Operation Sheet 4.2 Installing and Configuring VPN in Windows 2012 Server

Objectives: After the end of the activity, the students will be able to:

- ▶ Install VPN in Windows 2012 Server
- Configure PPTP VPN
- ➤ Test VPN from Windows 7 Client

Procedure:

Part I: Setup a VPN on Windows 2012 Server

This operation sheet shows you how you can install a VPN Server on Windows Server 2012 R2 Step-by-Step. It shows you how you can easily setup a VPN server from a small environment or for a hosted server scenario.

Ster	o 1:	First	install	the	"Remote	Access"	' via	Server	Manager	or	Windows	Power	rShell.

Ē.	Add Roles and Features Wizard	_ _ X	
Before You Begin Installation Type Server Selection Server Roles Features Remote Access	S Select one or more roles to install on the selected server. Roles Application Server DHCP Server Server Fax Server	DESTINATION SERVER WIN-QGRSD2K94P2 Description Remote Access provides seamless connectivity through DirectAccess, VPN, and Web Application Proxy. DirectAccess provides an Always On and Always Managed experience. RAS provides traditional VPN	
Role Services Confirmation Results		and Always Managed experience. RAS provides traditional VPN services, including site-to-site (branch-office or cloud-based) connectivity. Web Application Proxy enables the publishing of selected HTTP- and HTTPS-based applications from your corporate network to client devices outside of the corporate network. Routing provides traditional routing capabilities, including NAT and other connectivity options. RAS and Routing can be deployed in single- tenant or multi-tenant mode.	
	< <u>P</u> revious <u>N</u> ext	> Install Cancel	

Step 2: Select the "DirectAccess and VPN (RAS)" role services.



Step 3: On the next steps just use the default settings. After that you can have a look at the Overview screen and install the role.

	Add Roles and Features Wizard	_ D X
Confirm installa	ation selections	DESTINATION SERVER WIN-QGR5D2K94P2
Before You Begin	To install the following roles, role services, or features on selected se	erver, click Install.
Installation Type	Restart the destination server automatically if required	
Server Selection	Optional features (such as administration tools) might be displayed	on this page because they have
Server Roles	been selected automatically. If you do not want to install these optic their check boxes.	onal features, click Previous to clear
Features	יים בארידאי אינט אינע אינער איז אינער איז אינער איז אינער איז איז אינער איז איז אינער איז איז א	
Remote Access	Group Policy Management	^
Role Services	RAS Connection Manager Administration Kit (CMAK)	
Web Server Role (IIS)	Remote Access	=
Role Services	DirectAccess and VPN (RAS)	
Confirmation	Remote Server Administration Tools	
Results	Remote Access Management Tools	
	Remote Access GUI and Command-Line Tools	
	Remote Access module for Windows PowerShell	
	Web Server (IIS)	~
	Export configuration settings Specify an alternate source path	
	< Previous Next >	Install Cancel

Step 4: After the features are installed, which can take a while to finish you see the link for the Getting Started Wizard. Click on "**Open the Getting Started Wizard**".



Step 5: This opens a new wizard which will help you to configure the server. On the first screen select "**Deploy VPN only**".



Step 6: This opens the Routing and Remote Access MMC



Step 7: Right click on the Server name and click on "**Configure and Enable Routing and Remote Access**".

重			Routing and Remote Access	_ 0 X
Eile Action Vi	iew <u>H</u> elp			
🗢 🔿 🔟 🖬				
Routing and Re	emote Access	Routing and Remote Access		
Server Statu	15		amota Accorr	
	Configure and En	able Routing and Remote Access	s secure remote access to private networks.	
	Disable Kouting a	nd Kemote Access	onfigure the following:	
4	All Tasks	,	private networks.	
1	Delete		idaway.	
	Reportion		-).	
	Hele			
		To add a Routing and Remote Acc	ess server, on the Action menu, dick Add Server.	~
Stops Routing and F	Remote Access a	nd removes the previous configuration		

Step 8: On the new wizard select "Custom configuration".

Routing and Remote Access Server Setup Wizard						
Configuration You can enable any of the following combinations of services, or you can customize this server.						
 <u>Remote access (dial-up or VPN)</u> Alow remote clients to connect to this server through either a dial-up connection or a secure virtual private network (VPN) Internet connection. <u>Network address translation (NAT)</u> Alow internal clients to connect to the Internet using one public IP address. <u>Virtual private network (VPN) access and NAT</u> Alow remote clients to connect to this server through the Internet and local clients to connect to the Internet using a single public IP address. <u>Secure connection between two private networks</u> Connect this network to a remote network, such as a branch office. <u>Quatom configuration</u> Select any combination of the features available in Routing and Remote Access. 						
< <u>B</u> ack <u>N</u> ext > Cancel						

Step 9: Select "VPN Access".

Routing and Remote Access Server Setup Wizard							
Custom Configuration When this wizard closes, you can configure the selected services in the Routing and Remote Access console.							
Select the services that you want to enable on this server. VPN access Demand-dial connections (used for branch office routing) NAT LAN routing							
< <u>B</u> ack <u>N</u> ext > Cancel							

Step 10: After you have click finish you can now start the **Routing and Remote Access service.**

Routing and Remote Access Server Setup Wizard						
		Completing the Routing and Remote Access Server Setup Wizard You have successfully completed the Routing and Remote				
		Routing and Remote Access				
	Start the se	ervice and Remote Access service is ready to use.				
		To close this wizard, click Finish.				
< <u>B</u> ack Finish Cancel						

If you have another firewall between the internet and your Windows Server you have to open the following Firewall port sand forward them to your Windows Server:

For PPTP: 1723 TCP and Protocol 47 GRE (also known as PPTP Pass-through) **For L2TP** over IPSEC: 1701 TCP and 500 UDP **For SSTP**: 443 TCP

After the installation Users have to be enabled for Remote Access to connect to your VPN Server. On a standalone server this can be done in the Computer Management MMC, in a domain environment this can be done in the user properties of an Active Directory user.

	Admi	nistrator Pr	operties	? X			
General Member Of Profile Environment Sessions							
Remote co	ntrol Re	emote Desktop	Services Profile	Dial-in			
Network Access Permission Image: Allow access Image: Derivative De							
Verify Caller-ID: Callback Options No Callback Set by Caller (Routing and Remote Access Service only) C Always Callback to:							
Assign Static IP Addresses Define IP addresses to enable for this Dial-in connection. Apply Static <u>R</u> outes							
Define routes to enable for this Dial-in Static Routes							
	OK	Cancel	Apply	Help			

If you don't have a DHCP Server in your environment you have to add a static IP address pool. This is often needed if you have a single server hosted at a service provider. In the properties of your VPN server you can click on the IPv4 tab and enable and configure the "Static address pool".

WI	N-QGR5D2K94P2 (loca	I) Properties ? X	<u>د</u>						
General	Security IPv4 IPv6 IK	Ev2 PPP Logging							
🔽 Enal	Enable IPv4 Forwarding								
⊂ IPv4 a This s ○ D ⊙ Si	IPv4 address assignment This server can assign IPv4 addresses by using: O Dynamic Host Configuration Protocol (DHCP) Static address pool								
-	From To Num	ber IP Addre Mask							
	New I	Pv4 Address Range	? ×						
	Type a starting IP address an addresses in the range.	nd either an ending IP address or the	number of						
🔽 En	Start IP address:	192.168.1.100							
	End IP address:	192 . 168 . 1 . 200							
	Number of addresses:	101							
		ОК	Cancel						
	ОК	Cancel Apply							

You now have to add a IP address from the same subnet as your static address pool to the network interface of your server, so users can access the server.

Part II: Connecting VPN Server from Windows 7 Client

To connect to a VPN on Windows 7, press the Windows key and, type VPN, and press Enter.



Enter the address of your VPN provider in the Internet Address box. You can enter an address like vpn.example.com or a numerical IP address, depending on the server information your VPN provider gave you.

You should also enter a Destination name – this can be anything you like. It's only used to help you remember which VPN connection is which.

61	Create a VPN connection							
Ту	Type the Internet address to connect to							
You	ur network administrator (can give you this address.						
Inte	ernet address:	vpn.example.com						
D <u>e</u>	stination name:	Example VPN						
	🔲 Use a <u>s</u> mart card							
8	<u>A</u> llow other people to This option allows an	o use this connection yone with access to this computer to use this connection.						
	Don't connect now; just set it up so I can connect later							
		<u>N</u> ex	t Cancel					

Enter your login credentials on the next screen. Use the username and password your VPN provider gave you.

_			
G	Create a VPN connection		
Т	Type your user name a	and password	
ι	Jser name:	user	
P	Password:	•••••	
		Show characters	
		Remember this password	
D	Oomain (optional):		
			Connect Cancel

Windows will connect you to the VPN you configured. If you checked the "Don't connect now" checkbox on the first screen, Windows will save the VPN connection so you can easily connect later.



Once connected, you can click the network icon in your system tray to view your VPN connections. While connected to a VPN, all your network traffic will be sent over it.

To disconnect from a VPN, click it and click Disconnect. You can then reconnect to it later by clicking it and selecting Connect. You can have multiple VPNs configured and switch between them in this way.



To delete a saved VPN connection, press the Windows key, type *network connections*, and press Enter. Right-click a VPN connection and use the Delete option.

Vetwork an Network C	Connections 🕨 🔻 🍫	Search Network Connect	tions 🔎
Organize 🔻 Start this connection Re	name this connection »	₩= ¥=	
Local Area Connection Network cable unplugged Killer e2200 PCI-E Gigabit Etherne	Local Area Connect Network cable unp	tion 2 lugged er V9	
VirtualBox Host-Only Network Unidentified network VirtualBox Host-Only Ethernet Ad	VPN Connection Disconnected WAN Miniport (PP	TP)	
Wireless Network Connection TELUS2410 Intel(R) Centrino(R) Wireless-N 22	Connect Status		
	Set as Defau Create Copy	lt Connection	
	Create Short	tcut	
	🛞 Delete		
	🛞 Rename	63	
	😗 Properties		