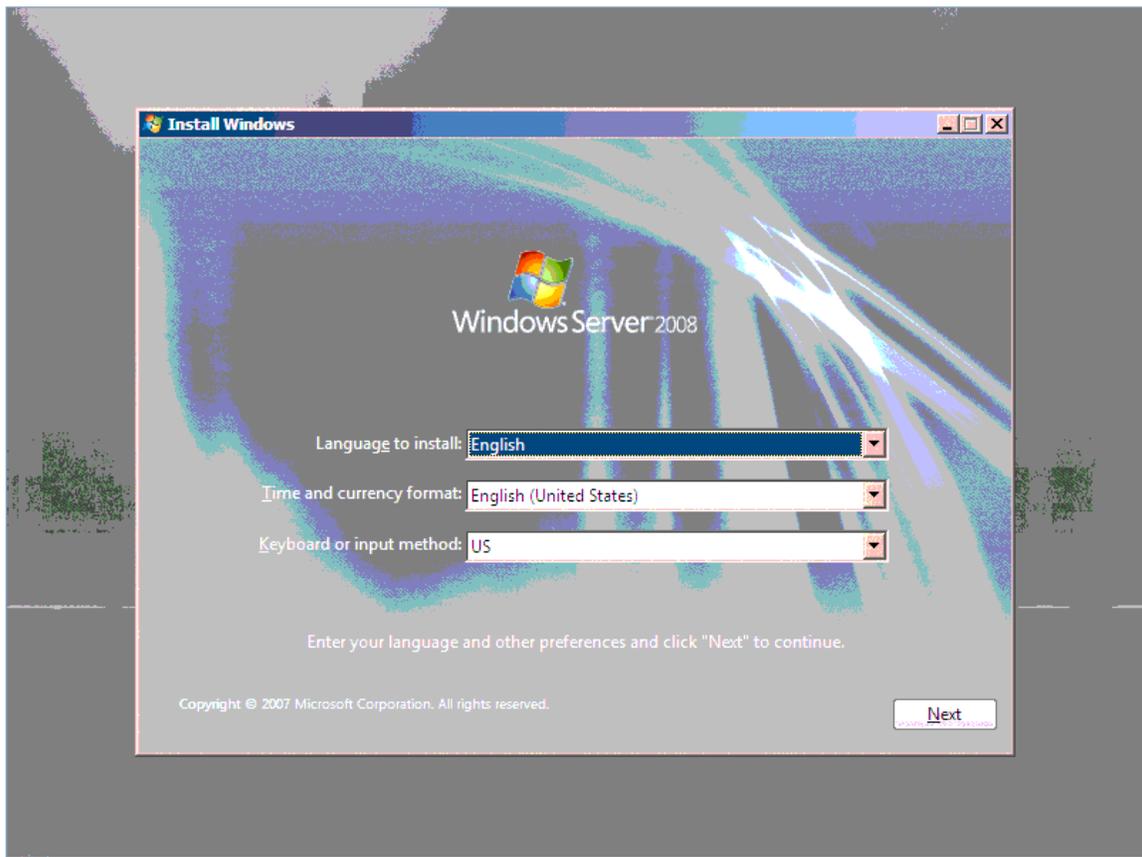
1.3.1 Loading Files



1.3.2 Green Bars

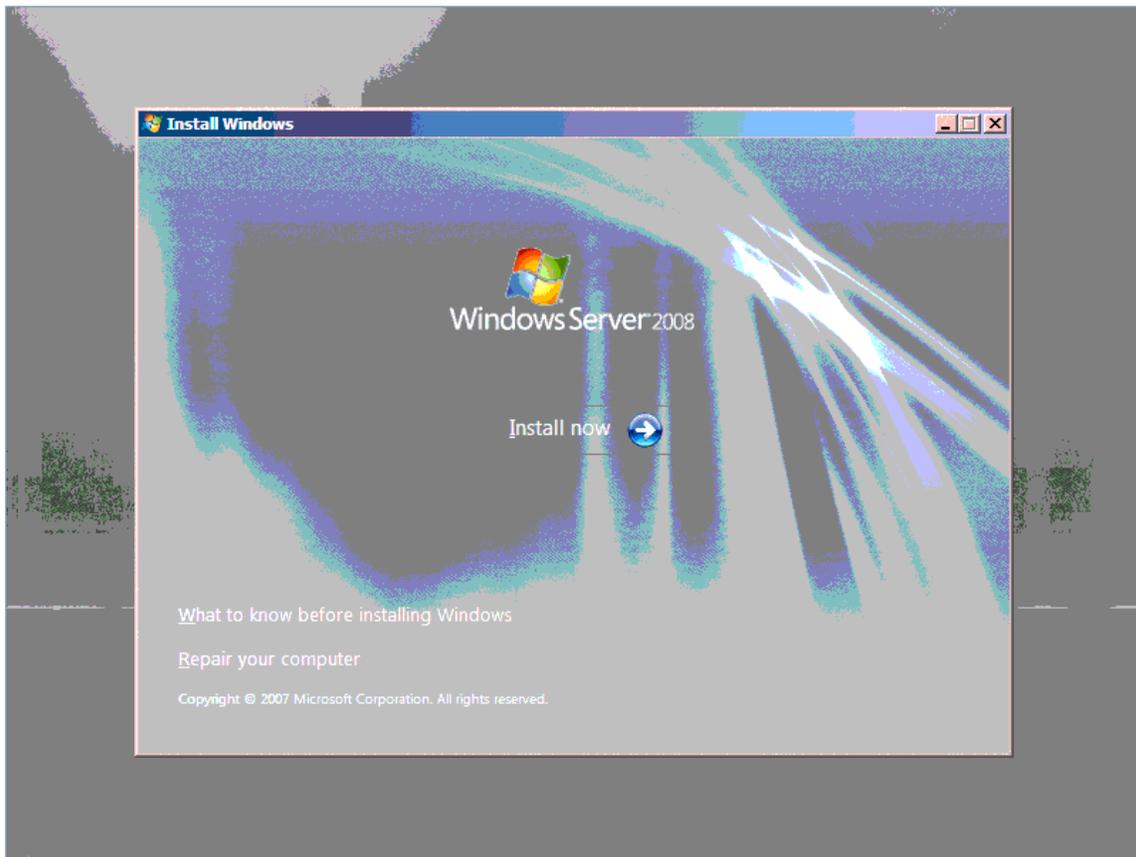


1.3.3 Language and Other Preferences



Select as appropriate and click *Next*.

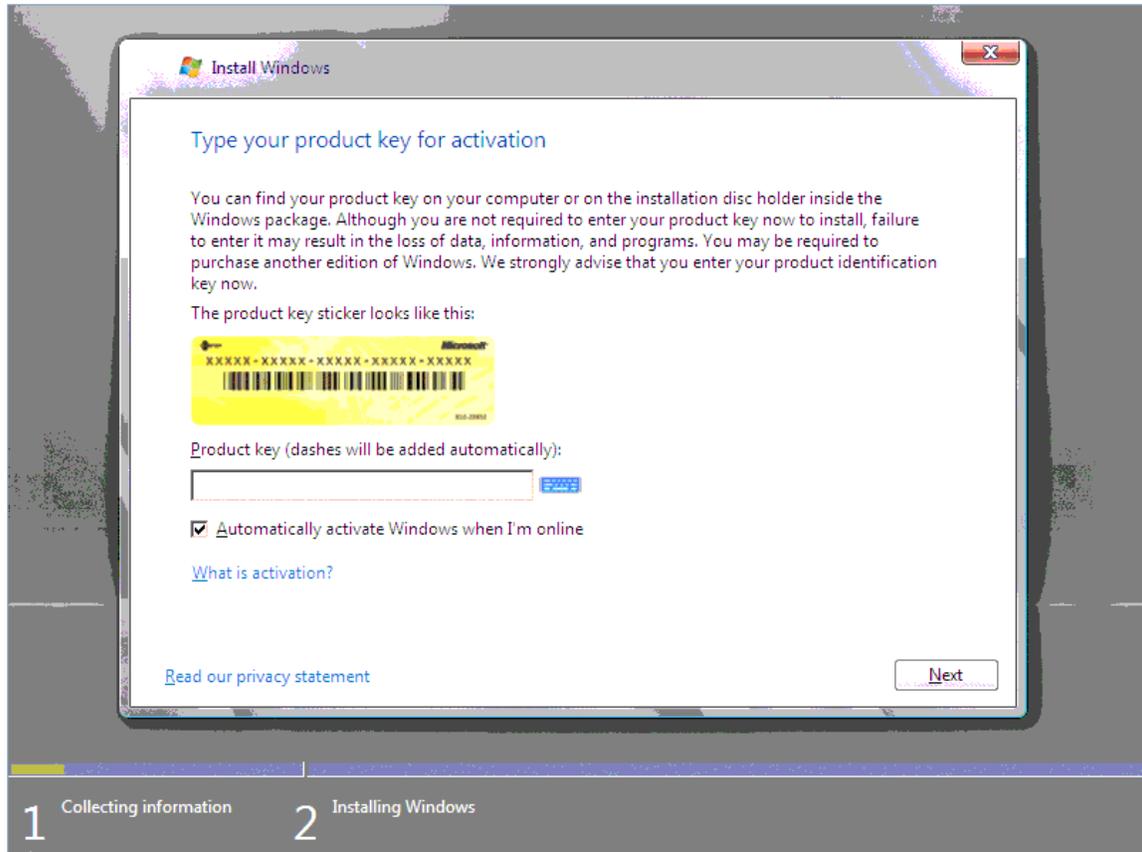
1.3.4 Install Now



Click *Install now*.

1.3.5 Product Key

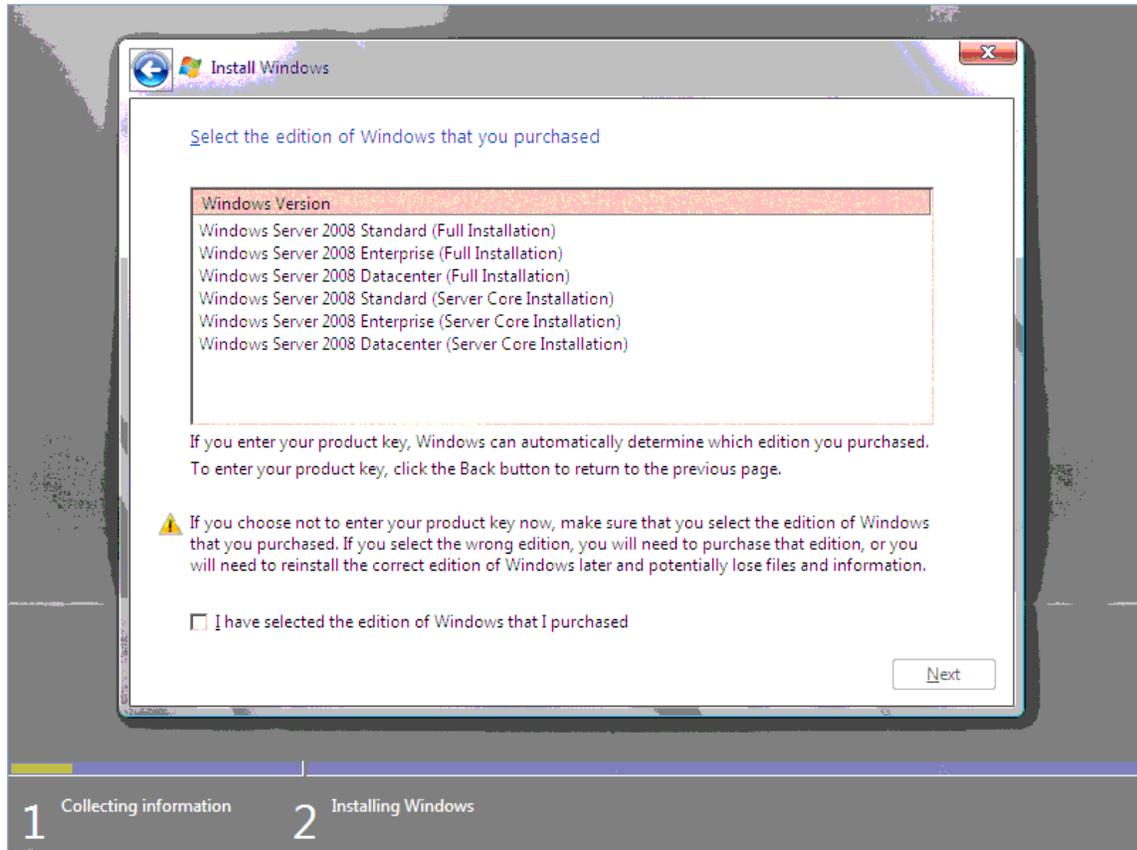
Enter as appropriate.



Click *Next*.

1.3.6 Windows Edition Selection

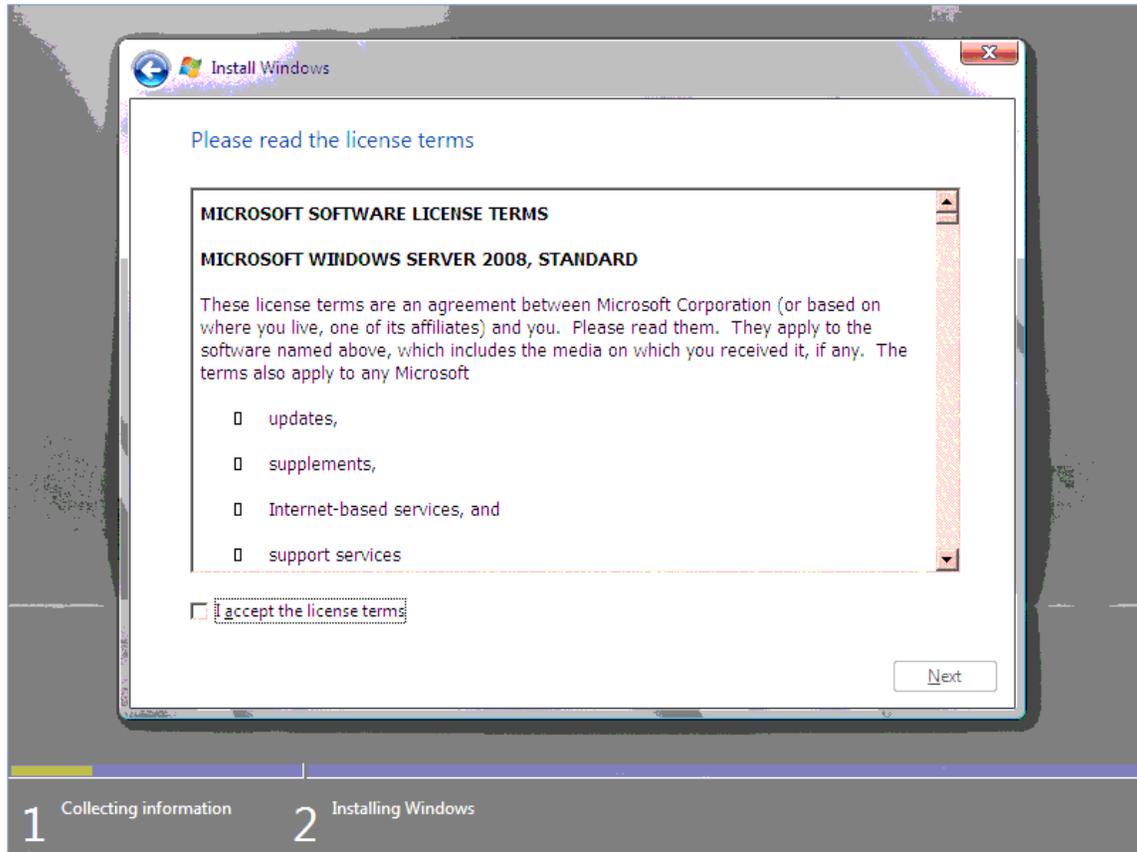
Select as appropriate.



Click *Next*.

1.3.7 License Terms

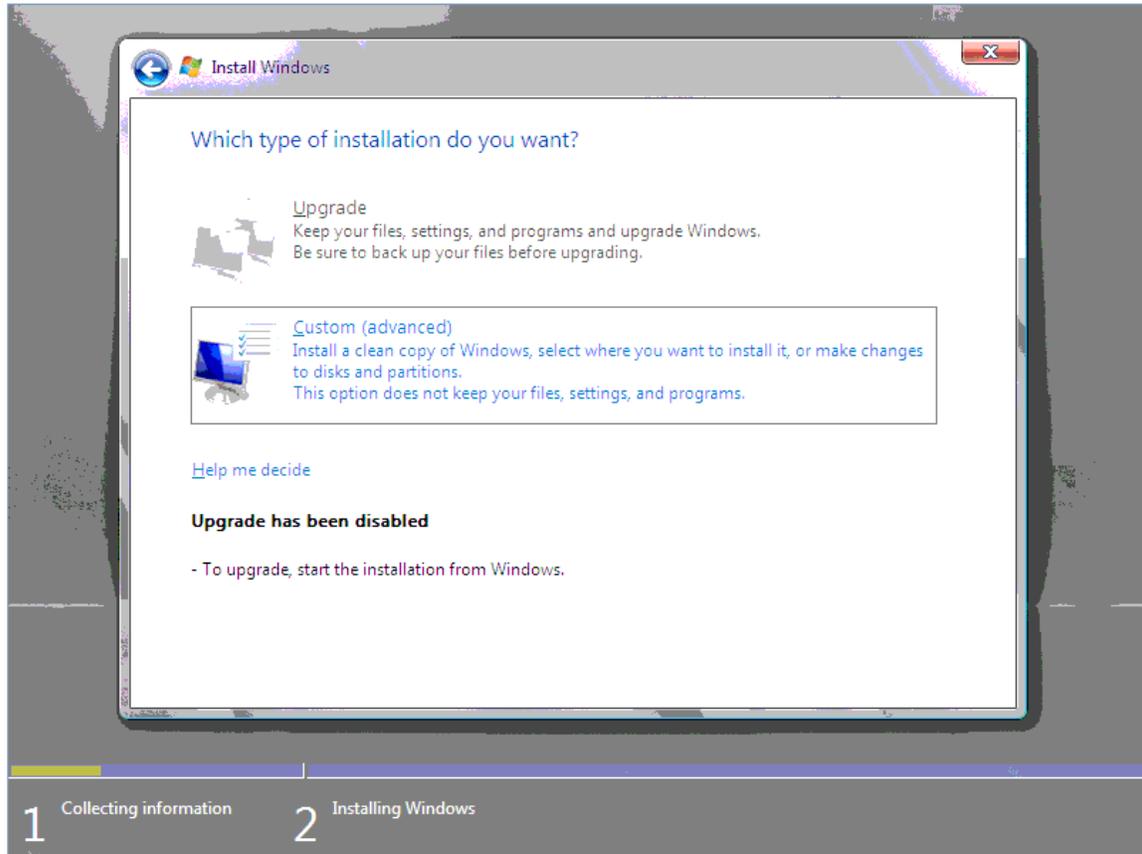
If you agree to the license select the checkbox.



Click *Next*.

1.3.8 Installation Type

For this example we are doing a clean copy.



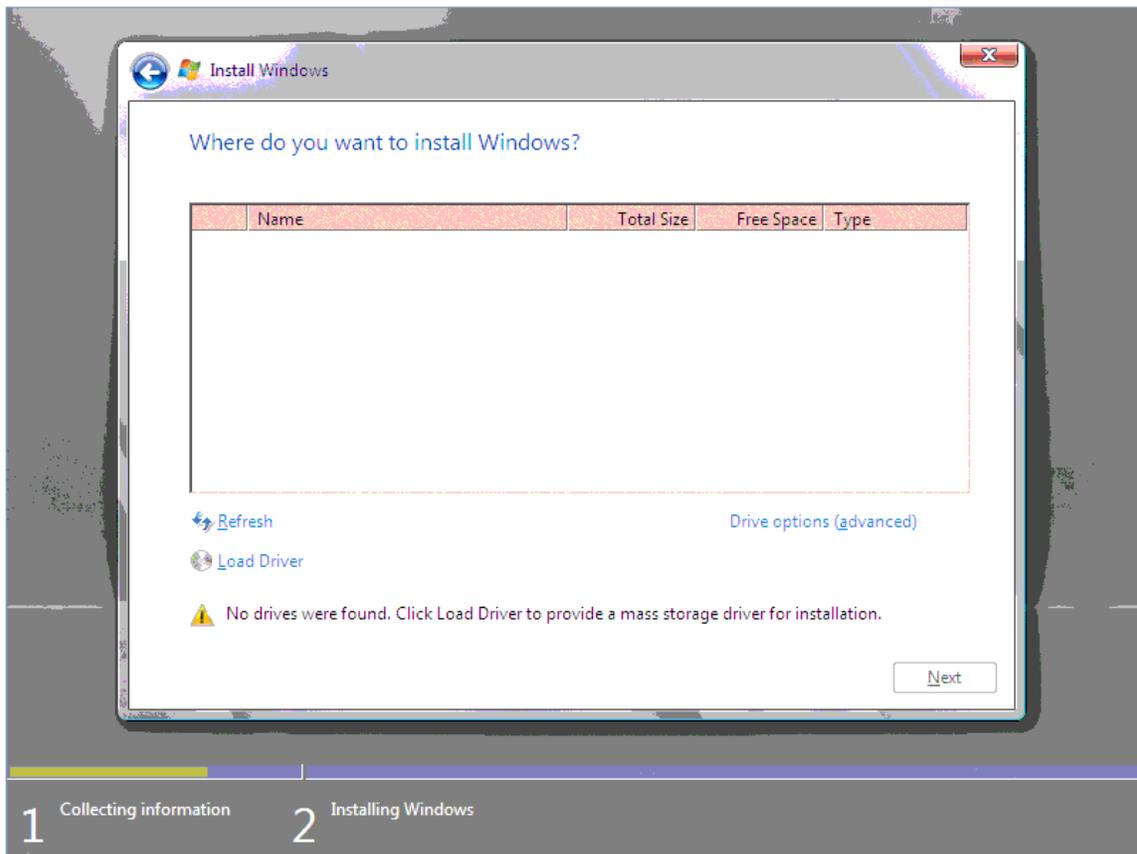
Click *Custom (advanced)*.

1.3.9 Where to Install Windows

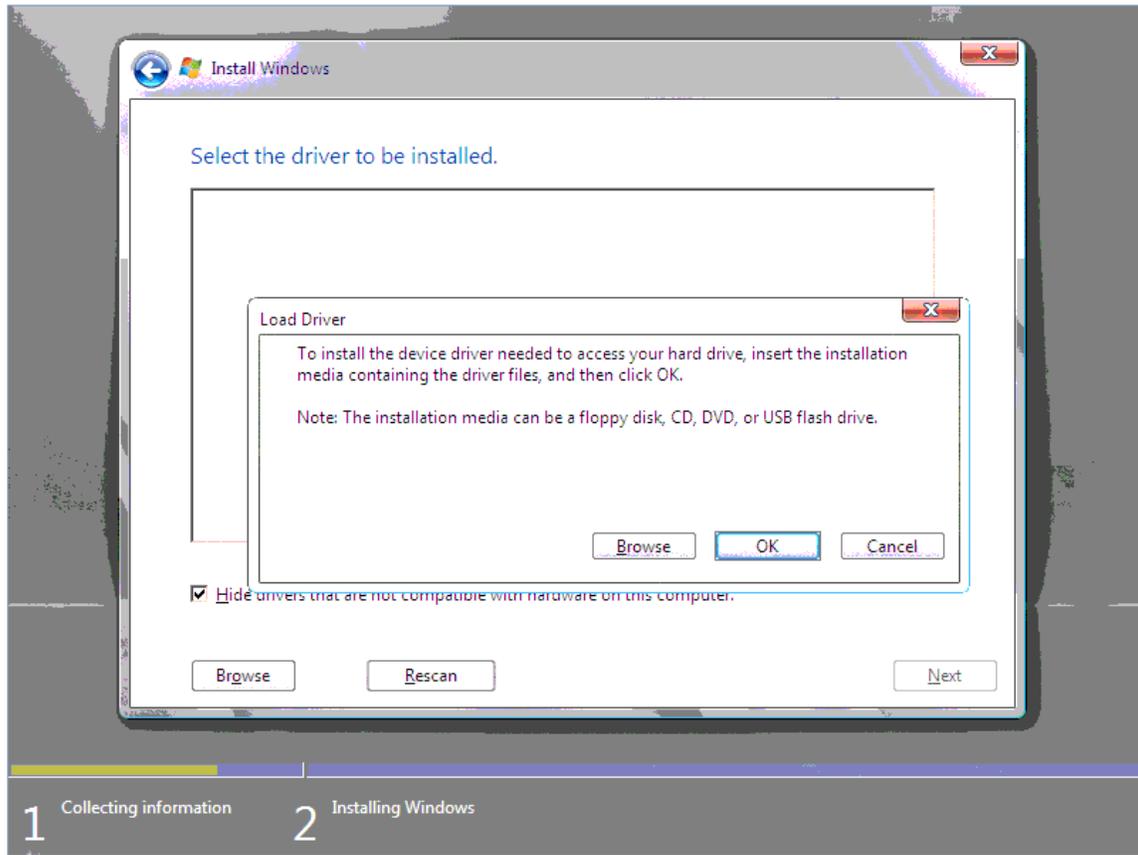
If your SAN LUN is displayed then proceed to [SAN LUN](#) on page 24.

1.3.9.1 Installing Drivers

If no drives are found you need to load the appropriate network drivers. See [Broadcom NetXtreme II Windows 2008 Drivers](#) on page 31 for instructions. Insert the USB memory device you set up with the network drivers into the USB connector on the front of the BladeCenter.

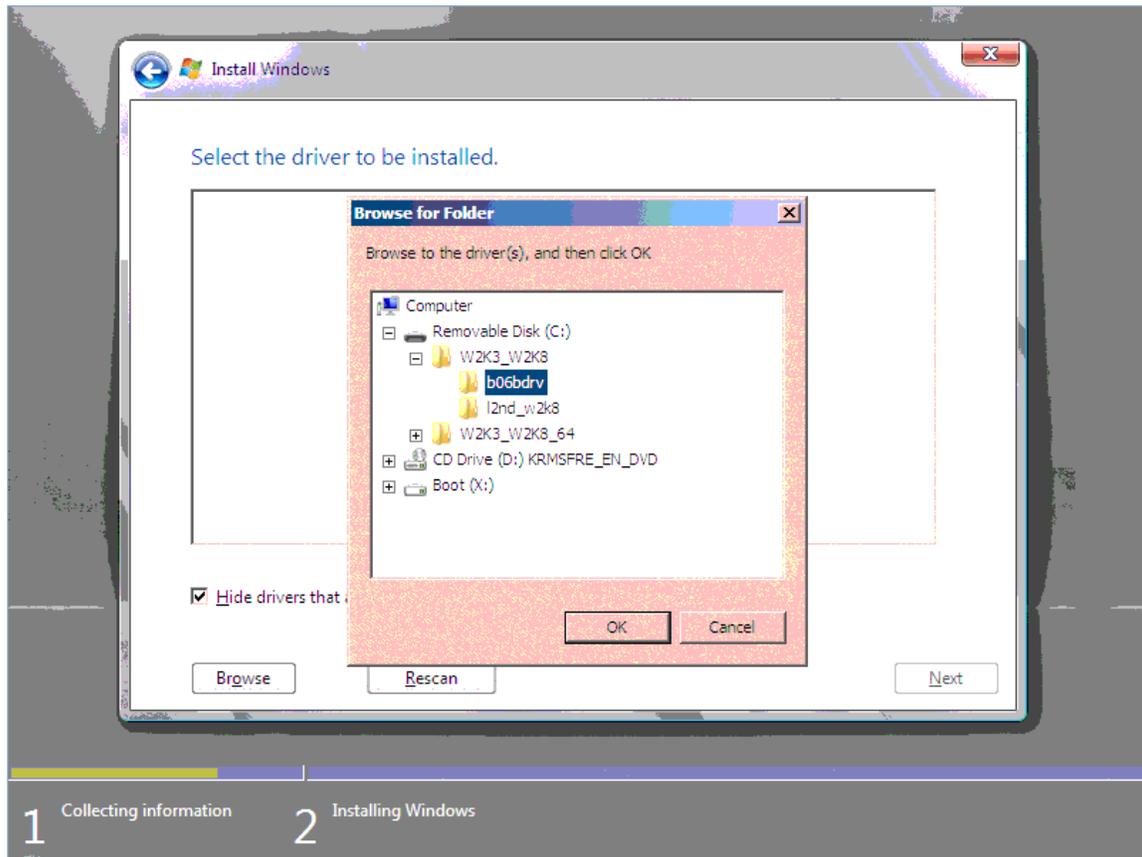


Click *Load Driver*.



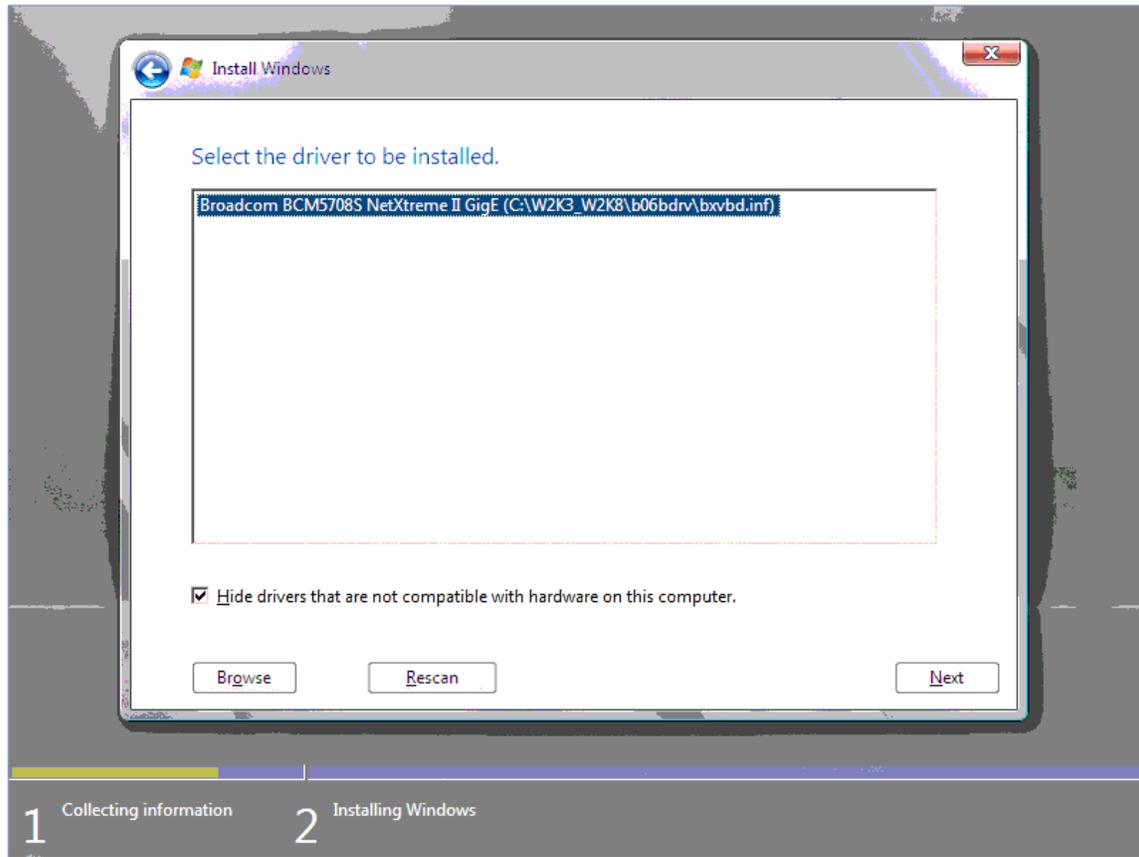
Click *Browse*.

Select your USB memory device. Expand the folder list and select the driver folder appropriate to the version of Windows you are installing (e.g. 32-bit or 64-bit).



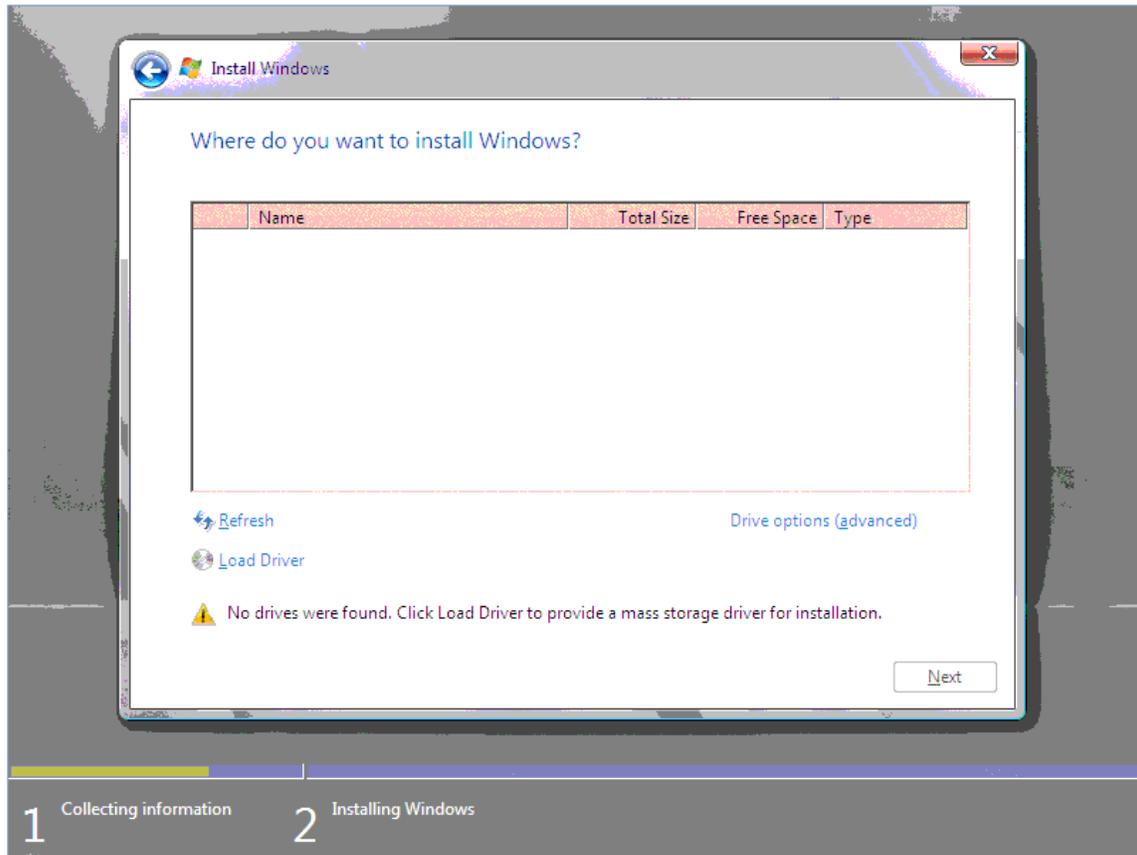
Select 'b06bdrv' and click *OK*.

In the case of Broadcom NetXtreme II select the 'vbd' driver.



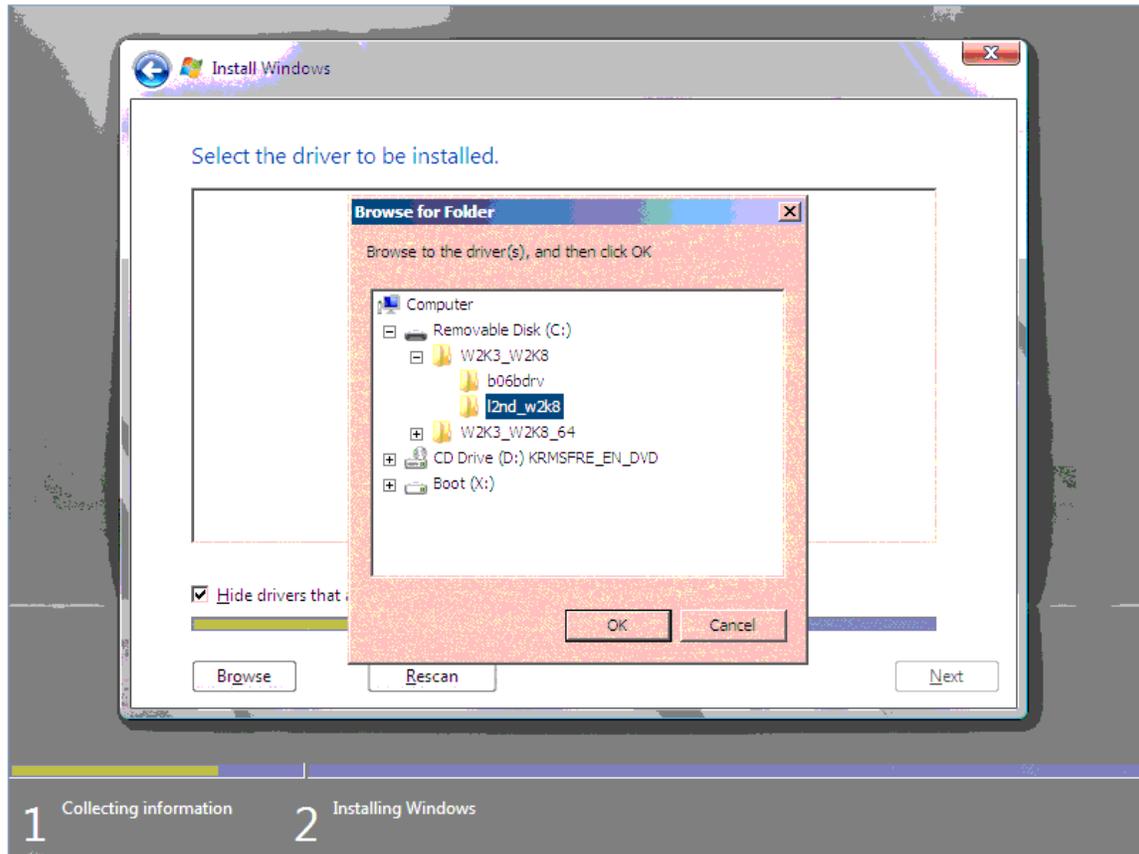
Click *Next*.

The list does remain empty.



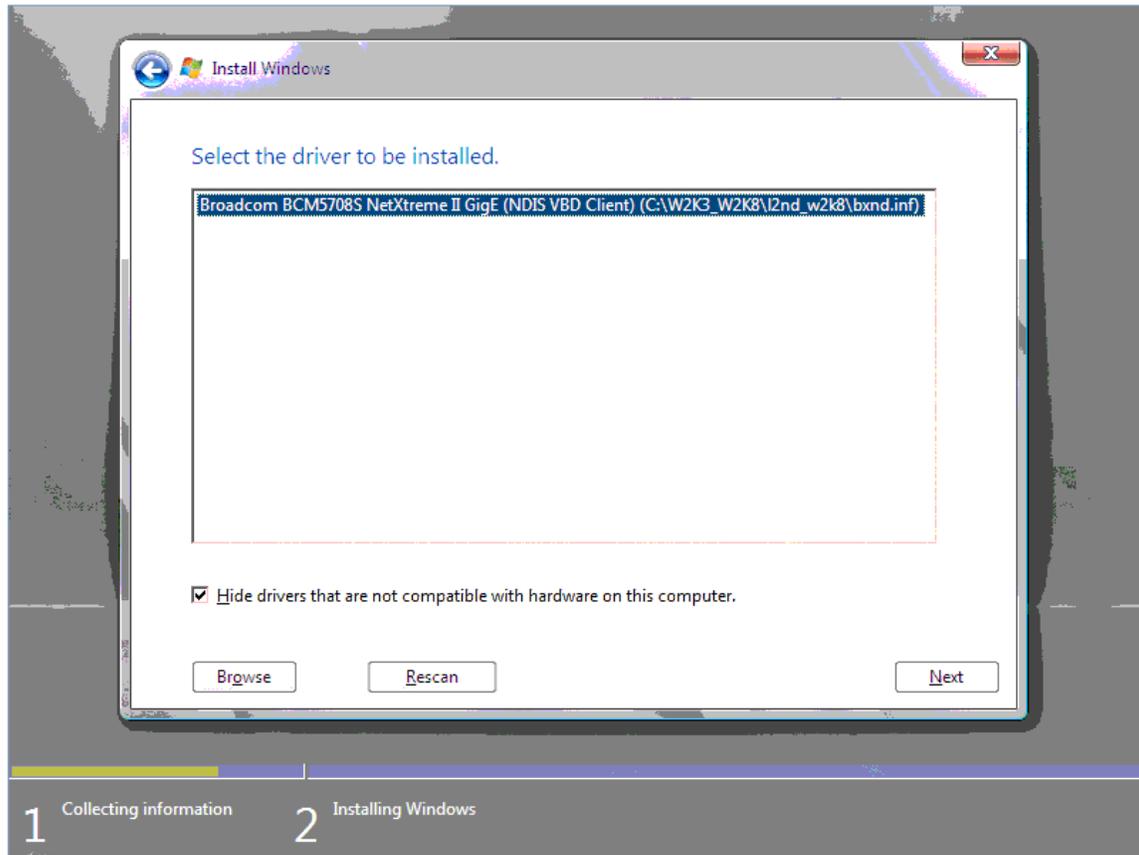
Click *Load Driver* again.

Click Browse and expand the folder list as before.



Select 'I2nd_w2k8' and click *OK*.

This time select 'ndis'.

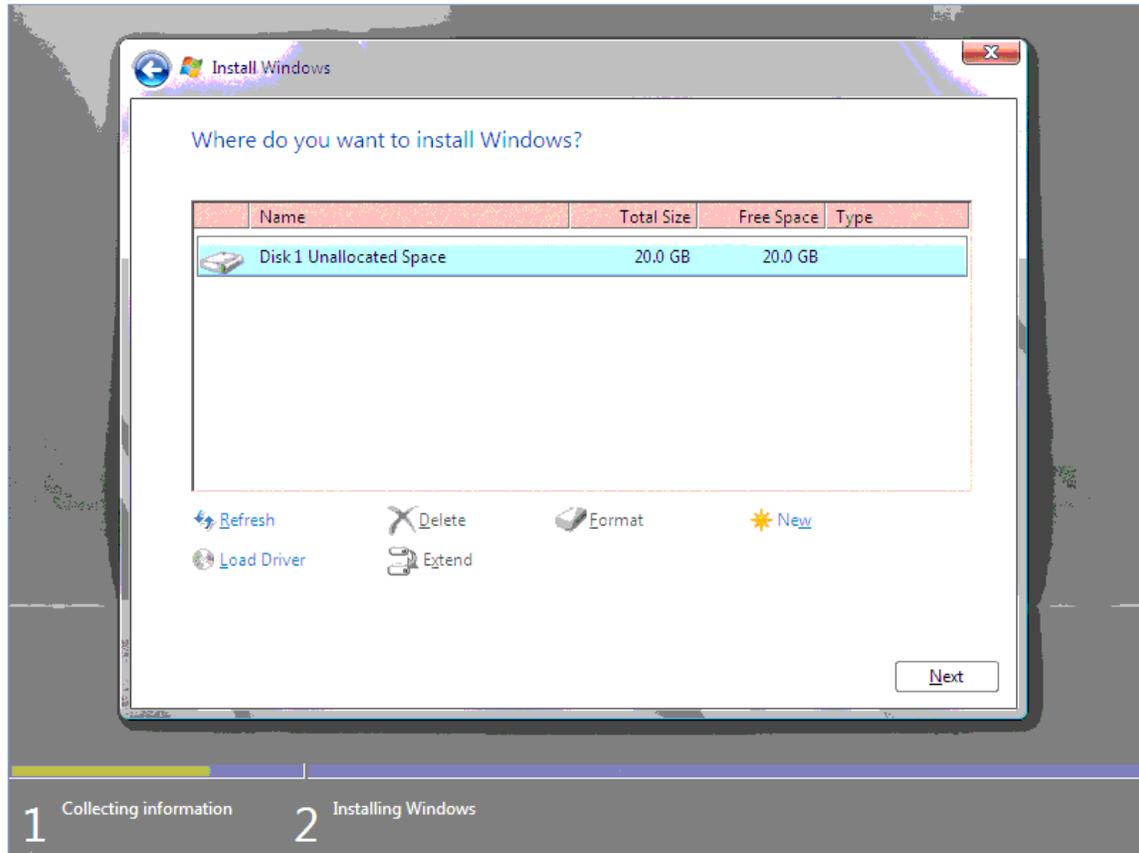


Click *Next*.

Your SAN LUN should now show up. If your SAN LUN does not show up try clicking on *Refresh*.

1.3.9.2 SAN LUN

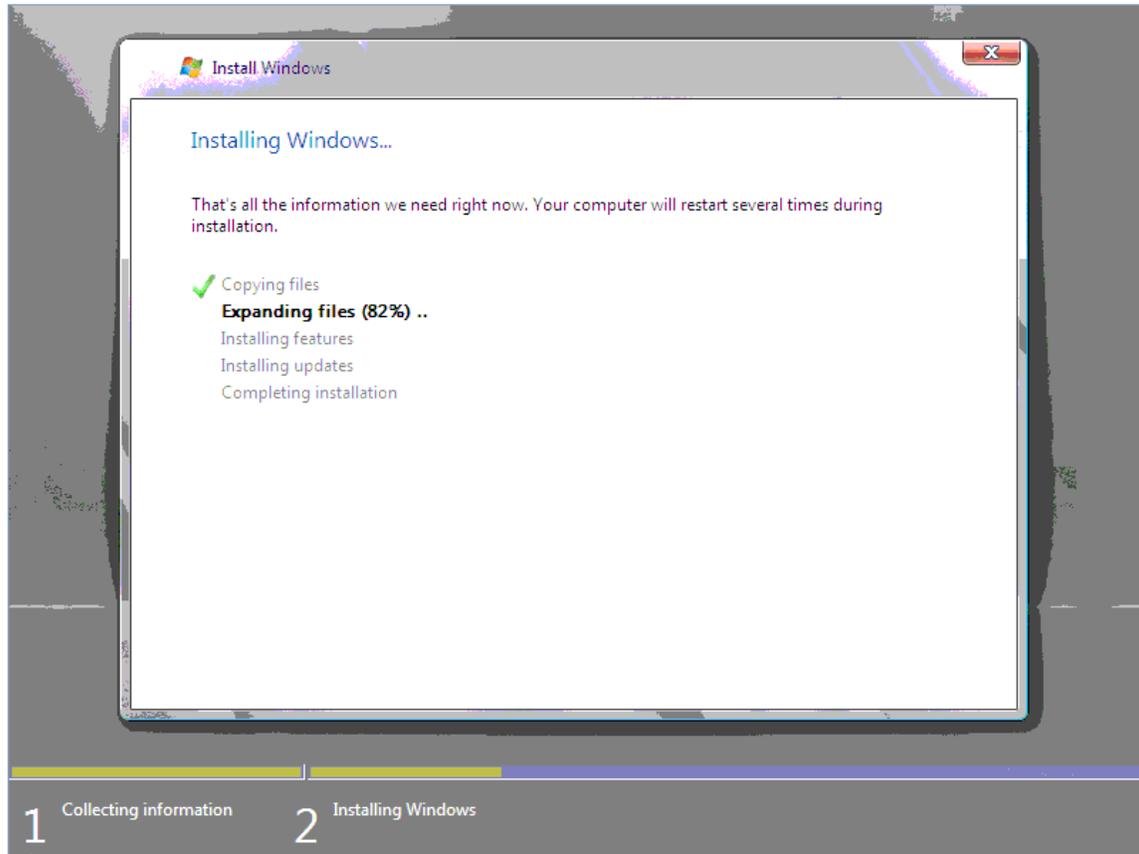
Click *Drive options (advanced)*. If your LUN is not completely clean then select the SAN disk and click *Delete*.



Select the SAN disk and click *Next*.

1.3.10 Installing Windows...

Installation proceeds.



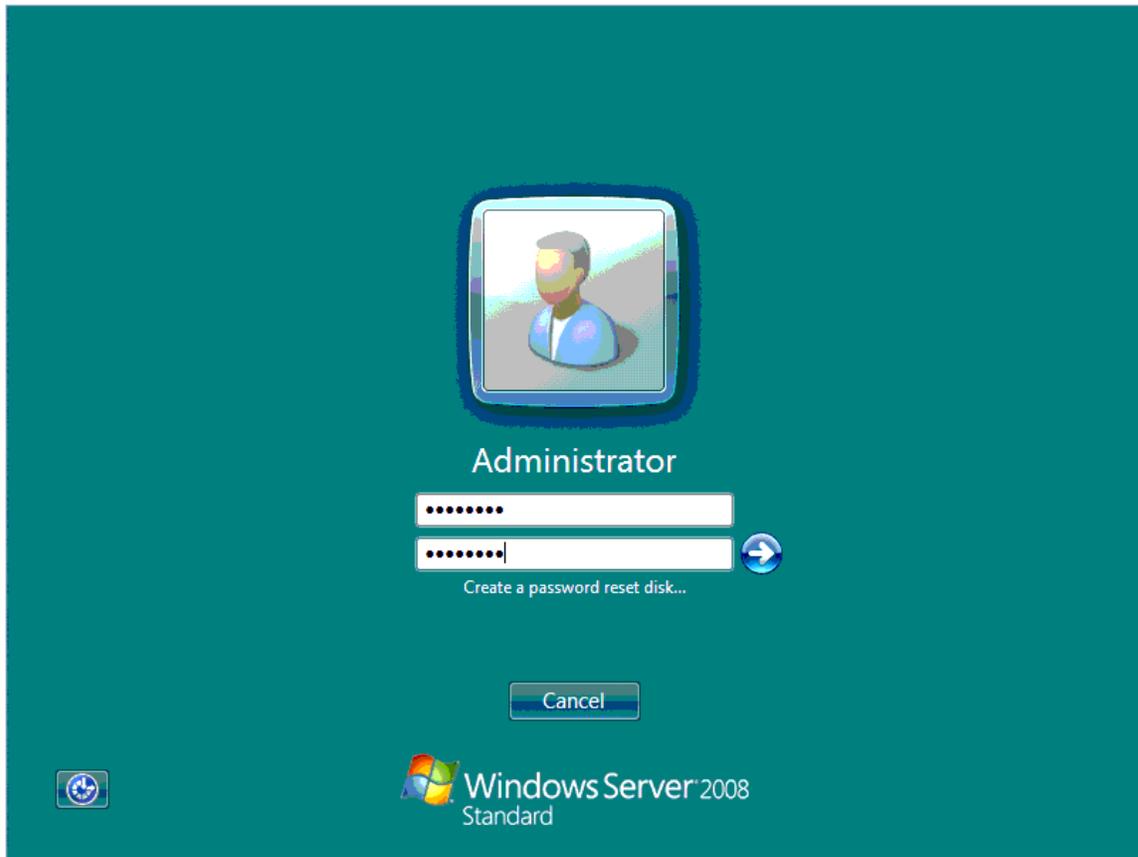
The system will reboot.

1.3.11 Install Complete

You may see the following screen.



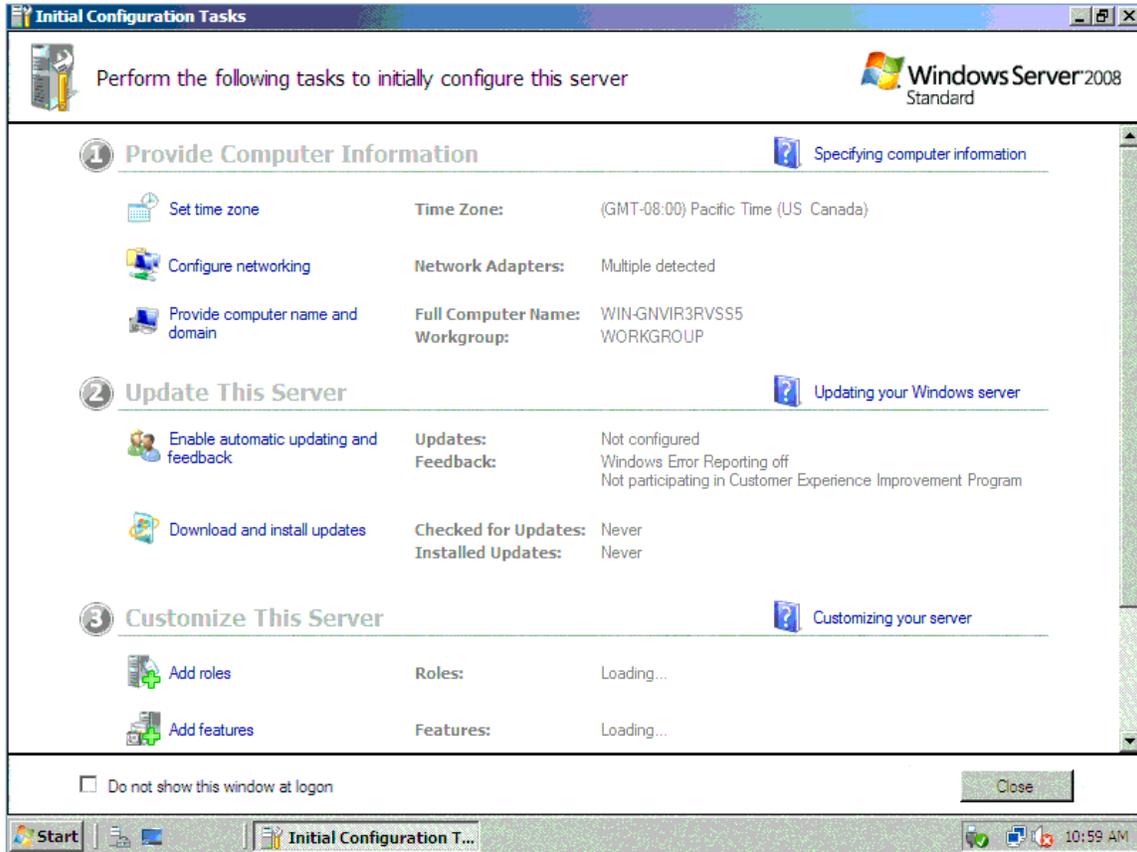
Set up your password if required.



Enter your password and log on.

1.3.12 Desktop

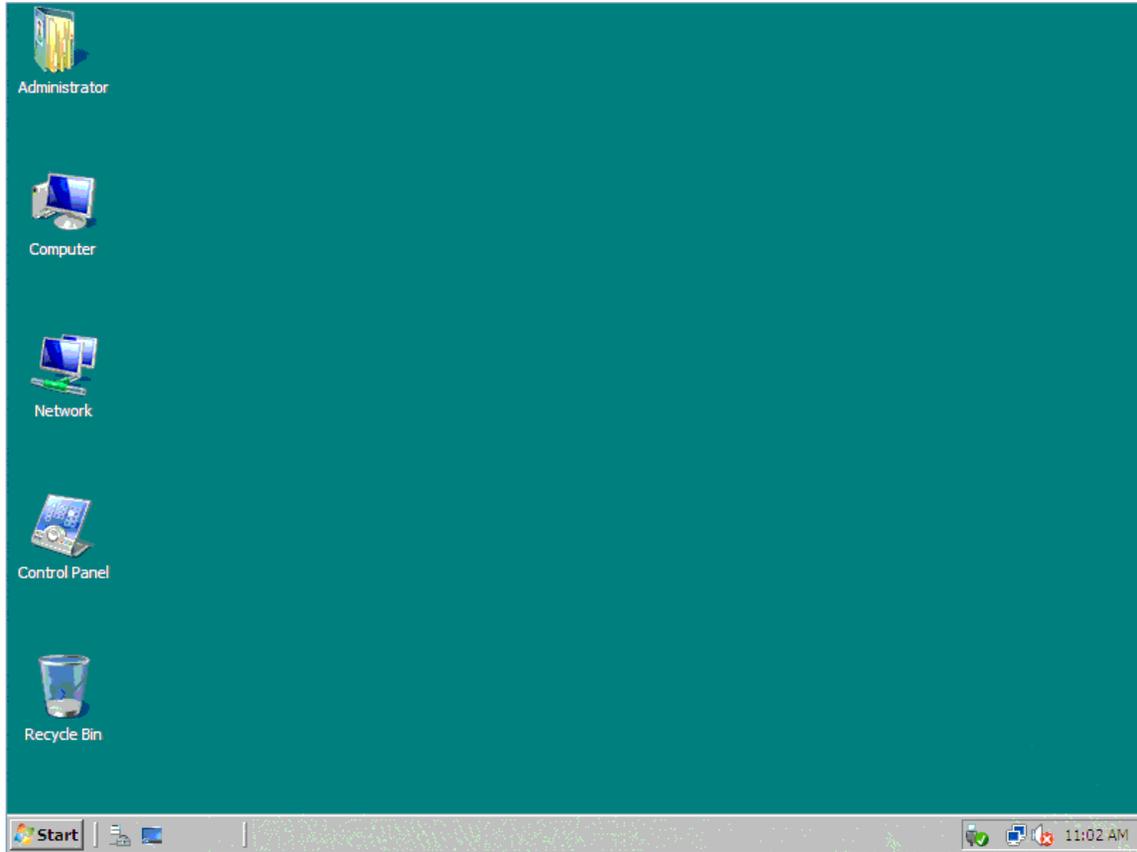
Set up your server as appropriate.



Your installation is complete.

1.3.13 Done

If you are doing a single install then you are done.



If you are going to do many installs across a set of Servers of similar Type (many 7995's for example) then you might want to consider Imaging.

1.4 Imaging (sysprep)

Imaging can be an efficient means of deployment. In this example install Windows 2008 and set things up per your preferences. Next the image is prepared via sysprep. The SAN LUN can now be cloned as a means to deploy Windows 2008.

Imaging is a powerful tool. Consult Microsoft's deployment literature for additional information.

1.4.1 Sysprep

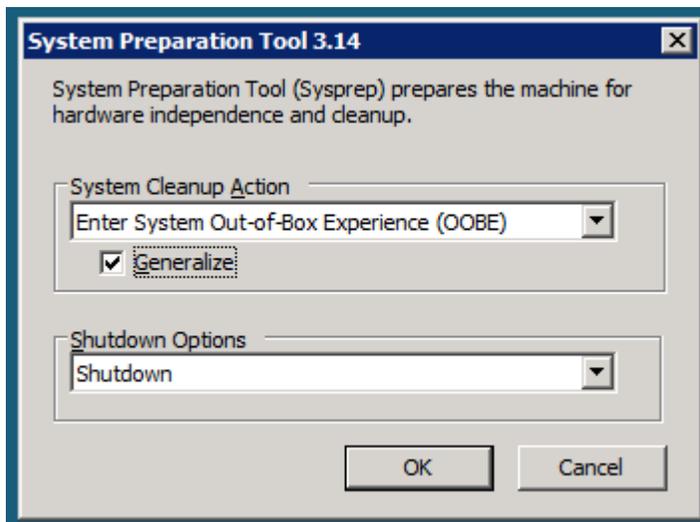
Once the system is installed and configured per your preferences run *sysprep*.

Command prompt:

```
c:\windows\system32\sysprep\sysprep.exe /quiet /generalize /shutdown /oobe
```

GUI:

```
c:\windows\system32\sysprep\sysprep.exe
```



The system shuts down.

1.4.2 SAN Storage

On your SAN storage device you can now clone the LUN that has been sysprep'd to a 'master image'. This master image can then be cloned for each system of similar Type as a means of deployment. Consult your Storage documentation for the commands specific to your device.

1.5 Appendix

1.5.1 Broadcom NetXtreme II Windows 2008 Drivers

Obtain the Windows 2008 drivers version T4.4.8 or later from:

- [Broadcom NetXtreme II Gigabit Ethernet Software CD](#)
- [Broadcom NetXtreme II Device Drivers for Windows](#)

On a USB memory device copy the appropriate files from the driver package to the USB memory device. Note: preserve the folder hierarchy when performing the copy operation.

If you are using the Windows 2008 32-bit (x86) version:

1. W2K3_W2K8\b06bdrv
2. W2K3_W2K8\I2nd_w2k8

If you are using the Windows 2008 64-bit (x64) version:

1. W2K3_W2K8_64\b06bdrv
2. W2K3_W2K8_64\I2nd_w2k8

Note on 64-bit drivers: You must be using “signed drivers”. If you are testing with non-signed drivers you must press ‘F8’ when the DVD starts to boot. You will be presented with a menu. You can then select ‘Disable Driver Signature Enforcement’. You will need to do the ‘F8’ step on every subsequent boot as well.

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