

# LAB 3.1. CÀI ĐẶT WINDOWS 7 TỰ ĐỘNG QUA MẠNG

# I. GIỚI THIỆU

Bài lab thực hiện các bước chuẩn bị và tiến hành cài đặt tự động Windows 7 trên hàng loạt máy mục tiêu.

Để thực hiện bài lab, cần có 03 máy cùng nối vào 01 switch:

- 01 máy Windows Server 2008 R2 đã nâng cấp domain controller
- 01 máy Windows 7
- 01 máy mục tiêu chưa cài đặt hệ điều hành.
  - Cấu hình IP của Windows Server 2008 R2:
    - Ip Address: 192.168.1.254
    - Subnet Mask: 255.255.255.0
    - Preferred DNS: 192.168.1.254

Các bước thực hiện:

- A. CHUẨN BI: Thực hiện trên máy Windows 7
  - 1. Cài đặt Windows Automatic Installation Kit (Windows AIK).
  - 2. Dùng Windows AIK tao unattended setup answer file.
  - 3. Tạo đĩa DVD cài đặt tự động.

## B. CÂU HÌNH WINDOWS DEPLOYMENT SERVICES SERVER: Thực hiện trên DC

- 1. Cài đặt & cấu hình DHCP server
- 2. Cài đặt Windows Deployment Services server
- 3. Cấu hình Windows Deployment Services server
- 4. Cấu hình các image
- 5. Bổ sung cấu hình install image & cấu hình server

C. CÀI ĐẶT TỰ ĐỘNG QUA MẠNG: Thực hiện tại PC mục tiêu



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## II. THỰC HIỆN

A. CHUẨN BỊ: Thực hiện trên PC11

## 1. Cài đặt Windows Automatic Installation Kit (Windows AIK)

- Kích hoạt tập tin wAIKx86.msi từ đĩa DVD Windows AIK



- Giữ nguyên các phương thức cài đặt mặc định.  $\rightarrow$  Hoàn tất $\rightarrow$  Close

🛱 Windows Automated Installation Kit	- • •
Installation Complete	
Windows Automated Installation Kit has been successfully installed.	
Click "Close" to exit.	
Cancel < Back	Close

- Nạp đĩa DVD source Windows & Copy tập tin INSTALL.WIM từ thư mục Sources của DVD vào C:





### 2. Dùng Windows AIK tạo answer file

- Start  $\rightarrow$  All Programs  $\rightarrow$  Microsoft Windows AIK  $\rightarrow$  Windows System Image Manager
- Click phải Select aWindows image... → Select Windows Image...



- Chọn tập tin **Install.wim** trên C: → Open

🔠 Select a Windo	ows Image		×
Look in:	🚢 Local Disk (C:) 👻	G 🤌 📂 🛄 -	
æ	Name	Date modified	Туре
2	🐌 PerfLogs	7/14/2009 9:37 AM	File folder
Recent Places	퉬 Program Files	10/27/2009 11:51	File folder
	퉬 Users	10/27/2009 11:39	File folder
	퉬 Windows	10/23/2009 1:28 PM	File folder
Desktop	install.wim	7/14/2009 4:26 PM	WIM File
Libraries			
Computer	4		
Network	File name: install		Open
NELWOIK	Files of type: Windows image or catalog files(*.wi	im, *.clg) 🔻 🛛	pen Folder
			Cancel





- Yes

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- Chọn Windows 7 ULTIMATE  $\rightarrow$  OK

	Select an Image	
	Select an image in the Windows image file: Windows 7 STARTER Windows 7 HOMEBASIC Windows 7 HOMEPREMIUM Windows 7 PROFESSIONAL Windows 7 ULTIMATE	
	(You must be an administrator of the local machine to create catalogs.)	Ĩ
Windows S	System Image Manager	n/for
?	The catalog file for Windows image Windows 7 ULTIMATE cannot be opened for the following reason: Cannot find the catalog file associated with the Windows image Windows 7 ULTIMATE.	
	You must have a valid catalog file to continue. Do you want to create a catalog file? (You must be an administrator of the local machine.)	6
	Generating Catalog File	
	Image 1 of 1 Mounting Windows image: C:\install.wim. This might take a few minutes.	
	Stop	hai Mai

- Menu File  $\rightarrow$  New Answer File...







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#### - Windows 7 ULTIMATE → Components → x86 Microsoft-Windows-International-Core-WinPE 6.1...





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## - Chọn tham số **InputLocale** → Nhập **EN-US**

0.16385\_neutral 

6.1.7600.16385\_neutral

- Tương tự, chọn các tham số SystemLocale, UILanguage và UserLocale → nhập chuỗi EN-US

	Answer File	Mi	icrosoft-Windo	ows-International-Core-V
1.16385_neutral	Untitled Components 1 windowsPE 2 offline Servicing 2 offline Servicing 3 generalize 4 specialize 5 audit System 6 audit User 7 oobe System Packages		Properties AppliedConfiguratio Enabled Id Settings Input.Locale LayeredDriver SystemLocale UILanguage UILanguageFallbac UserLocale	nPas 1 windowsPE True x86_Microsoft-Windows-Inter EN-US EN-US k EN-US
nam số UIL	anguage → nhập chuỗi EN-US			
nam số UIL	anguage → nhập chuỗi EN-US		_	
nam số UIL	.anguage → nhập chuỗi EN-US			





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- Windows 7 ULTIMATE  $\rightarrow$  Components  $\rightarrow$  x86\_Microsoft-Windows-Setup \_6.1.7600...  $\rightarrow$  Click phåi  $\rightarrow$  Add Setting to Pass 1 windowsPE

Wind	dows Image	_					
	x86_Microsoft-Windows-	Security-SPP-U	X_6.1.7600.16385_neutral	<b>^</b>			
	x86_Microsoft-Windows-3	Security-SPP-U Setup: 6.1.760	X-SPPCC_6.1./600.16385_r 1.16385_neutral	neutral			
	x86 Microsoft-Windows	Δdd Set	ting to Pass 1 windowsPE				
÷. 🚺	x86_Microsoft-Windows	Add Sci	ting to Pass 2 offligeCon i	-in			
	x86_Microsoft-Windows	Add Set	ting to Pass 2 offlineServic	ing		_	
	x86_Microsoft-Windows	Add Set	ting to Pass 3 generalize [	Add Setting to Pass	1 windowsPE		Applic
	x86_Microsoft-Windows	Add Set	ting to Pass 4 specialize				
	x86 Microsoft-Windows	Add Set	ting to Pass 5 auditSystem	1			•
÷-ð	x86_Microsoft-Windows	Add Set	ting to Pass 6 auditUser	Morene			
÷ 🗍	x86_Microsoft-Windows	Add Set	ting to Pass 7 oobeSystem	Messag	yes		
	x86_Microsoft-Windows			XML (0)	Validation (0)	Configuration Set (0)	
<b>∔</b> … <b></b>	x86_Microsoft-Windows	습 Copy	C	trl+C Des	scription		
	x86 Microsoft-Windows	Help		F1			
-0	x86_Microsoft-Windows-	TerminalService	es-LocalSessionManager_6.1	.7600.			
	x86_Microsoft-Windows-	TerminalService	es-Publishing-WMIProvider_6	.1.760			
	x86_Microsoft-Windows-	TerminalService	es-RDP-WinStationExtension	s_6.1.1 ▼			m
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	And in case of the	and state over	the same manual of				
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- 1		Answer Fi	le		DiskConfi	guration Propertie	2S
		Untitled	nte		Propert	ies Constant Product de	- 05
		Compose			AppliedCo	onfiguration Pas 1 windows	SPE —
		Componer	dowsPF		Compone	nt Microsoft	Windows-Setup
		Component Component	dowsPE 86_Microsoft-Windows-Intern	ational-Core-WinPE n	e Path	nt Microsoft- DiskConfi	-Windows-Setup
		Component Compon	dowsPE 86_Microsoft-Windows-Intern 1) SetupUILanguage	ational-Core-WinPE_n	e Path	nt Microsoft- DiskConfi	-Windows-Setup guration

ComplianceCheck Diagnostics DiskConfiguration Display DynamicUpdate ImageInstall PageFile RunAsynchronous RunSynchronous

1) UpgradeData 1) UserData

2 offline Servicing

... WindowsDeploymentServices

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\*

16385\_neutral



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- Click phải DiskConfiguration → Insert New Disk







- Click phải CreatePartitions → Insert New CreatePartition

\_ 0 <u>\_ x</u> reatePartitions Pro Untitled Properties Components AppliedConfigurationPas 1 windowsPE 🦣 1 windowsPE Component Microsoft-Windows-Setup - x86\_Microsoft-Windows-International-Core-WinPE Path DiskConfiguration/Disk[DiskID 🗂 Setup UILanguage x86\_Microsoft-Windows-Setup\_neutral ComplianceCheck Diagnostics DiskConfiguration 🗄 🗐 Disk[DiskID="0"] ModifyPa X Cut Ctrl+X Display h Copy Ctrl+C DynamicUpdate Ctrl+V ImageInstall Paste PageFile Del Delete RunAsynchronou RunSynchronous Insert New CreatePartition UpgradeData Help... F1 16385\_neutral UserData 1.7600.16385\_neutral WindowsDeploymentServices Insert New List Item - Chọn tham số **Order** → Nhập giá trị 1 - Chọn tham số Size → Nhập giá trị 15000 - Chọn tham số Type  $\rightarrow$  Chọn Primary - 0 reatePartition[Order="1"] Propert Untitled Properties . Components AppliedConfigurationPas 1 windowsPE 🦣 1 windowsPE Microsoft-Windows-Setup Component x86\_Microsoft-Windows-International-Core-WinPE KeyName Order Setup UILanguage Path DiskConfiguration/Disk[DiskID microsoft-Windows-Setup\_neutral Settings ComplianceCheck Action AddListItem Diagnostics Extend false DiskConfiguration Order 1 15000 Size CreatePartitions Primary -CreatePartition[Order="1"] ModifyPartitions Display **DynamicUpdate** ImageInstall PageFile RunAsynchronous RunSynchronous 16385\_neutral UpgradeData 1.7600.16385\_neutral 🗍 UserData



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- Click phải ModifyPartitions  $\rightarrow$  Insert New ModifyPartition







- Chọn tham số **DiskID** → Nhập giá trị 0
   Chọn tham số **PartitionID** → Nhập giá trị 1

16385_neutral 1.7600.16385_neutral aam số <b>Accep</b>	Untitled Components 1 windowsPE 1 windowsPE 1 windowsPE 1 windowsPE 1 windowsPE 1 windowsPE 1 windows-International-Core-WinPE_ne 1 windows-Setup_neutral 1 windows-Setup_neutral 2 wind	Properties     AppliedConfiguration     Component     Path     Settings     DiskID     PartitionID	Pas 1 windowsPE Microsoft-Windows-Setup ImageInstall/OSImage/Install 0 1
am số FullNa am số Organ	ame → Nhập giá trị Nhat Nghe		
@	nization → Nhập giá trị Nhat Nghe	UserData Propert	ies



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- Chọn tham số Key → Nhập giá trị xxx-xxx-xxx-xxx
   Chọn tham số WillShowUI → Chọn OnError
- \_ 0 \_ × roductKey Propertie Untitled Properties Components AppliedConfigurationPas 1 windowsPE 🚊 🖣 1 windowsPE Component Microsoft-Windows-Setup Path UserData/ProductKey x86\_Microsoft-Windows-Setup\_neutral Ė. Settings ComplianceCheck Kev XXX-XXX-XXX-XXX-XXX Diagnostics WillShowUI OnError DiskConfiguration Display DynamicUpdate 🗍 ImageInstall PageFile RunAsynchronous RunSynchronous 🗍 Upgrade Data 🗂 UserData Produc :tKev WindowsDeploymentServices 2 offlineServ 3 generalize 4 specialize 2 offline Servicing 16385\_neutral 3 generalize 1.7600.16385\_neutral - Chọn tham số **DisplayReport** → Chọn **Never** a

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					W
	Answer File	С	omplianceCheck Pr	operties	
	Untitled Components 1 windowsPE x86_Microsoft-Windows-International-Core-WinPE_ne x86_Microsoft-Windows-Setup_neutral ComplianceCheck Diagnostics DiskConfiguration Display DynamicUpdate PageFile RunAsynchronous RunSynchronous WindowsDeploymentServices 2 offlineServicing 3 generalize		Properties AppliedConfigurationPas Component Path Settings DisplayReport	1 windowsPE Microsoft-Windows-Setup ComplianceCheck Never	<u>  N "//////////////////////////////////</u>
00.16385_neutral					



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- Windows 7 ULTIMATE → Components → x86\_Microsoft-Windows-Shell-Setup \_6.1.7600... → Click phải → Add Setting to Pass 7 oobeSystem



- Click phải LocalAccounts → Insert New LocalAccounts





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- Chọn tham số **DisplayName** → Nhập giá trị **NhatNghe**
- Chọn tham số Group → Nhập giá trị Administrators
- Chọn tham số Name → Nhập giá trị NhatNghe



Trang 14/42





- Chọn tham số **HideEULAPage** → Chọn **true**
- Chọn tham số HideWirelessSetup → Chọn true
- Chọn tham số NetworkLocation → Chọn Home
- Chọn tham số **ProtectYourPC** → Nhập giá trị **3**
- Chọn tham số SkipMachineOOBE → Chọn true
- Chọn tham số SkipUserOOBE → Chọn true



- - Windows 7 ULTIMATE → Components → chọn x86\_Microsoft-Windows-Shell-Setup \_6,1.7600...





- Chọn tham số Filename → Nhập chuỗi Install.wim
- Chọn tham số ImageGroup → Nhập chuỗi ImageGroup1
- Chọn tham số ImageName → Nhập chuỗi Windows 7 ULTIMATE



- Chọn tham số **DiskID** → Nhập giá trị **0**
- Chọn tham số **PartitionID** → Nhập giá trị 1







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- Chọn tham số Domain → Nhập chuỗi NhatNghe.Local
- Chọn tham số Password → Nhập chuỗi P@ssword
- Chọn tham số Username → Nhập chuỗi Administrator



- Menu File  $\rightarrow$  Save Answer File

📑 ປ	ntitled* - Windows System Image M	anager	
Fil	e Edit Insert Tools Help		2
: 智	New Answer File Ctrl+N	📝 🥵   🔞	_
i 🖻	Open Answer File Ctrl+O	Answer Fle	liserData P
6	Close Answer File	Untitled	
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	Save Answer File As		Component
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	Close Distribution Share	ComplianceCheck	AcceptEula
		Diagnostics	FullName
	Select Windows Image		Organization
	Close Windows Image	Display	
	Fvit		
_	LAR	PageFile	2
			2

- Lưu tập tin lên đĩa C:\ Unattend.XML

## B. CÁU HÌNH WINDOWS DEPLOYMENT SERVICES SERVER: Thực hiện trên DC

# 1. Cài đặt & cấu hình DHCP server

- Start  $\rightarrow$  Administrative Tools  $\rightarrow$  Server Manager
- Click phải Roles → Add Role



Add Roles Wizard		×
Before You Begin		
Before You Begin Server Roles Confirmation Progress Results	This wizard helps you install roles on this server. You determine which roles to install based on the tasks you want this server to perform, such as sharing documents or hosting a Web site. Before you continue, verify that: • The Administrator account has a strong password • Network settings, such as static IP addresses, are configured • The latest security updates from Windows Update are installed If you have to complete any of the preceding steps, cancel the wizard, complete the steps, and then run the wizard again. To continue, click Next.	
	Skip this page by default          < Previous	





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#### - Chọn DHCP Server $\rightarrow$ Next

Add Roles Wizard		×
Select Server Ro	les	
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 DNS Settings DHCP Scopes DHCP V6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress Results	Select one or more roles to install on this server.         Roles:         Active Directory Certificate Services         Active Directory Federation Services (Installed)         Active Directory Federation Services         Active Directory Rights Management Services         Application Server         DiCP Server         DiCP Server         PilcP Server         PilcP Server         Nstork Policy and Access Services         Print and Document Services         Web Server (IIS)         Windows Deployment Services         Windows Server Update Services         More about server roles	Description: Dynamic Host Configuration Protocol (DHCP) Server enables you to centrally configure, manage, and provide temporary IP addresses and related information for client computers.





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Add Roles Wizard	× Connection Bindings
Before You Begin Server Roles DHCP Server Network Connection Bindings TRv4 DNS Settings	One or more network connections having a static IP address were detected. Each network connection can be used to service DHCP clients on a separate subnet. Select the network connections that this DHCP server will use for servicing clients. Network Connections:
IPv4 WINS Settings DHCP Scopes DHCPv6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress Results	IP Address         Type           I 192.168.1.254         IPv4
	Details Name: LAN Network Adapter: LAN Physical Address: 00-0C-29-58-3C-22 <pre></pre>

Specify IPv4 DN	IS Server Settings
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 WINS Settings DHCP Scopes DHCPv6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress Results	When clients obtain an IP address from the DHCP server, they can be given DHCP options such as the IP addresses of DINS servers and the parent domain name. The settings you provide here will be applied to clients using IPv4.         Specify the name of the parent domain that clients will use for name resolution. This domain will be used for all scopes you create on this DHCP server.         Parent domain:         NhatNghe.Local         Specify the IP addresses of the DNS servers that clients will use for name resolution. These DNS servers will be used for all scopes you create on this DHCP server.         Preferred DNS server IPv4 address:         192.168.1.254       Validate         Alternate DNS server IPv4 address:         Validate



# TRUNG TÂM ĐÀO TẠO MẠNG MÁY TÍNH NHẤT NGHỆĐÓI TÁC ĐÀO TẠO CỦA MICROSOFT TẠI VIỆT NAM105 Bà Huyện Thanh Quan, Q3, TP. HCMTel: 3.9322.735 – 0913.735.906 Fax: 3.9322.734www.nhatnghe.com



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- Next

Add Roles Wizard	×
Specify IPv4 WI	NS Server Settings
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 DNS Settings DHCP Scopes DHCPv6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress Results	When clients obtain an IP address from the DHCP server, they can be given DHCP options such as the IP addresses of WINS servers. The settings you provide here will be applied to clients using IPv4.         Image: WINS is not required for applications on this network         Image: WINS is required for applications on this network         Specify the IP addresses of the WINS servers that clients will use for name resolution. These WINS servers will be used for all scopes you create on this DHCP server.         Preferred WINS server IP addresse:         Alternate WINS server IP addresse:
	< Previous Install Cancel

- Add

Add Roles Wizard Add or Edit DHC	× Scopes
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 DNS Settings IPv4 WINS Settings DHCP Scopes DHCPV6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress	A scope is the range of possible IP addresses for a network. The DHCP server cannot distribute IP addresses to clients until a scope is created. Scopes:           Name         IP address range         Add           Edit         Edit
Results	Properties         Add or select a scope to view its properties.         More about adding scopes                  Previous         Next >         Install         Cancel



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- Nhập các giá trị như hình minh hoạ  $\rightarrow$  OK

dd Scope	
A scope is a range of possible cannot distribute IP addresses	IP addresses for a network. The DHCP server s to clients until a scope is created.
Scope name:	Win7 Client
Starting IP address:	192.168.1.11
Ending IP address:	192.168.1.200
Subnet type:	Wired (lease duration will be 8 days)
Activate this scope	
Configuration settings that p	propagate to DHCP client
Subnet mask:	255.255.255.0
Default gateway (optional):	
	OK Cancel

Add Roles Wizard		×
Add or Edit DHC	P Scopes	
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 DNS Settings IPv4 WINS Settings DHCP Scopes DHCPv6 Stateless Mode IPv6 DNS Settings DHCP Server Authorization Confirmation Progress	A scope is the range of possible IP addresses for a network. The DHCP server cannot distribute IP addresses to clients until a scope is created. Scopes: Name IP address range Add Win7 Client 192.168.1.11 - 192.168.1.200 Edit Delete	
Results	Properties Add or select a scope to view its properties.  More about adding scopes	]





- Chon Disable DHCPv6 stateless mode for this server  $\rightarrow$  Next









### - Install

Add Roles Wizard		×
Confirm Installa	tion Selections	
Before You Begin Server Roles DHCP Server Network Connection Bindings IPv4 DNS Settings IPv4 WINS Settings DHCP Scopes DHCPv6 Stateless Mode DHCP Server Authorization Confirmation Progress Results	To install the following roles, role services, or features, click Install. <ul> <li>Informational message below</li> </ul> <ul> <li>This server might need to be restarted after the installation completes.</li> <li> <ul> <li>DHCP Server</li> </ul>          Network Connection Bindings:       192.168.1.254 (IPv4)</li> </ul> IPv4 DNS Settings       DNS Parent Domain :         DNS Parent Domain :       NhatNghe.Local         DNS Servers :       192.168.1.254         WINS Servers :       None         Scopes       Win7 Client         Default Gateway :       None         Subnet Mask :       255.255.255.0         IP Address Range :       192.168.1.11 - 192.168.1.200         Subnet Type :       Wired (lease duration will be 8 days)         Activate Scope :       Yes         DHCPv6 Stateless Mode :       Disabled         DHCP Server Authorization :       Authorize using credentials associated with NHATNGHE\Administrator	
	Print, e-mail, or save this information           < Previous	

## - Hoàn tất → Close







#### 2. Cài đặt Windows Deployment Services server

- Server Manager  $\rightarrow$  Click phải Roles  $\rightarrow$  Add Role
- Chon Windows Deployment Services  $\rightarrow$  Next

Progress Results	Active Directory Fightweight Directory Services     Active Directory Lightweight Directory Services     Application Server     DHCP Server (Installed)     DHS Server (Installed)     Fax Server     File Services     Hyper-V     Network Policy and Access Services     Print and Document Services     Web Server (IIS)     Windows Deployment Services     Windows Server Update Services	Windows operating system's to computers over the network.
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- Next

Add Roles Wizard		×
Select Role Servi	ces	
Before You Begin Server Roles WDS Role Services Confirmation Progress Results	Select the role services to install for Windows Deployment Services:          Role services: <ul> <li>Deployment Server</li> <li>Transport Server</li> </ul> <ul> <li>Transport Server</li> </ul> <ul> <li>More about role services</li> </ul> <ul> <li>Previous</li> <li>Next.</li> </ul>	Description: Deployment Server provides the full functionality of Windows Deployment Services, which you can use to configure and remotely install Windows operating systems. With Windows Deployment Services, you can create and customize images and then use them to reimage computers. Deployment Server is dependent on the core parts of Transport Server.

- Install

Add Roles Wizard Confirm Install	ation Selections
Before You Begin Server Roles WDS Role Services Confirmation Progress Results	To install the following roles, role services, or features, click Install. <ul> <li>Informational message below</li> </ul> <ul> <li>This server might need to be restarted after the installation completes.</li> <li> <ul> <li>Windows Deployment Services</li> <li>Deployment Server</li> <li>Transport Server</li> </ul></li></ul>
	Print, e-mail, or save this information         < Previous





3. COM/f01

- Hoàn tất → Close

Add Roles Wizard		×
Installation Resu	ilts	
Before You Begin Server Roles WDS Role Services Confirmation Progress Results	The following roles, role services, or features were installed successfully: <ul> <li>I warning message below</li> </ul> <ul> <li>Windows automatic updating is not enabled. To ensure that your newly-installed role or feature is automatically updated, turn on Windows Update in Control Panel.</li> <li> <ul> <li>Windows Deployment Services</li> <li>Installation succeeded</li> </ul>            The following role services were installed:         Deployment Server           Transport Server           Transport Server    Print, e-mail, or save the installation report</li></ul>	
	< Previous Next > Close Cancel	]

## 3. Cấu hình Windows Deployment Services server

- Start  $\rightarrow$  Administrative Tools  $\rightarrow$  Windows Deployment Services



- Click phải FQDN của server → Configure Server

🎬 Windows Deployment Servic	es		- D ×
File Action View Help			
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Windows Deployment Services	SV-01.N	hatNghe.Local	
E Servers			
<ul> <li>SV-01.NhatNghe.Local</li> </ul>	A		
	Configure Server	Windows Deployment Services is not configured	
	Remove Server		
	View 🕨	ver is not configured. To configure this server, first verify a local administrator.	that
	Refresh	ht-click the server, and click Configure Server.	
	Help		





#### - Next

🕎 Windows Deployment Services Configuration Wizard	×
Before You Begin	
You can use this wizard to configure Windows Deployment Services. Once the server is configured, you will need to add at least one boot image and one install image to the server before you will be able to install an operating system.	
Before you begin, ensure that the following requirements are met:	
<ul> <li>The server is a member of an Active Directory Domain Services (AD DS) domain, or a domain controller for an AD DS domain.</li> </ul>	
<ul> <li>There is an active DHCP server on the network. This is because Windows Deployment Services uses Pre-Boot Execution Environment (PXE), which relies on DHCP for IP addressing.</li> </ul>	
There is an active DNS server on your network.	
This server has an NTFS file system partition to store images on.	
To continue, click Next.	
< Back Next >	Cancel

boot files, ition that is t be an
Browse





- Yes



- Chon **Do not listen on port 67** và **Configure DHCP option 60 to "PXEClient**" → Next

🕎 Windows Deployment Services Configuration Wizard	×
DHCP Option 60	
If Dynamic Host Configuration Protocol (DHCP) is running on this server, check both of the following check boxes and use DHCP tools to add Option 60 to all DHCP scopes. If a non-Microsoft DHCP server is running on this server, then check the first box and manually configure DHCP option 60	
The Windows Deployment Services Configuration Wizard detected Microsoft DHCP service running on the server. Please select from the following options:	
Do not listen on port 67	
Configure DHCP option 60 to 'PXEClient'	
For more information on DHCP, <u>click here</u>	
< Back Next >	Cancel

- Chon **Respond to all client computers (known and unknown)** → Next

👺 Windows Deployment Services Configuration Wizard
PXE Server Initial Settings
You can use these settings to define which client computers this server will respond to. Known clients are the clients that you have prestaged in AD DS. When you prestage a client, you create a computer account object in AD DS that is mapped to a physical computer. Then when the physical computer performs a PXE boot, the operating system will be installed based on the settings that you have defined.
Select one of the following options:
O Do not respond to any client computers
C Respond only to known client computers
<ul> <li>Respond to all client computers (known and unknown)</li> </ul>
Require administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. In addition, a computer account will be created in AD DS for the unknown client.
To configure this server, click Next.
More information about these settings
< Back Next > Cancel



- Bo chon Add images to the server now  $\rightarrow$  Finish

🦉 Windows Deployment Services Configuration Wizard	×
Operation Complete	
You have successfully configured Windows Deployment Services. To modify any of the server settings, right-click the server, and click Properties.	
Now that you have configured the server, you will need to add images. These images include a boot image (which is the bootable environment that you initially boot the computer into), and the install images (which are the operating system images that you deploy).	
To add images when this wizard closes, select the following check box. To add images at a later time, right-click the Install Images or Boot Images node in the snap-in.	
Add images to the server now	
To close this wizard, click Finish.	
< Back. [Finish]	Cancel

# 4. Cấu hình các image

- Nap đĩa DVD source Windows 7
- Console Windows Deployment Services → Click phåi Boot Images → Add Boot Image...

🙀 Windows Deployment Services						
File Action View Help						
🗢 🔿 🔁 🔐 🗟 🛛 🖬						
Windows Deployment Services	Boot Images	0 Boot Image(s)				
Servers     SV-01.NhatNohe.Local	Image Name	Architecture	Status	Size	Date	OS Version
Install Images     Soot Images		There are no it	tems to show	w in this v	view.	
Pending Devi     Add Boot Image.						
Drivers	•					
Export List						
Help						
	4					
Adds a Boot Image to the server.	<u></u>					





- Browse

🔋 Add Image Wizard		×
Image File		
Enter the location of the W	indows image (.wim) file that contain:	s the images to add.
File location:		
		Browse
Note: The default boot and installation DVD in the ∖So	install images (Boot.wim and Install.) urces folder.	wim) are located on the
More information about ima	ges and image types	
	< Back	Next > Cancel

- Browse đến thư mục DVD source source Windows 7 \ Sources  $\rightarrow$  chọn tập tin **boot.wim**  $\rightarrow$  Open

🎬 Select Windows Imag	je (W	/IM) File				×
😋 🕞 🗸 🗸 CD Driv	ive (D	:) GRMCULFRER_EN_DVD 👻	sources 👻 🔻	Search sources		2
Organize 🔻					= • 🔳 🤇	0
🔆 Favorites	4	Name *	Date modified	Туре	Size	
🧫 Desktop		퉬 dlmanifests	7/14/2009 2:26 AM	File folder		
Downloads		퉬 en-us	7/14/2009 2:26 AM	File folder		
🔠 Recent Places		🐌 etwproviders	7/14/2009 2:26 AM	File folder		
🔚 Libraries		퉲 inf	7/14/2009 2:26 AM	File folder		
Documents		퉬 license	7/14/2009 2:26 AM	File folder		
J Music		퉬 replacementmanifests	7/14/2009 2:26 AM	File folder		
Pictures		퉬 servicing	7/14/2009 2:26 AM	File folder		
Videos		퉬 servicingstackmisc	7/14/2009 2:26 AM	File folder		
· Comentar		boot.wim	7/14/2009 2:26 AM	WIM File	140,897 KB	
Local Disk (C:)		install.wim	7/14/2009 2:26 AM	WIM File	2,137,293 KB	
Fil	le na	me: boot.wim		Windows image	e file (*.wim) 🔻	7
		1		Open	Cancel	



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#### - Next



Add Image Wizard Image Metadata	
Enter a name and description for the following image: 'Microsoft Windows Setup (x86)'	
Image name:	_
Microsoft Windows Setup (x86)	
Image description:	_
Image architecture: x86	
< Back	Next > Cancel





Learning Solutions

🚆 Add Image Wizard		×
Summary		Ţ
You have selected the	he following images	
Image group:	Boot Images	
Image file:	D:\sources\boot.wim	
Selected images:		
Name		
Microsoft Windows	s Setup (x86)	
To change your sele Next.	ction, click Back. To add the selected images to the server, clic	ck
	< Back Next > (	Cancel

🎬 Add Image Wizard		X
Task Progress		
Adding boot image		
Adding Image 1 of 1 (Microsoft Windows	Setup (x86))	
	< Back	Finish



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# - Finish

🕎 Add Image Wizard	×
Task Progress	<b>I</b>
The operation is complete	
The selected images were successfully added to the server.	
< Back Finish	Cancel

- Console Windows Deployment Services  $\rightarrow$  Click phåi Install Images  $\rightarrow$  Add Install Image...

	💇 Windows Deployment S	iervices			_ 🗆 🗙
	File Action View Help				
ļ	🗢 🔿 🖄 🖬 🗟 🛛	? 🖬			
	Windows Deployment Ser	vices	Install Images	0 Image Group(s)	
l	Servers	i	Incore Course		
l	🖃 🚠 SV-01.NhatNghe.I	Local	Image Group		
l	🕂 🦳 Install Images			There are no items to show in this view	
	🕀 🗾 Boot Images	Add Install Imag	ge	There are no items to show in this view.	
	🕀 📑 Pending Devic	e Add Image Grou	up		
	∃ 📑 Multicast Tran ∃ 🔜 Drivers	View	•		
		Export List			
I					

- Bảo đảm Image group name là ImageGroup1  $\rightarrow$  Next

👺 Add Image Wizard		×
Image Group		
This wizard adds an install image to your se image and one boot image on your server i Execution Environment (PXE) and install ar	erver. You must have at least one install n order to boot a client using Pre-Boot n operating system.	
An image group is a collection of images th security. Enter the image group for the inst	at share common file resources and all image that you want to add.	
${f C}$ Select an existing image group		-
Create an image group named	ImageGroup1	
	< Back Next > 0	Cancel





- Browse

Add Texago Missard			-
Image File			
Enter the location of the Windows image (.v	wim) file that contain	is the images to a	add.
File location: Note: The default boot and install images (E installation DVD in the \Sources folder.	3oot.wim and Install	.wim) are located	vse)
More information about images and image to	<u>ypes</u>		
	< Back	Next >	Cancel

- Browse đến thư mục DVD source source Windows 7 \ Sources  $\rightarrow$  chọn tập tin **install.wim**  $\rightarrow$  Open

💇 Select Windows Image (V	VIM) File			×
CD Drive (I	D:) GRMCULFRER_EN_DVD 👻	sources 🔹 👻	Search sources	2
Organize 🔻				= - 🔟 📀
🚺 Downloads 📃	Name *	Date modified	Туре	Size
🖳 Recent Places	퉬 dlmanifests	7/14/2009 2:26 AM	File folder	
🔚 Libraries	퉬 en-us	7/14/2009 2:26 AM	File folder	
Documents	퉬 etwproviders	7/14/2009 2:26 AM	File folder	
J Music	퉲 inf	7/14/2009 2:26 AM	File folder	
Pictures	鷆 license	7/14/2009 2:26 AM	File folder	
🛃 Videos	鷆 replacementmanifests	7/14/2009 2:26 AM	File folder	
· Como da	퉬 servicing	7/14/2009 2:26 AM	File folder	
Local Disk (C:)	servicingstackmisc	7/14/2009 2:26 AM	File folder	
CD Drive (D:) GRMi	boot.wim	7/14/2009 2:26 AM	WIM File	140,897 KB
Shared Folders (\\.	install.wim	7/14/2009 2:26 AM	WIM File	2,137,293 KB
<b>•</b>				
File na	ame: install.wim		Windows image	file (*.wim) 🔻
	,		Open	Cancel

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dd Image Wizard	
mage File	
Enter the location of the	Windows image (.wim) file that contains the images to add.
File location:	
D:\sources\install.wim	Browse
Note: The default boot a installation DVD in the \	nd install images (Boot.wim and Install.wim) are located on the Sources folder.
Note: The default boot a installation DVD in the \ More information about i	nd install images (Boot.wim and Install.wim) are located on the Sources folder. mages and image types
Note: The default boot a installation DVD in the \	nd install images (Boot.wim and Install.wim) are located on the Sources folder. mages and image types
Note: The default boot a installation DVD in the \	nd install images (Boot.wim and Install.wim) are located on the Sources folder. <u>mages and image types</u>
Note: The default boot a installation DVD in the \ More information about i	nd install images (Boot.wim and Install.wim) are located on the Sources folder. <u>mages and image types</u>

- Chỉ giữ lại dấu chọn Windows 7 ULTIMATE
- Bảo đảm có dấu chọn "Use the default name..." → Next

Add Image Wizard Available Images The file that you specified contains t want to add to the server.	the following im	ages. Select the images that you	
Name	Architecture	Description	_
Windows 7 STARTER	x86	Windows 7 STARTER	_
Windows 7 HOMEBASIC	x86	Windows 7 HOMEBASIC	
Windows 7 HOMEPREMIUM	x86	Windows 7 HOMEPREMIUM	
Windows 7 PROFESSIONAL	x86	Windows 7 PROFESSIONAL	
Windows 7 ULTIMATE	x86	Windows 7 ULTIMATE	
۲ <u>ــــــــــــــــــــــــــــــــــــ</u>			Þ
Use the default name and descr	iption for each	of the selected images	
	<	Back Next > C	Cancel



TRUNG TÂM ĐÀO TẠO MẠNG MÁY TÍNH NHẤT NGHỆĐÓI TÁC ĐÀO TẠO CỦA MICROSOFT TẠI VIỆT NAM105 Bà Huyện Thanh Quan, Q3, TP. HCMTel: 3.9322.735 – 0913.735.906 Fax: 3.9322.734www.nhatnghe.com



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🕎 Add Image Wizard	×
Summary	
You have selected t	he following images
Image group:	ImageGroup1
Image file:	D:\sources\install.wim
Selected images:	
Windows 7 ULTIN	IATE
To change your sele Next.	ction, click Back. To add the selected images to the server, click
	< Back Next > Cancel

臂 Add Image Wizard			×
Task Progress			
Adding Windows image(s)			
Adding Image 1 of 1 (Windows 7 ULTIMAT	E)		
	< Back	Finish Cancel	



Microsoft<sup>-</sup>

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## - Finish

mage Wizard	×
Progress	
-	
he operation is complete	
he selected images were successfully added to the server.	
< Back Finish Ca	incel

## 5. Bổ sung cấu hình install image & cấu hình server

- Copy tập tin UnAttend.XML từ PC Windows 7 vào C:\RemoteInstall\WDSClientUnaatend

- Console Windows Deployment Services → Click phải image Windows 7 ULTIMATE → Properties

🚆 Windows Deployment Services						_	
File Action View Help							
🗢 🔿 🗡 🖬 🗙 🗟 🔽 🖬							
Windows Deployment Services	ImageGroup1	1 Insta	ll Image(s)				
E Servers	Image Name		Architecture	Status	Size	Date	OS V
	Windows 7 L	ILTIMATE	x86	Online	807	10/2	6.1.
E Poot Images		Proper Disable	rties =				
🗄 🔜 Boot Images		Expor	- t Image				
🗄 📑 Multicast Transmissions		Replac	e Image				
🕀 🧱 Drivers		Create	e Multicast Transr	nission			
		Delete	:				
		Help					
	•						
Displays the properties.							



Libraries
 Documents
 Music
 Pictures
 Videos

July Computer

CD Drive (D:) GRMCULFRER\_EN\_DVD
Shared Folders (\\.host) (Z:)

File name: UnAttend



Þ

-

Cancel

Tab General → Đánh dấu chọn "Allow image to install in unattended mode" → Select File...
 Browse

age Properties		×	
General Version	User Permissions		
<u></u>			
Window	/s 7 ULTIMATE		
Image type:	Install Image		
State:	Online		
Architecture:	x86		
Description:	Windows 7 ULTIMATE		
Image group:	ImageGroup1		2
File name:	install.wim		
Size:	8078 MB (8471060645 bytes)		
Created:	Monday, July 13, 2009 10:24:44 PM		
Modified:	Tuesday, October 27, 2009 2:19:29 AM		Select Unattend File
HAL type:	acpiapic		Enter the unattend file path. This file will be uploaded as ImageUnattend xml on the server.
			Unattend File Path:
I Allow image to i	install in unattended mode		Browse
	Select File		If unattend file for the selected image already exists, it will be overwritten with the new file.
			OK Cancel
. /			
vse đên C:	\RemoteInstall\WDSClientUna	aatend	$\rightarrow$ chọn tập tin UnAttend.XML $\rightarrow$ Open
	Select Unattend File		
	Correction of the second seco	end	Search WdsClientUnattend
	Organize 🔻 New folder		III • 🖬 🔍
	💻 Desktop	Name 🔶	Date modified Type Size
	Downloads	🔮 UnAttend	10/27/2009 3:12 PM XML Document
	Recent Places		

•

Image Unattend File (\*.xml)

Open

----





- OK 2 lần

	Image Deposition		v
	Image Properties		^
	General Version	User Permissions	
	Window	vs 7 ULTIMATE	
			_
	Image type:	Install Image	
	State:	Online	
	Architecture:	x86	
	Description:	Windows 7 ULTIMATE	
	Image group:	ImageGroup 1	-
	File name:	install.wim	
	Size:	8078 MB (8471060645 bytes)	
	Created:	Monday, July 13, 2009 10:24:44 PM	
elect Unattend File	Modified:	Tuesday, October 27, 2009 2:19:29 AM	
Enter the unattend file path. This file will be uploaded as ImageUnattend xml on the server.	HAL type:	acpiapic	-
Unattend Hile Path: C:\RemoteInstall\WdsClientUnattend\UnAttend.xml Rmwse	Allow image to	install in unattended mode	
If unattend file for the selected image already exists, it will be overwritten with the new file.	Unattend File:	Images\ImageGroup1\install\L Select File	
OK Cancel		OK Cancel Apply	

- Click phải FQDN của server → Properties
- Tab Boot → đánh dấu chọn 2 mục Always continue the PXE boot (Known clients & Unknown clients)

			SV-01 Properti	es				×
			DHCP	Multicast	Advance	ed	Network	
			General	PXE Response	AD DS	Boot	Client	
Windows Deployment Service         File       Action       View       Help         Image: Servers       Images       Images       Images         Image: Structure       Images       Images       Images         Image: Images       Images       Images       Images         Image: Images	SV-01.NI Name Properties Remove Server All Tasks View Kefresh Export List Help	hatNghe.Local Images mages ng Devices ast Transmissions s	PXE Boot P After a netw Known clier Require Always Continu- Unknown c Require Always Continu- Default boo x86 archite ia64 archite	olicy ork boot is initiated, de its: the user to press the continue the PXE boot e the PXE boot unless lients: the user to press the continue the PXE boot e the PXE boot unless t image (optional) cture:	F12 key to con t t the user press F12 key to con t t the user press the user press	XE boot will ( tinue the PX es the ESC ) tinue the PX es the ESC )	Continue. (E boot key (E boot key Select Select Select	
Displays the properties.				<u></u>				





- Đánh dấu chọn Enable unattended installation → khung x86 architecture → Browse
 - Browse đến C:\RemoteInstall\WDSClientUnaatend → chọn tập tin UnAttend.XML → Open

01 Propert	ies					
DHCP	Multicast	Adv	Advanced Network			
General	PXE Response	AD DS	6 Boo	t Client		
Unattend fi When you are proces client unat	le enable this option, the sed using the setting tend file that you spe	he UI screer is in the Win icify here.	ns on the clie dows Deplo	ent computer yment Services		
Enable	e unattended installat	ion				
x86 an	chitecture:			Browse		
ia64 a	rchitecture:			Browse		
x64 an	chitecture:			Browse		
Joining a D Do not Client Logg	iomain t join the client to a d ing e client logging	omain after a	an installatio	n.		
Logging L	evel: Log error, w	aming and i	nformational	messages 💌		
More informa	tion about unattende	d installation				

				E	
💇 Choose Unatten	l File				×
Look in: <u>]</u> WdsCli	entUnattend	•	G 🤌	• 🖭 🥙	
Name 🔺		→ Date m	odified	- Type	
🔮 UnAttend		10/27/	2009 3:1	2 XML D	ocume
1					•
File name: Un Att	end		<b>-</b>	Open	
Files of type: Image	Unattend File (* xml)	)	•	Cance	1



DUCD	1	1		N
DHCP	Multicast	Adva	inced	Network
General	PXE Response	AD DS	AD DS Boot	
- Unattend fi	le			
When you are proces client unat	enable this option sed using the sett tend file that you s	i, the UI screens ings in the Wind specify here.	s on the clien lows Deployr	t computer ment Services
🔽 Enable	e unattended insta	llation		
x86 architecture: WdsCli		dsClientUnattend	d\UnAttend	Browse
ia64 a	rchitecture:			Browse
x64 architecture:				Browse
-Joining a D	omain			
Do not	t join the client to a	a domain after ar	n installation.	
	<u> </u>			
	ing			
Client Logg	a olient logging			
Client Logg	s cilent logging			
Client Logg Enable Logging L	evel: Log error	, waming and in	formational n	nessages 💌
Client Logg C Enable Logging L More informa	evel: Log error	, waming and in ded installation	formational n	nessages 💌





# C. CÀI ĐẶT TỰ ĐỘNG QUA MẠNG: Thực hiện tại PC cần cài đặt

- Cấu hình BIOS của PC cần cài đặt: boot từ card mạng
- $\rightarrow$  Boot  $\rightarrow$  Quá trình cài đặt tự động diễn ra đến khi hoàn tất.



