

# ITSA1001: Server Administration Fundamentals

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## WEEK 6 PRACTICAL: INSTALL WINDOWS SERVER 2012 DOMAIN CONTROLLER

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Dr. Vinh Bui

# Practical task outline

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- Install Windows Server 2012 DC role
- Promote Windows Server 2012 to DC
- Install Windows XP/7 client
- Join Windows client to AD domain

(you can watch provided video tutorial  
for additional information)

# Check Current Server Roles

The screenshot displays the Windows Server Manager interface. The top navigation bar includes 'Manage', 'Tools', 'View', and 'Help'. A dropdown menu is open under 'Manage', with an arrow pointing to 'Remove Roles and Features'. The main dashboard area is titled 'WELCOME TO SERVER MANAGER' and contains a 'QUICK START' section with a numbered list: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, and 4. Create a server group. Below this is the 'ROLES AND SERVER GROUPS' section, which shows a summary of installed roles: AD DS, DHCP, DNS, File and Storage Services, Local Server, and All Servers. Each role card lists its components: Manageability, Events, Services, Performance, and BPA results. The 'Local Server' and 'All Servers' cards have red status indicators and show a count of 1. The system tray at the bottom indicates the time is 2:06 AM on 4/22/2016.

# Check Current Server Roles

The screenshot displays the Windows Server Manager interface. A 'Remove Roles and Features Wizard' dialog box is open, showing the 'Before you begin' step. The wizard is titled 'Remove Roles and Features Wizard' and has a 'DESTINATION SERVER' field with the value 'WIN-1234.jit.edu.au'. The 'Before you begin' section contains the following text:

This wizard helps you remove roles, role services, or features.

To add roles, role services, or features:  
Start the **Add Roles and Features Wizard**.

Before you continue, verify that the following tasks have been completed:

- Decide if you want to save or delete role data
- Migrate role settings and data to another server
- Schedule downtime for affected services
- Notify users of potential service interruptions

To continue, click **Next**.

Skip this page by default

The wizard has navigation buttons: '< Previous', 'Next >', 'Remove', and 'Cancel'. The background shows the Server Manager console with a tree view of server roles and features. The tree view includes 'File and Storage Services', 'Local Server', and 'All Servers'. The 'Local Server' and 'All Servers' nodes are highlighted in red, indicating they are selected. The 'Local Server' node shows a list of roles and features: 'Manageability', 'Events', 'Services', 'Performance', and 'BPA results'. The 'All Servers' node shows the same list of roles and features. The console also displays performance and BPA results for the selected server.

# Check Current Server Roles

The screenshot displays the Windows Server 2012 Server Manager console. A 'Remove Roles and Features Wizard' dialog box is open, showing the 'Server Selection' step. The wizard is titled 'Remove Roles and Features Wizard' and has a 'DESTINATION SERVER' of 'WIN-1234.vit.edu.au'. The 'Server Selection' step is active, and the user is prompted to 'Select a server or a virtual hard disk from which to remove roles and features.' There are two radio buttons: 'Select a server from the server pool' (selected) and 'Select a virtual hard disk'. Below this is a 'Server Pool' section with a 'Filter:' text box and a table of servers. The table has columns for 'Name', 'IP Address', and 'Operating System'. One server is listed: 'WIN-1234.vit.edu.au', '192.168.123.1', and 'Microsoft Windows Server 2012 R2 Standard'. Below the table, it says '1 Computer(s) found' and 'This page shows servers that are running Windows Server 2012, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.' There are navigation buttons: '< Previous', 'Next >', 'Remove', and 'Cancel'. The background shows the Server Manager interface with a list of server roles and services. The roles listed are 'File and Storage Services', 'Local Server', and 'All Servers'. Each role has a list of services: 'Manageability', 'Events', 'Services', 'Performance', and 'BPA results'. The 'Local Server' and 'All Servers' roles have red indicators next to 'Events' and 'Services', suggesting they are not installed or are in a state that needs attention. The system tray at the bottom shows the date and time as '2:09 AM 4/22/2016'.

# Check Current Server Roles

Remove Roles and Features Wizard

Remove server roles

DESTINATION SERVER  
WIN-1234.jit.edu.au

Before You Begin  
Server Selection  
**Server Roles**  
Features  
Confirmation  
Results

To remove one or more installed roles from the selected server, clear their check boxes.

Roles	Description
<input type="checkbox"/> Active Directory Certificate Services (Not installed)	Active Directory Certificate Services (AD CS) is used to create certification authorities and related role services that allow you to issue and manage certificates used in a variety of applications.
<input checked="" type="checkbox"/> Active Directory Domain Services	
<input type="checkbox"/> Active Directory Federation Services (Not installed)	
<input type="checkbox"/> Active Directory Lightweight Directory Services (Not installed)	
<input type="checkbox"/> Active Directory Rights Management Services (Not installed)	
<input type="checkbox"/> Application Server (Not installed)	
<input checked="" type="checkbox"/> DHCP Server	
<input checked="" type="checkbox"/> DNS Server	
<input type="checkbox"/> Fax Server (Not installed)	
<input checked="" type="checkbox"/> File and Storage Services	
<input type="checkbox"/> Hyper-V (Not installed)	
<input type="checkbox"/> Network Policy and Access Services (Not installed)	
<input type="checkbox"/> Print and Document Services (Not installed)	
<input type="checkbox"/> Remote Access (Not installed)	

Un-tick DNS Server role to allow automatic DNS configuration

File and Storage Services 1  
Manageability  
Events  
Services  
Performance  
BPA results

Local Server 1  
Manageability  
2 Events  
3 Services  
Performance  
BPA results  
4/21/2016 4:45 AM

All Servers 1  
Manageability  
2 Events  
3 Services  
Performance  
BPA results  
4/21/2016 4:45 AM

# Add Active Directory Roles

The screenshot displays the Windows Server Manager interface. The top navigation bar shows 'Server Manager' and 'Dashboard'. The left sidebar contains a 'Dashboard' menu with options for 'Local Server', 'All Servers', 'DHCP', 'DNS', and 'File and Storage Services'. The main content area is titled 'WELCOME TO SERVER MANAGER' and features a 'QUICK START' section with a numbered list of tasks:

- 1 Configure this local server
- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group

An arrow points to the second task, 'Add roles and features'. Below this section is the 'ROLES AND SERVER GROUPS' area, which shows a summary of installed roles and server groups. The summary indicates 3 roles, 1 server group, and 1 server total. The roles listed are DHCP, DNS, and File and Storage Services. The server groups listed are Local Server and All Servers. Each role and server group card displays a list of associated features: Manageability, Events, Services, Performance, and BPA results. The Local Server and All Servers cards also show a red '1' next to the Events feature, indicating a configuration issue. The date 4/21/2016 2:01 AM is displayed at the bottom right of the server group cards.

# Add Active Directory Roles

The screenshot displays the Windows Server Manager interface. In the foreground, the 'Add Roles and Features Wizard' is open, showing the 'Before you begin' step. The wizard provides instructions on how to remove roles and lists prerequisites that must be met before proceeding. A black arrow points to the 'Next >' button at the bottom of the wizard. The background shows the Server Manager console with a tree view on the left and server status cards for 'Local Server' and 'All Servers' on the right.

**Before you begin**

DESTINATION SERVER  
WIN-1234

This wizard helps you install roles, role services, or features. You determine which roles, role services, or features to install based on the computing needs of your organization, such as sharing documents, or hosting a website.

**Before You Begin**

Installation Type  
Server Selection  
Server Roles  
Features  
Confirmation  
Results

To remove roles, role services, or features:  
Start the [Remove Roles and Features Wizard](#).

Before you continue, verify that the following tasks have been completed:

- The Administrator account has a strong password
- Network settings, such as static IP addresses, are configured
- The most current security updates from Windows Update are installed

If you must verify that any of the preceding prerequisites have been completed, close the wizard, complete the steps, and then run the wizard again.

To continue, click Next.

Skip this page by default

< Previous Next > Install Cancel



# Add Active Directory Roles

The screenshot displays the Windows Server 2012 Server Manager interface. A dialog box titled "Add Roles and Features Wizard" is open, showing the "Select installation type" step. The wizard is running on a destination server named "WIN-1234". The "Installation Type" section is selected in the left-hand navigation pane. Two options are presented: "Role-based or feature-based installation" (selected) and "Remote Desktop Services installation". The "Next >" button is highlighted with a black arrow.

DESTINATION SERVER  
WIN-1234

Select the installation type. You can install roles and features on a running physical computer or virtual machine, or on an offline virtual hard disk (VHD).

- Role-based or feature-based installation**  
Configure a single server by adding roles, role services, and features.
- Remote Desktop Services installation**  
Install required role services for Virtual Desktop Infrastructure (VDI) to create a virtual machine-based or session-based desktop deployment.

< Previous Next > Install Cancel

# Add Active Directory Roles

The screenshot shows the 'Add Roles and Features Wizard' in the Server Manager console. The wizard is titled 'Add Roles and Features Wizard' and is currently at the 'Server Selection' step. The 'Destination Server' is identified as 'WIN-1234'. The wizard prompts the user to 'Select a server or a virtual hard disk on which to install roles and features.' There are two radio button options: 'Select a server from the server pool' (which is selected) and 'Select a virtual hard disk'. Below these options is a 'Server Pool' section with a 'Filter:' text box and a table of servers. The table has three columns: 'Name', 'IP Address', and 'Operating System'. One server is listed: 'WIN-1234' with IP address '192.168.123.1' and operating system 'Microsoft Windows Server 2012 R2 Standard'. Below the table, it says '1 Computer(s) found' and provides a note: 'This page shows servers that are running Windows Server 2012, and that have been added by using the Add Servers command in Server Manager. Offline servers and newly-added servers from which data collection is still incomplete are not shown.' At the bottom of the wizard, there are four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'. A black arrow points to the 'Next >' button. The background shows the Server Manager console with a 'Local Server' and 'All Servers' tile, and a taskbar at the bottom with the system clock showing 2:22 AM on 4/21/2016.

Name	IP Address	Operating System
WIN-1234	192.168.123.1	Microsoft Windows Server 2012 R2 Standard

# Add Active Directory Roles

The screenshot displays the Windows Server Manager interface. In the foreground, the 'Add Roles and Features Wizard' is open, showing the 'Server Roles' step. The wizard lists the following roles:

- Active Directory Certificate Services
- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Application Server
- DHCP Server (Installed)
- DNS Server (Installed)
- Fax Server
- File and Storage Services (3 of 12 installed)
- Hyper-V
- Network Policy and Access Services
- Print and Document Services
- Remote Access
- Remote Desktop Services

The description for 'Active Directory Certificate Services (AD CS)' is: 'Active Directory Certificate Services (AD CS) is used to create certification authorities and related role services that allow you to issue and manage certificates used in a variety of applications.'

The background shows the Server Manager console with the following views:

- Storage: 1
- Local Server: 1
  - Manageability
  - Events
  - Services
  - Performance
  - BPA results
- All Servers: 1
  - Manageability
  - Events
  - Services
  - Performance
  - BPA results

The system tray at the bottom shows the time as 2:22 AM on 4/21/2016.

# Promote Server to Domain Controller

Server Manager - AD DS

**SERVERS**  
All servers | 1 total

Configuration required for Active Directory Domain Services at WIN-1234

Server Name	IPv4 Address	Manageability	Last Update	Windows Activation	
WIN-1234	192.168.123.1	Online	Performance counters not started	4/21/2016 2:58:38 AM	Not activated

**EVENTS**  
All events | 12 total

Server Name	ID	Severity	Source	Log	Date and Time
WIN-1234	1202	Error	DFSR	DFS Replication	4/21/2016 2:48:28 AM
WIN-1234	408	Error	Microsoft-Windows-DNS-Server-Service	DNS Server	4/21/2016 2:48:21 AM
WIN-1234	408	Error	Microsoft-Windows-DNS-Server-Service	DNS Server	4/21/2016 2:48:21 AM
WIN-1234	414	Warning	Microsoft-Windows-DNS-Server-Service	DNS Server	4/21/2016 2:48:21 AM
WIN-1234	407	Error	Microsoft-Windows-DNS-Server-Service	DNS Server	4/21/2016 2:48:21 AM
WIN-1234	404	Error	Microsoft-Windows-DNS-Server-Service	DNS Server	4/21/2016 2:48:21 AM
WIN-1234	1202	Error	DFSR	DFS Replication	4/21/2016 2:24:32 AM

**SERVICES**  
All services | 13 total

Server Name	Display Name	Service Name	Status	Start Type
WIN-1234	Windows Time	W32Time	Stopped	Manual (Triggered)
WIN-1234	Active Directory Web Services	ADWS	Stopped	Disabled
WIN-1234	Active Directory Domain Services	NTDS	Stopped	Disabled
WIN-1234	Netlogon	Netlogon	Stopped	Manual
WIN-1234	Distributed Link Tracking Client	TrkWks	Running	Automatic
WIN-1234	Intrinsite Messaging	lsmSrv	Stopped	Disabled
WIN-1234	DFS Namespace	Dfs	Running	Automatic

# Promote Server to Domain Controller

The screenshot displays the Windows Server Manager interface. A task window titled 'All Servers Task Details and Notifications' is open, showing a task named 'Promote this server to a domain controller'. The task status is 'Not Started' and the message is 'Configuration required for Active Directory Domain Services'. A black arrow points to the task name. Below the task list, a notification states: 'Additional steps are required to make this machine a domain controller.' at 4/21/2016 2:48:40 AM.

The background shows the 'All Tasks' pane with a table of tasks:

Status	Task Name	Stage	Message	Action	Notifications
Warning	Post-deployment Configuration	Not Started	Configuration required for Active Directory Domain Services	Promote this server to a domain controller	1

Below the tasks pane, the 'SERVICES' pane shows a table of services:

Server Name	Display Name	Service Name	Status	Start Type
WIN-1234	Windows Time	W32Time	Stopped	Manual (Triggered)
WIN-1234	Active Directory Web Services	ADWS	Stopped	Disabled
WIN-1234	Active Directory Domain Services	NTDS	Stopped	Disabled
WIN-1234	Netlogon	Netlogon	Stopped	Manual
WIN-1234	Distributed Link Tracking Client	TrkWks	Running	Automatic
WIN-1234	Intersite Messaging	IsmServ	Stopped	Disabled
WIN-1234	DFS Namespace	Dfs	Running	Automatic

# Promote Server to Domain Controller

The screenshot displays the Windows Server Manager interface with the Active Directory Domain Services Configuration Wizard open. The wizard is at the 'Deployment Configuration' step, showing the following options:

- Deployment Configuration
- Domain Controller Options
- Additional Options
- Paths
- Review Options
- Prerequisites Check
- Installation
- Results

The 'Deployment Configuration' section is active, showing the following options:

- Select the deployment operation:
  - Add a domain controller to an existing domain
  - Add a new domain to an existing forest
  - Add a new forest
- Specify the domain information for this operation:
  - Root domain name:

The 'Next >' button is highlighted with a black arrow, and the 'Root domain name' text box is also highlighted with a black arrow. The background shows the Server Manager console with various server roles and their status indicators.

# Promote Server to Domain Controller

Active Directory Domain Services Configuration Wizard

Domain Controller Options

TARGET SERVER  
WIN-1234.VIT.edu.au

Deployment Configuration

Domain Controller Options

DNS Options

Additional Options

Paths

Review Options

Prerequisites Check

Installation

Results

Select functional level of the new forest and root domain

Forest functional level: Windows Server 2008

Domain functional level: Windows Server 2008

Specify domain controller capabilities

Domain Name System (DNS) server

Global Catalog (GC)

Read only domain controller (RODC)

Type the Directory Services Restore Mode (DSRM) password

Password:

Confirm password:

More about domain controller options

< Previous Next > Install Cancel

File and Storage Services

Local Server

All Servers

4/21/2016 4:32 AM

4:37 AM 4/21/2016

# Promote Server to Domain Controller

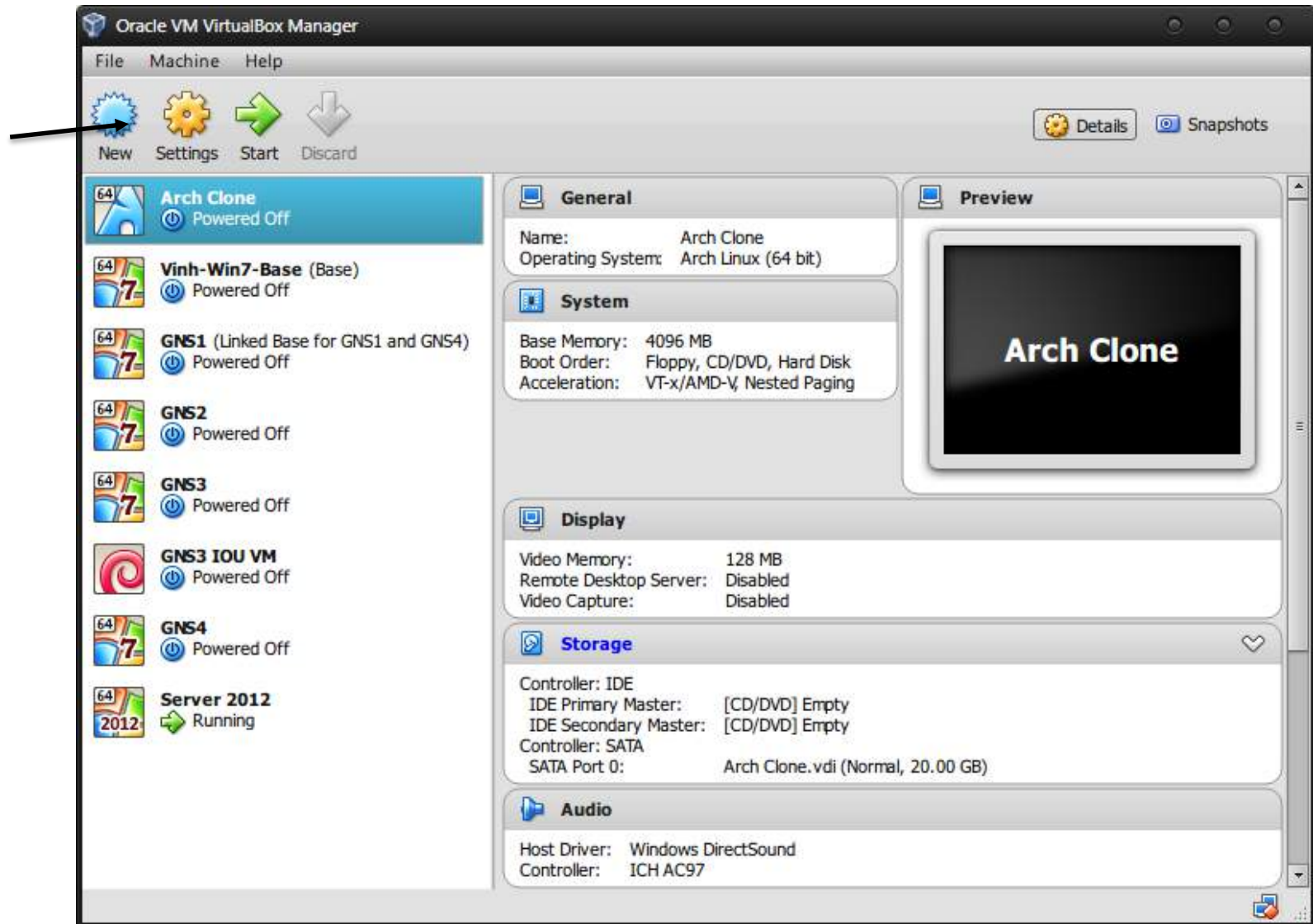
The screenshot displays the 'Active Directory Domain Services Configuration Wizard' in the 'Prerequisites Check' step. The target server is 'WIN-1234'. A message states: 'All prerequisite checks passed successfully. Click 'Install' to begin installation.' The 'Install' button is highlighted with a black arrow. Below the wizard, the 'SERVICES' list is visible:

Server Name	Display Name	Service Name	Status	Start Type
WIN-1234	Windows Time	W32Time	Stopped	Manual (Triggered)
WIN-1234	Active Directory Web Services	ADWS	Stopped	Disabled
WIN-1234	Active Directory Domain Services	NTDS	Stopped	Disabled
WIN-1234	Netlogon	Netlogon	Stopped	Manual
WIN-1234	Distributed Link Tracking Client	TrkWks	Running	Automatic
WIN-1234	Intrinsite Messaging	IsmServ	Stopped	Disabled
WIN-1234	DFS Namespace	Dfs	Running	Automatic

While it install the Active Directory Domain Controller, proceed with setting up the client. **DON'T CLOSE THE SERVER 2012 WINDOW**



# Active Directory – Client installation

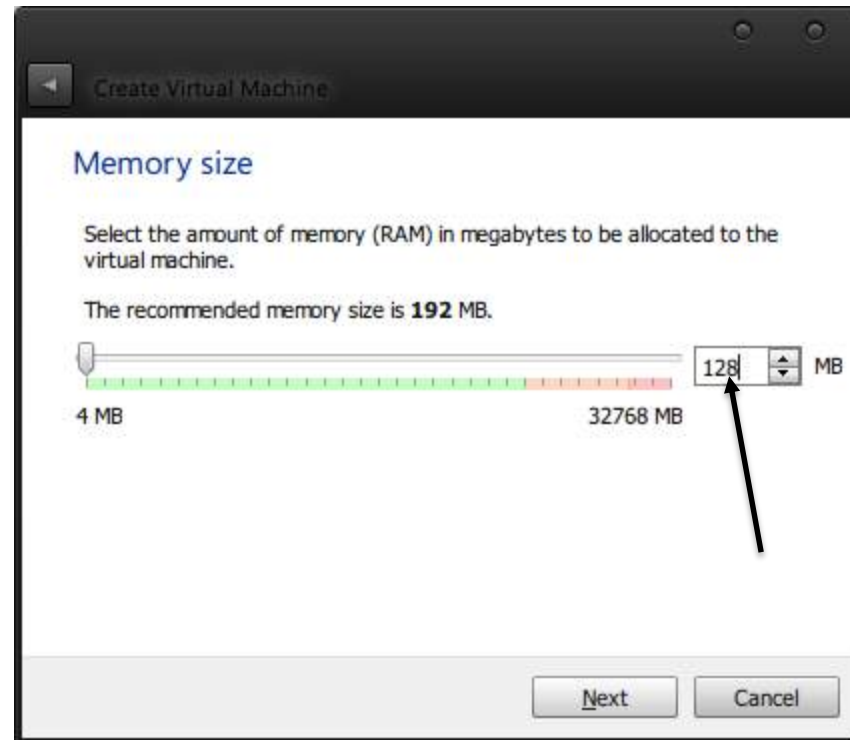


# Active Directory – Client Installation

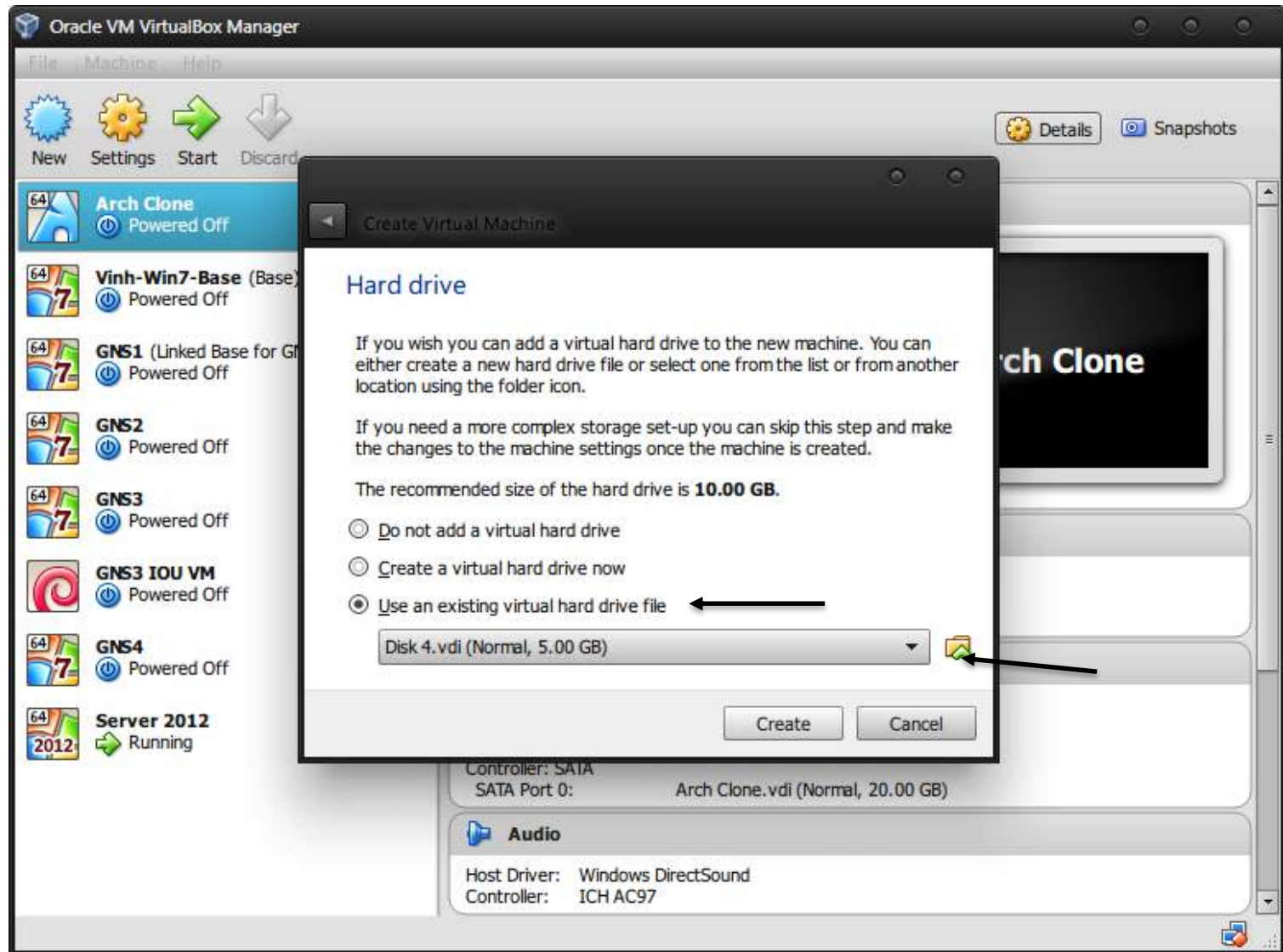


Make sure the  
Version is set to XP  
(32-bit).

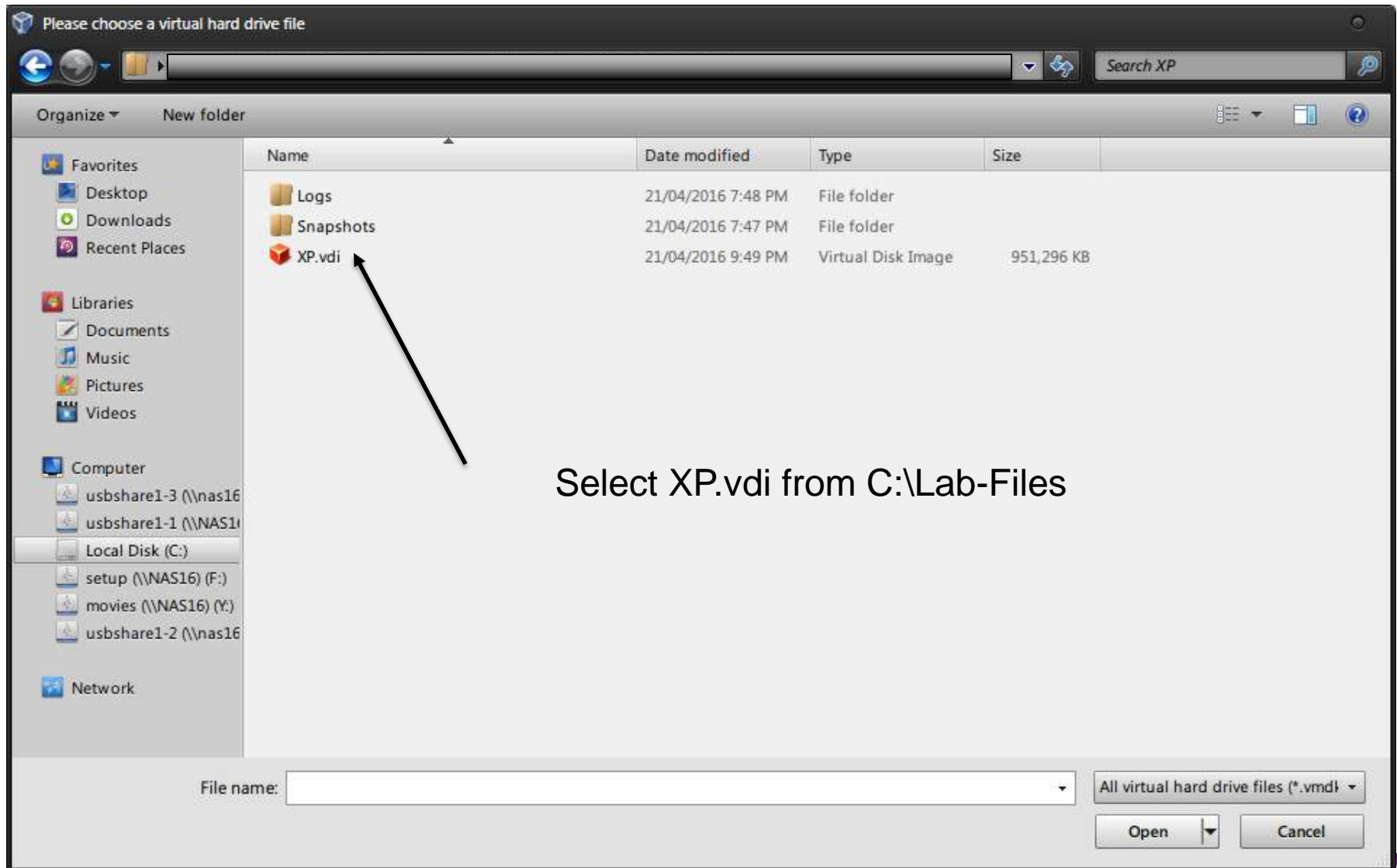
# Active Directory – Client Installation



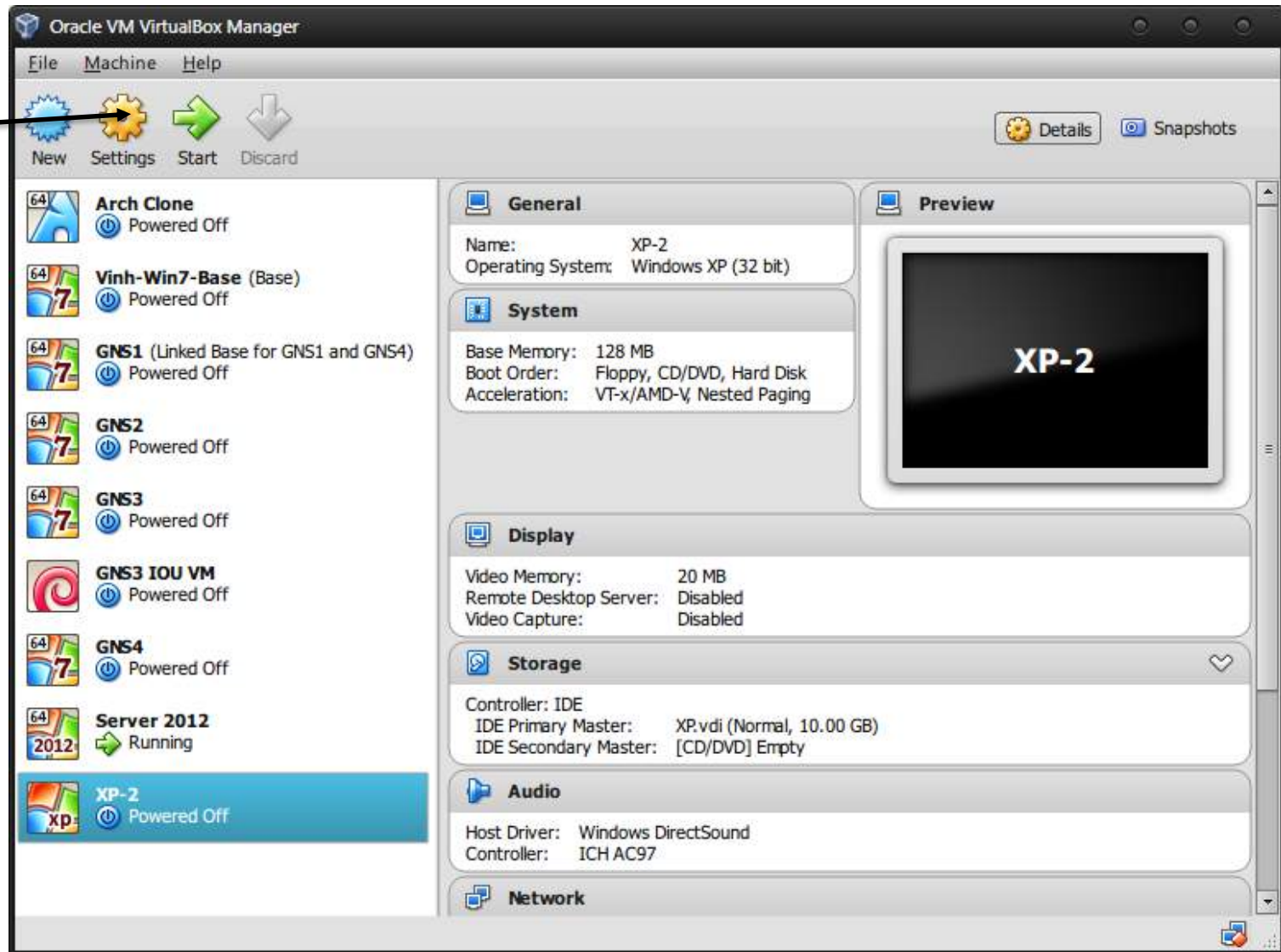
# Active Directory – Client Installation



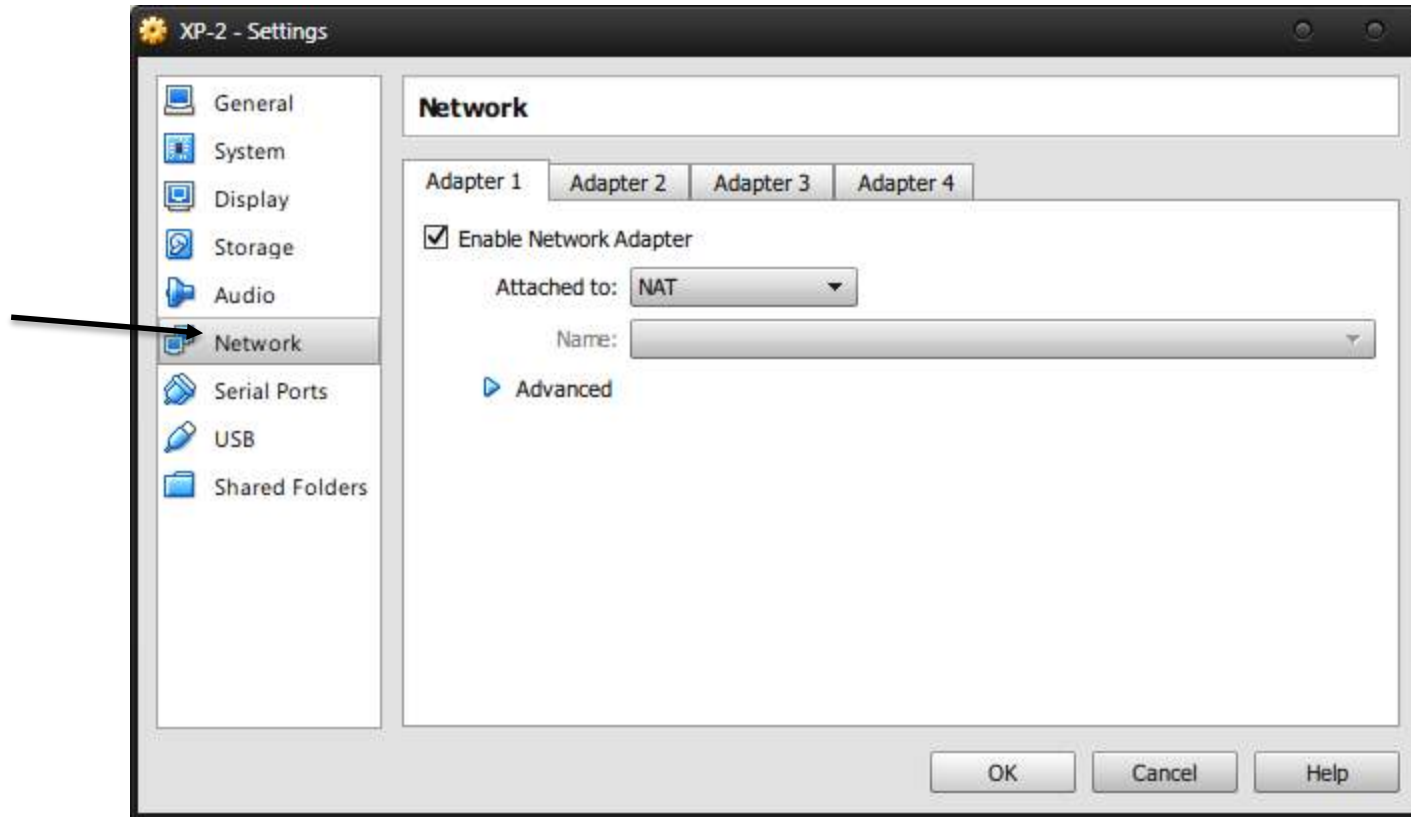
# Active Directory – Client Installation



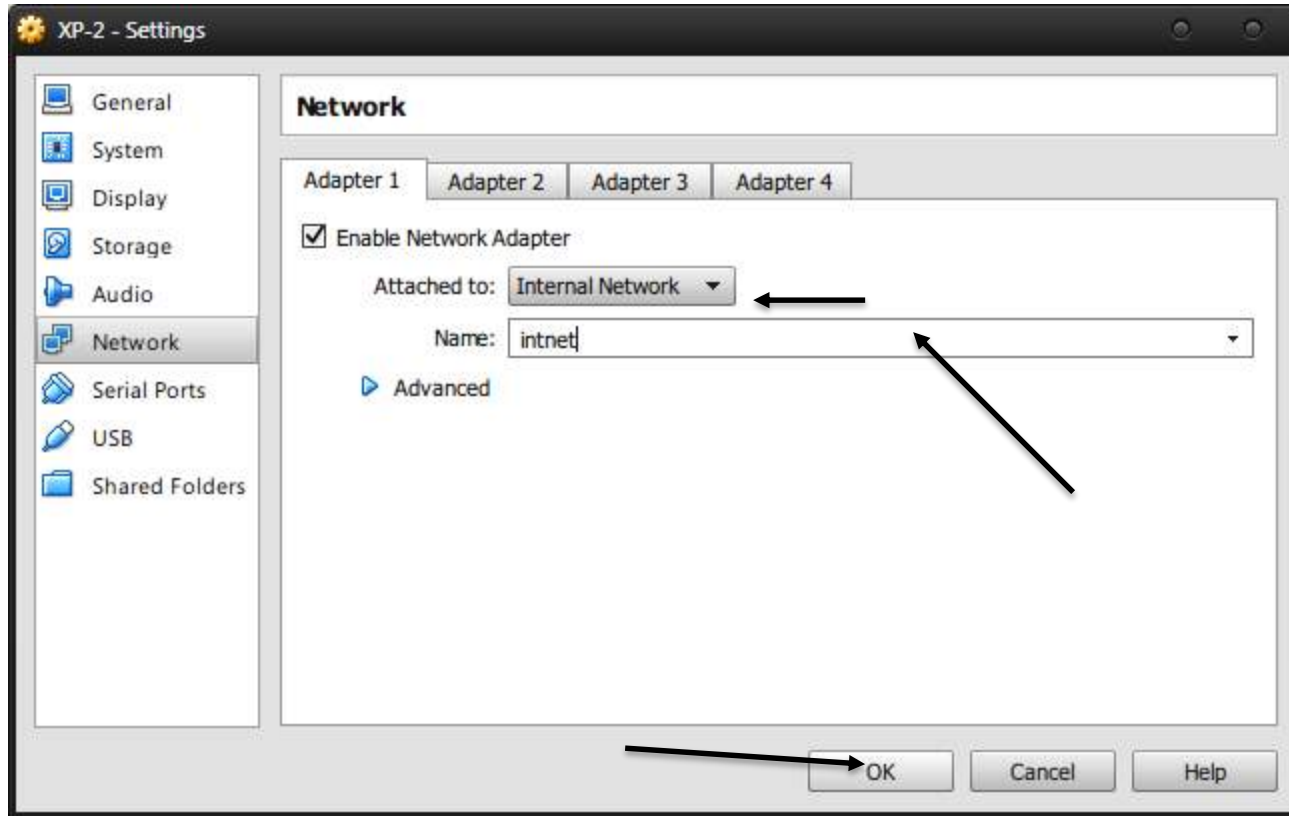
# Active Directory – Client Installation



# Active Directory – Client Installation



# Active Directory – Client Installation



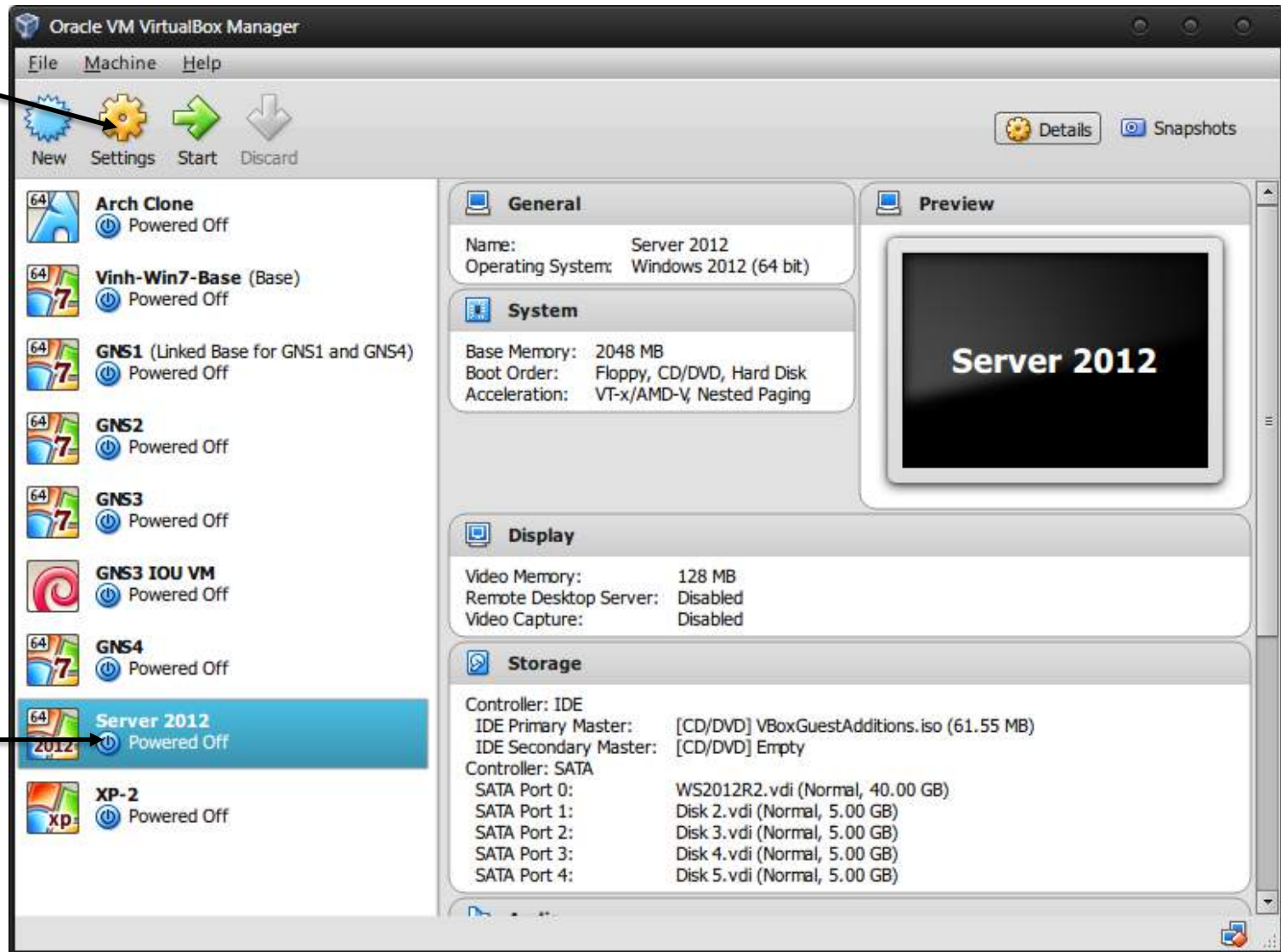


# Active Directory – Client Installation

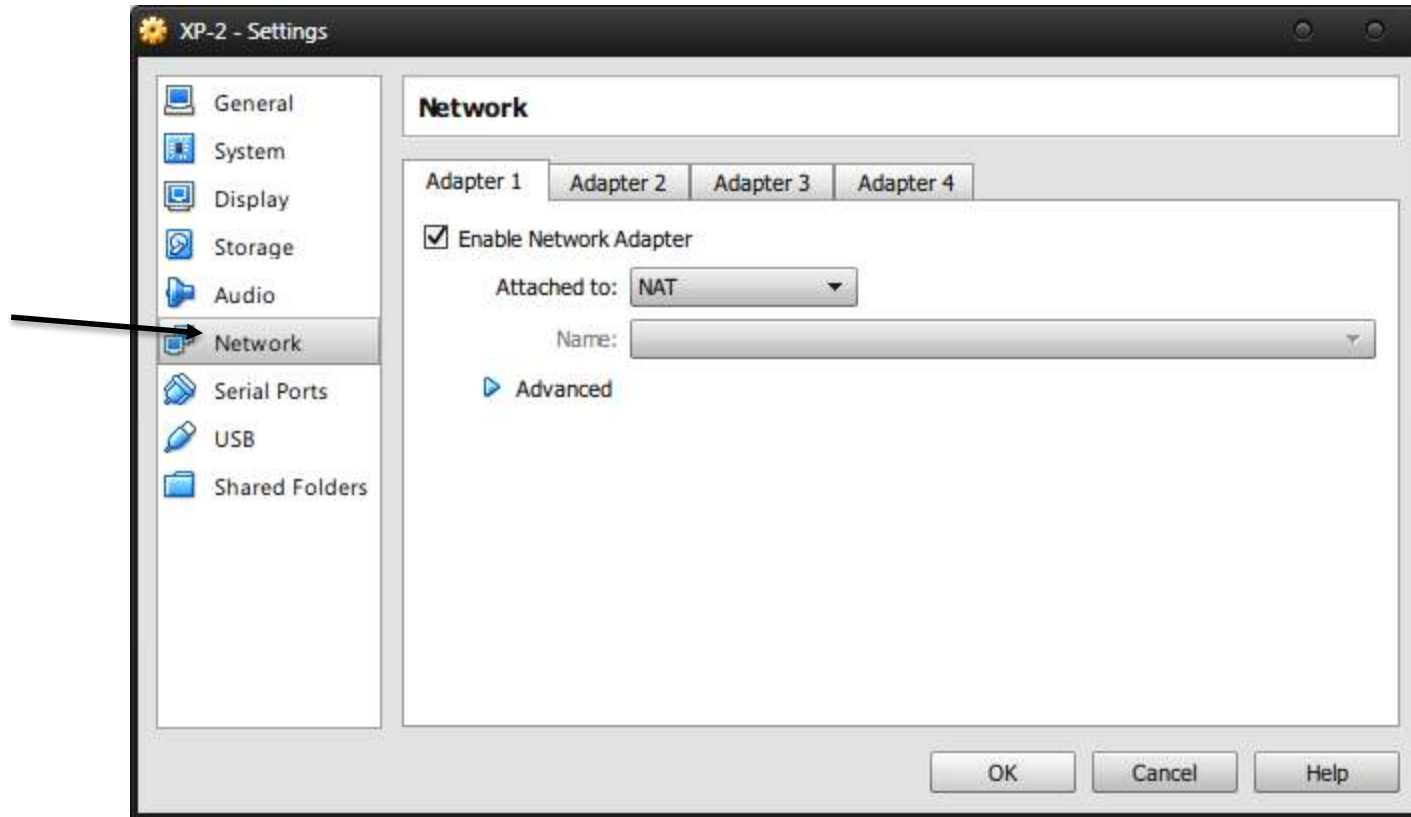
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- Go back and check if the installation and promotion of your Server to Domain Controller is finished. If it is, shut it down.

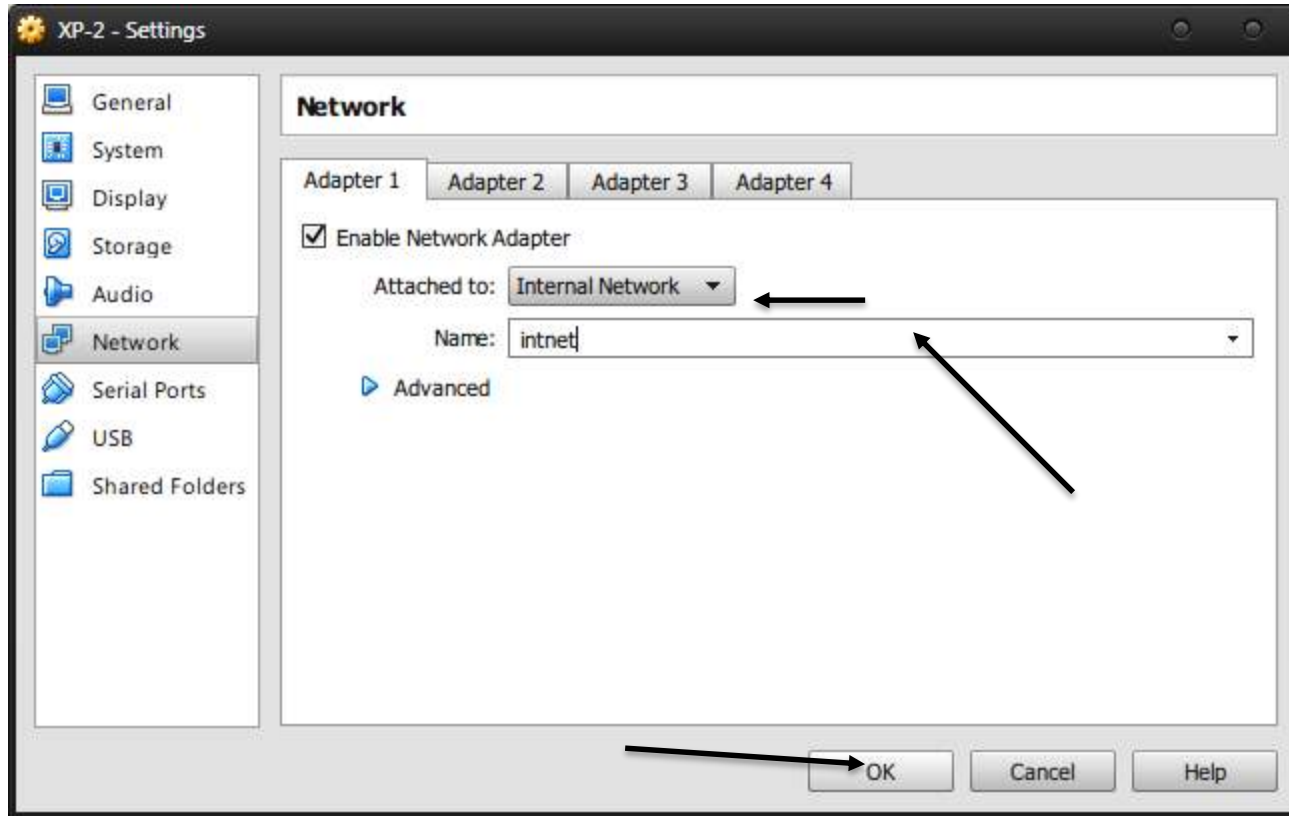
# Active Directory – Client Installation



# Active Directory – Client Installation



# Active Directory – Client Installation



# Active Directory – Client Installation

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- Start both the Server and Client boxes
- Join client to AD domain

# Active Directory – Client Installation



# Active Directory – Client Installation



# Active Directory – Client Installation





# Active Directory – Client Installation



# Your assignment task for this week

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- Record date, time
- Record all configuration updates you have made to the server during this practical tasks. Add screen shots to highlight the changes.
  - The screenshot should show your name/student ID
- Report any errors/warnings from the event viewer
- Record the server status at the time you have done everything e.g. running normally or any observable issues.