

# ITSA1001: Server Administration Fundamentals

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## WEEK 8 PRACTICAL: ADMINISTERING ACTIVE DIRECTORY USERS and GROUPS

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# 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 task.
  - 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.

# Prerequisites

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- Completion of the Week 5 practical tasks, in particular the creation of a storage pool, and a virtual volume.

# Create shared volume

The image shows a Windows Server 2012 environment. The top window is the Server Manager Dashboard, which includes 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, showing 'AD DS' and 'DHCP' roles installed. The bottom window is 'This PC', displaying the 'Drives Tools' tab. A context menu is open over a 'New Volume (F:) 8.81 GB free of 8.96 GB' drive, with the 'Format...' option highlighted. An arrow points from the text 'Right click on your virtual volume' to the drive. Another arrow points from the text 'Select Format' to the 'Format...' option in the context menu. A third arrow points from the text 'Open Explorer (Windows + R)' to the Explorer icon in the taskbar.

Server Manager Dashboard

WELCOME TO SERVER MANAGER

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

ROLES AND SERVER GROUPS

Roles: 4 | Server groups: 1 | Servers total: 1

- AD DS 1
  - Manageability
    - Events
    - Services
    - Performance
    - BPA results
- DHCP
  - Manageability
    - Events
    - Services
    - Performance

This PC

Drives Tools

Local Disk (C:) 30.8 GB free of 39.6 GB

New Volume (F:) 8.81 GB free of 8.96 GB

Format...

Right click on your virtual volume

Select Format

Open Explorer (Windows + R)

# Format shared volume

The screenshot displays the Server Manager interface for a local server. The dashboard includes 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, and 4. Create a server group. Below this, the 'ROLES AND SERVER GROUPS' section shows installed roles like AD DS and DHCP, along with their associated features such as Manageability, Events, Services, Performance, and BPA results.

Overlaid on the Server Manager is a Windows File Explorer window titled 'This PC'. A 'Format New Volume (F:)' dialog box is open, showing the following settings: Capacity: 8.96 GB, File system: NTFS (Default), Allocation unit size: 4096 bytes. The 'Volume label' field contains the text 'DATA'. The 'Format options' section has 'Quick Format' checked and 'Create an MS-DOS startup disk' unchecked. An arrow points from the text 'Set the volume label as DATA' to the 'Volume label' input field.

At the bottom of the screen, the Windows taskbar shows the system tray with the date and time: 1:22 AM, 5/12/2016.

# Create shared folders

The screenshot displays the Windows Server Manager interface for a Server 2012 VM. The 'Server Manager Dashboard' is visible, with a 'WELCOME TO SERVER MANAGER' section containing a numbered list of tasks: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, and 4. Create a server group. Below this, the 'ROLES AND SERVER GROUPS' section shows 'AD DS' and 'DHCP' roles with their respective sub-components like 'Manageability', 'Events', 'Services', 'Performance', and 'BPA results'.

Overlaid on the Server Manager is a File Explorer window titled 'DATA (F:)'. The address bar shows 'This PC > DATA (F:)'. The main pane displays a table of folders:

Name	Date modified	Type	Size
Public	5/12/2016 1:23 AM	File folder	
Student_Shared	5/12/2016 1:23 AM	File folder	
Staff_Shared	5/12/2016 1:24 AM	File folder	

The 'Staff\_Shared' folder is currently selected. A text overlay in the bottom right of the File Explorer window reads: 'In the newly formatted volume, create 3 folders as named'. The Windows taskbar at the bottom shows the system tray with the time '1:24 AM' and date '5/12/2016'.

# Create users and groups

The screenshot shows the Windows Server Manager interface. The 'Tools' menu is open, and 'Active Directory Users and Computers' is highlighted. A black arrow points from the text 'Back in the Server Manager, select Tools -> Active Directory Users and Computers' to the selected menu item. The main dashboard displays 'WELCOME TO SERVER MANAGER' with a 'QUICK START' section containing four steps: 1. Configure this local server, 2. Add roles and features, 3. Add other servers to manage, and 4. Create a server group. Below this, the 'ROLES AND SERVER GROUPS' section shows a grid of role cards for AD DS, DHCP, DNS, File and Storage Services, Local Server, and All Server Roles. Each card lists 'Manageability', 'Events', 'Services', 'Performance', and 'BPA results'. The taskbar at the bottom shows the system tray with the date and time as 1:26 AM on 5/12/2016.

Server Manager - Dashboard

WELCOME TO SERVER MANAGER

1 Configure this local server

2 Add roles and features

3 Add other servers to manage

4 Create a server group

ROLES AND SERVER GROUPS

Roles: 4 | Server groups: 1 | Servers total: 1

AD DS 1

Manageability

Events

Services

Performance

BPA results

DHCP 1

Manageability

Events

Services

Performance

BPA results

DNS 1

Manageability

Events

Services

Performance

BPA results

File and Storage Services 1

Manageability

Events

Services

Performance

BPA results

Local Server 1

Manageability

Events

Services

Performance

BPA results

All Server Roles 1

Manageability

Events

Services

Performance

BPA results

Tools

- Active Directory Administrative Center
- Active Directory Domains and Trusts
- Active Directory Module for Windows PowerShell
- Active Directory Sites and Services
- Active Directory Users and Computers
- ADSI Edit
- Certification Authority
- Component Services
- Computer Management
- Defragment and Optimize Drives
- DHCP
- DNS
- Event Viewer
- Group Policy Management
- iSCSI Initiator
- Local Security Policy
- ODBC Data Sources (32-bit)
- ODBC Data Sources (64-bit)
- Performance Monitor
- Resource Monitor
- Security Configuration Wizard
- Services
- System Configuration
- System Information
- Task Scheduler
- Windows Firewall with Advanced Security
- Windows Memory Diagnostic
- Windows PowerShell
- Windows PowerShell (x86)
- Windows PowerShell ISE
- Windows PowerShell ISE (x86)
- Windows Server Backup

Activate Windows  
Go to System in Control Panel to activate Windows.

1:26 AM  
5/12/2016

# Create group for staff

Server 2012 (Running) - Oracle VM VirtualBox  
Machine View Devices Help  
Active Directory Users and Computers

File Action View Help

Active Directory Users and Computers

Name	Type	Description
Builtin	builtinDomain	
Computers	Container	Default container for up...
Domain Controllers	Organizational Unit	Default container for do...
ForeignSecurityPrincipals	Container	Default container for sec...
Managed Service Accounts	Container	Default container for ms...
Users	Container	Default container for up...
VIT	Organizational Unit	

Right click anywhere in this region, select New -> Group

Creates a new item in this container.

Activate Windows  
Go to System in Control Panel to activate Windows.

1:27 AM  
5/12/2016

Right Ctrl



# Create group for staff

The screenshot shows a Windows Server 2012 environment. The 'Active Directory Users and Computers' console is open, displaying a list of objects with columns for 'Type' and 'Description'. The 'New Object - Group' dialog box is open, showing the following configuration:

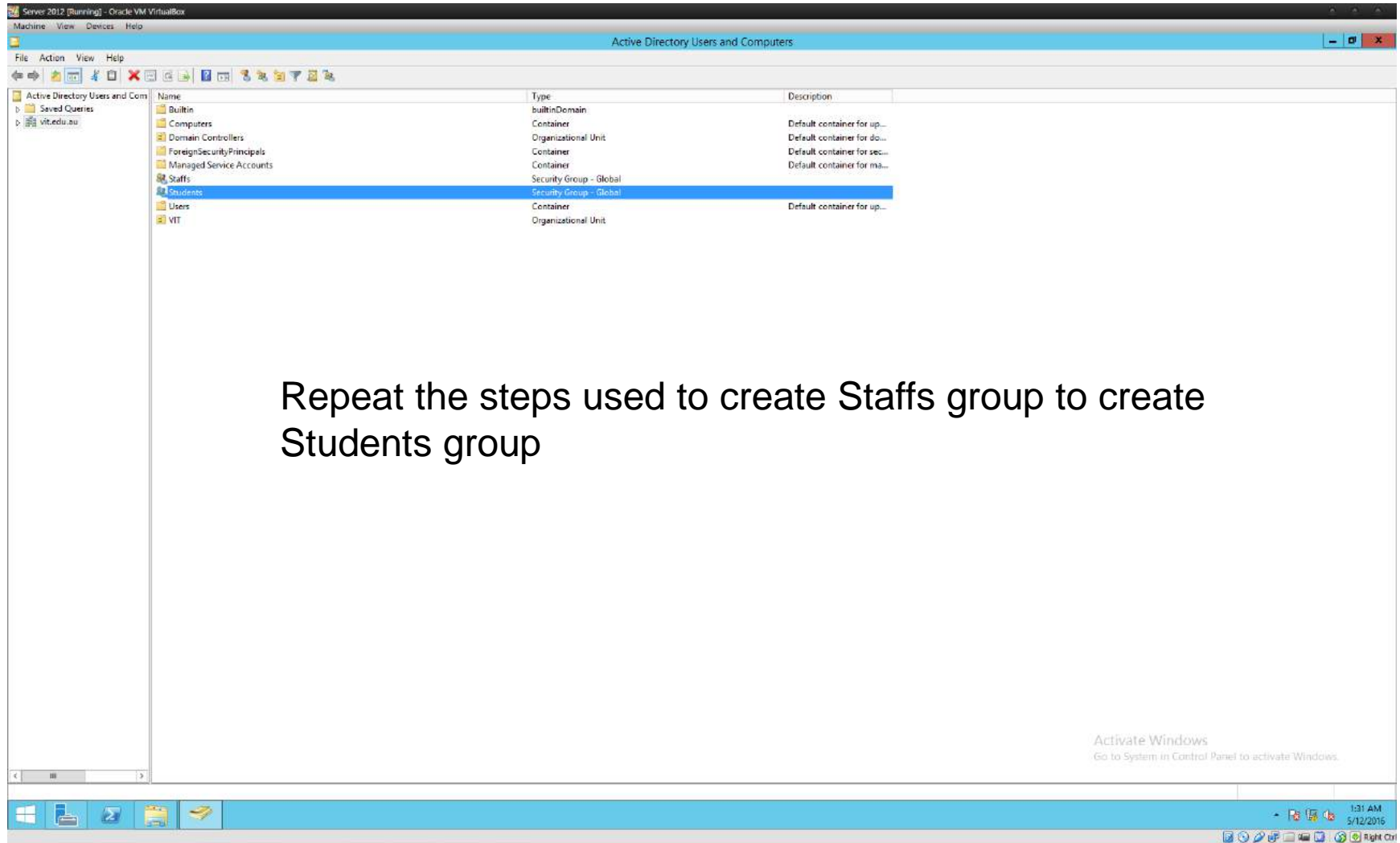
- Create in: vit.edu.au/
- Group name: staffs
- Group name (pre-Windows 2000): Staffs
- Group scope:  Global
- Group type:  Security

An arrow points from the text below to the 'Security' radio button in the 'Group type' section of the dialog box.

Type	Description
builtinDomain	
Container	Default container for up...
Organizational Unit	Default container for do...
Container	Default container for sec...
Container	Default container for ma...
Container	Default container for up...
Organizational Unit	

Name the group as Staffs.  
Remember to choose  
Global for group scope and  
Security for Group type

# Create group for students



The screenshot shows the Active Directory Users and Computers console in Windows Server 2012. The left-hand navigation pane shows the hierarchy: Active Directory Users and Computers > vlt.edu.au > Students. The main pane displays a table of objects in the domain:

Name	Type	Description
Builtin	builtinDomain	
Computers	Container	Default container for up...
Domain Controllers	Organizational Unit	Default container for do...
ForeignSecurityPrincipals	Container	Default container for sec...
Managed Service Accounts	Container	Default container for ma...
Staffs	Security Group - Global	
<b>Students</b>	<b>Security Group - Global</b>	
Users	Container	Default container for up...
VIT	Organizational Unit	

Below the screenshot, the text reads: "Repeat the steps used to create Staffs group to create Students group".

# Create “test user” for each group

The screenshot shows the Active Directory Users and Computers console in a Windows 2012 environment. The left pane shows the tree structure with 'Users' selected. The main pane displays a table of containers:

Name	Type	Description
Builtin	builtinDomain	
Computers	Container	Default container for up...
Domain Controllers	Organizational Unit	Default container for do...
ForeignSecurityPrincipals	Container	Default container for sec...
Managed Service Accounts	Container	Default container for ms...
Users	Container	Default container for up...
VIT	Organizational Unit	

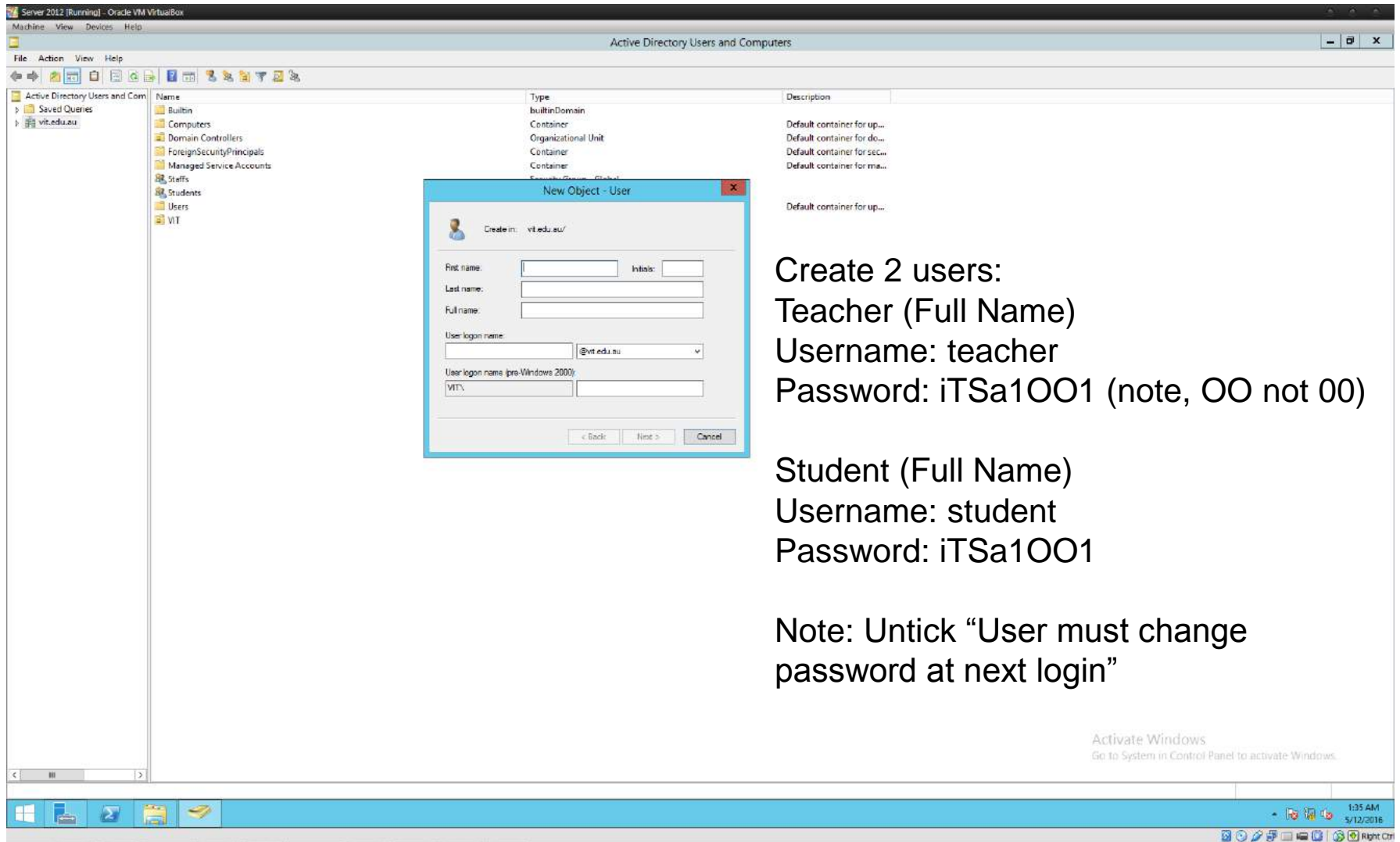
A context menu is open over the 'Users' container, with the 'New' option selected. The 'New' submenu is also open, showing options: Computer, Contact, Group, InetOrgPerson, msimaging-PSPs, MSMQ Queue Alias, Organizational Unit, Printer, User, and Shared Folder. An arrow points from the text 'Now, to create users' to the 'User' option in the submenu.

Now, to create users

Activate Windows  
Go to System in Control Panel to activate Windows.

1:27 AM  
5/12/2016

# Create “test user” for each group



The screenshot shows the Active Directory Users and Computers console in a Windows Server 2012 environment. A 'New Object - User' dialog box is open, allowing the creation of a new user. The dialog box has the following fields:

- Create in:** vit.edu.au/
- First name:** [ ]
- Initials:** [ ]
- Last name:** [ ]
- Full name:** [ ]
- User logon name:** [ ] @vit.edu.au
- User logon name (pre-Windows 2000):** VIT\ [ ]

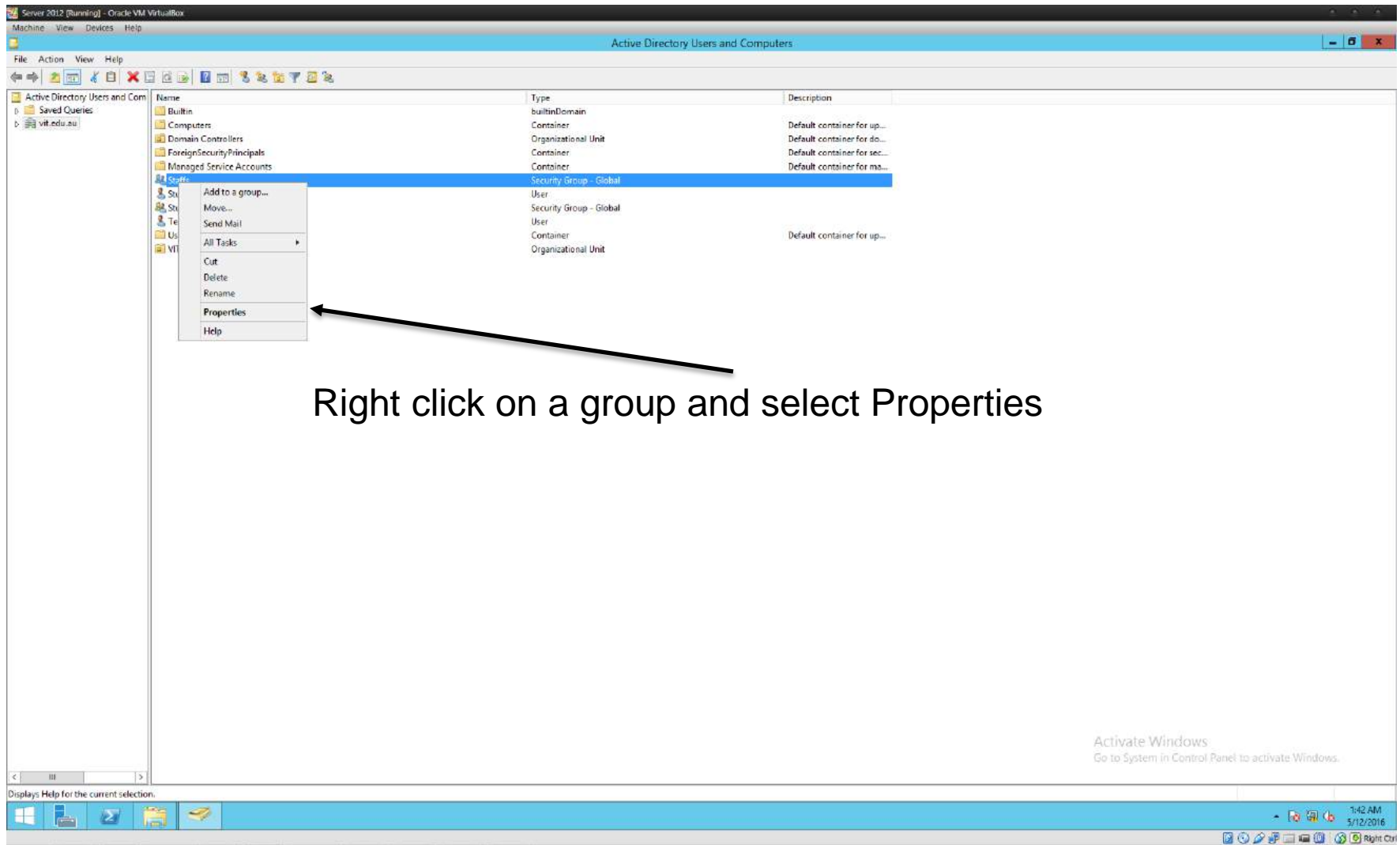
Buttons at the bottom of the dialog box include '< Back', 'Next >', and 'Cancel'.

Create 2 users:  
Teacher (Full Name)  
Username: teacher  
Password: iTSa1001 (note, OO not 00)

Student (Full Name)  
Username: student  
Password: iTSa1001

Note: Untick “User must change password at next login”

# Add users to groups



The screenshot shows the Active Directory Users and Computers console in Windows Server 2012. The left pane shows the tree structure with 'Users' selected. A right-click context menu is open over the 'Users' folder, with the 'Properties' option highlighted. A black arrow points from the text 'Right click on a group and select Properties' to the 'Properties' option in the menu.

Name	Type	Description
Builtin	builtinDomain	
Computers	Container	Default container for up...
Domain Controllers	Organizational Unit	Default container for do...
ForeignSecurityPrincipals	Container	Default container for sec...
Managed Service Accounts	Container	Default container for ms...
Groups	Security Group - Global	
Users	User	
Security Groups	Security Group - Global	
Users	User	
Containers	Container	Default container for up...
Organizational Units	Organizational Unit	

Right click on a group and select Properties

# Add users to groups

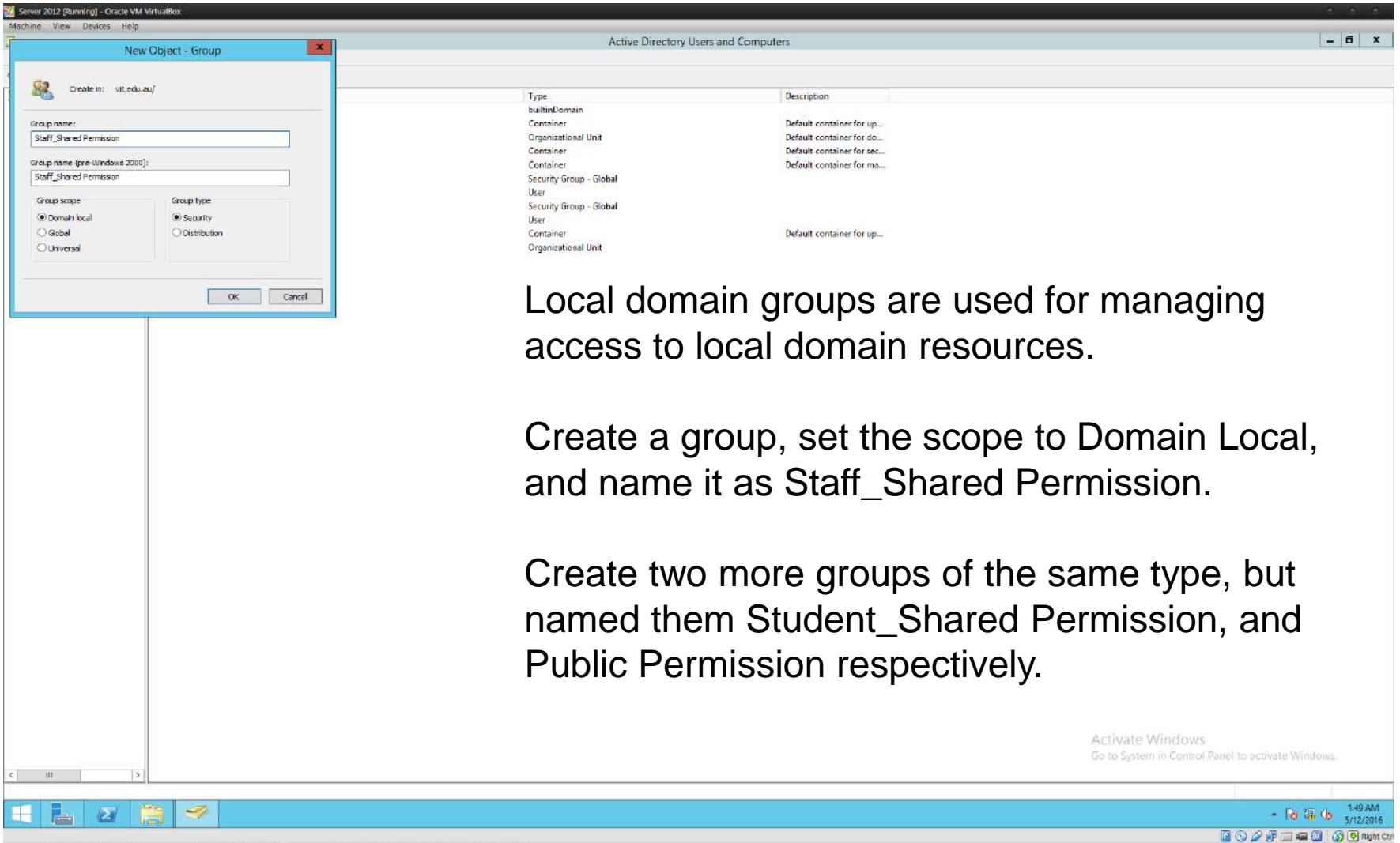
The screenshot shows the Active Directory Users and Computers console in Windows Server 2012. The left pane shows the tree structure with 'Staffs' selected. The right pane shows the properties for the 'Staffs' group, with the 'Members' tab active. A dialog box titled 'Select Users, Contacts, Computers, Service Accounts, or Groups' is open, showing the 'Members' list and the 'Add...' button. The dialog box has the following fields: 'Name' (Active Directory Domain Services Folder), 'Object Types' (User, Service Accounts, Groups, or Other objects), 'From this location' (vit.edu.au), and 'Enter the object names to select (separated)' (Teacher). The 'Check Names' button is also visible.

Choose Members tab and click Add... button to add users to the group.

Add the Teacher account to the Staffs group.

Repeat this step for the Student account and the Students group.

# Create groups for domain resources



The screenshot shows the 'New Object - Group' dialog box in the 'Active Directory Users and Computers' console. The dialog box is configured with the following settings:

- Create in: vit.edu.au/
- Group name: Staff\_Shared Permission
- Group name (pre-Windows 2000): Staff\_Shared Permission
- Group scope:  Domain local,  Global,  Universal
- Group type:  Security,  Distribution

The console shows a list of group types with descriptions:

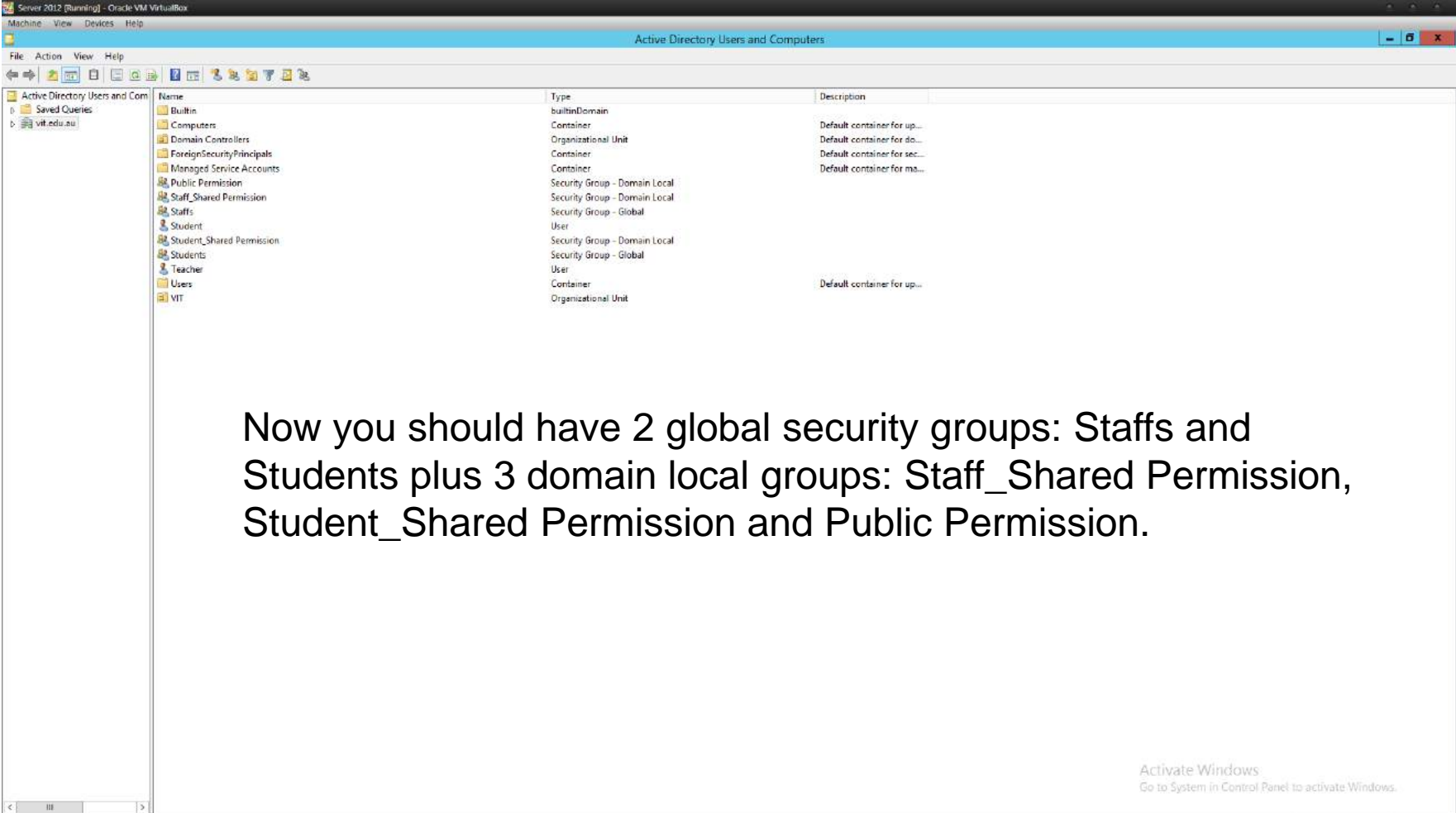
Type	Description
builtinDomain	
Container	Default container for up...
Organizational Unit	Default container for do...
Container	Default container for sec...
Container	Default container for ma...
Security Group - Global	
User	
Security Group - Global	
User	
Container	Default container for up...
Organizational Unit	

Local domain groups are used for managing access to local domain resources.

Create a group, set the scope to Domain Local, and name it as Staff\_Shared Permission.

Create two more groups of the same type, but named them Student\_Shared Permission, and Public Permission respectively.

# Create groups for domain resources



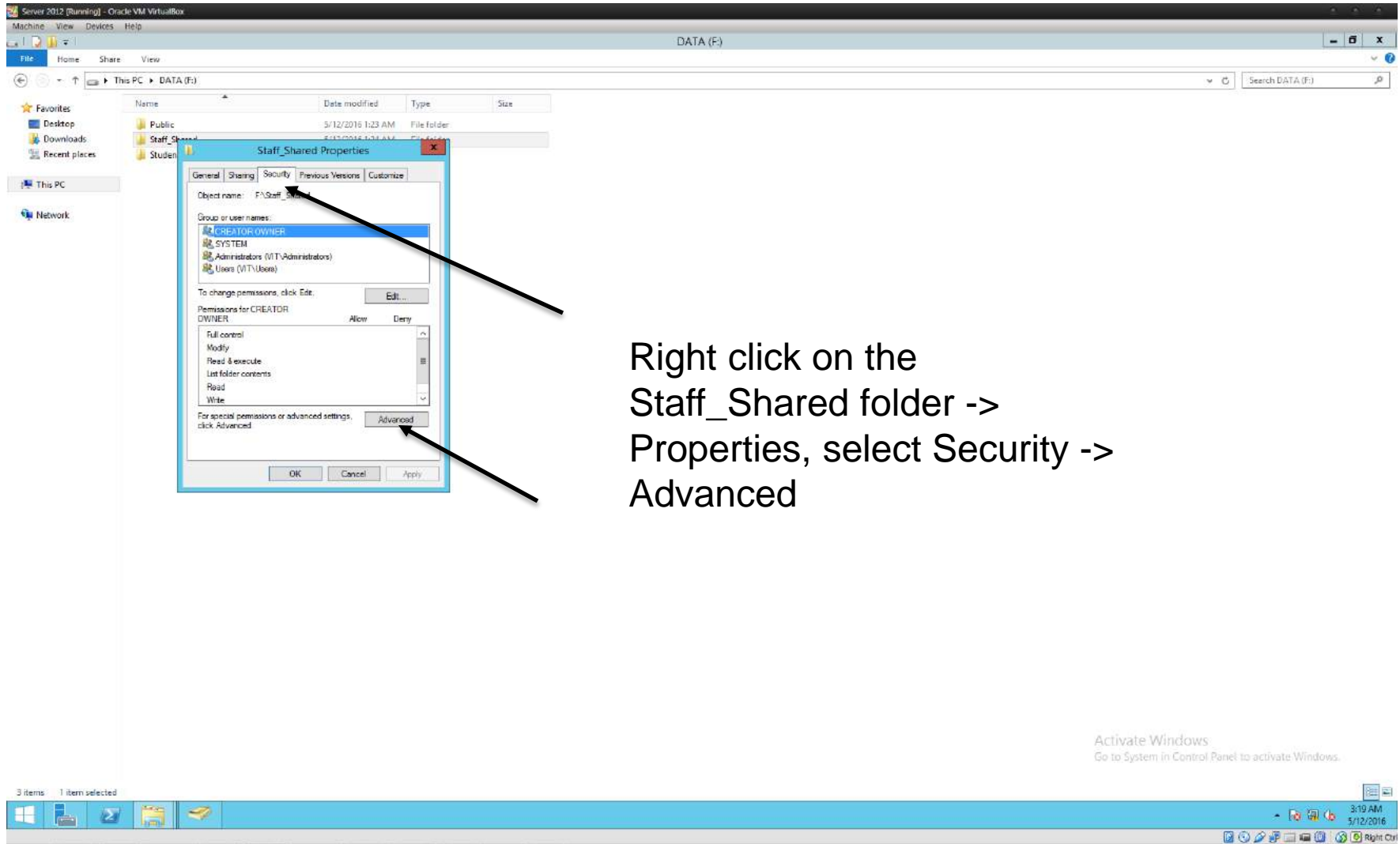
The screenshot shows the Active Directory Users and Computers console for the domain vit.edu.au. The left pane shows the tree structure with folders for Built-in, Computers, Domain Controllers, ForeignSecurityPrincipals, Managed Service Accounts, Public Permission, Staff\_Shared Permission, Staffs, Student, Student\_Shared Permission, Students, Teacher, Users, and VIT. The main pane displays a table of domain objects:

Name	Type	Description
Built-in	builtinDomain	
Computers	Container	
Domain Controllers	Container	Default container for up...
ForeignSecurityPrincipals	Organizational Unit	Default container for do...
Managed Service Accounts	Container	Default container for sec...
Public Permission	Container	Default container for ma...
Staff_Shared Permission	Security Group - Domain Local	
Staffs	Security Group - Domain Local	
Student	Security Group - Global	
Student_Shared Permission	User	
Students	Security Group - Domain Local	
Teacher	Security Group - Global	
Users	User	
VIT	Container	Default container for up...
	Organizational Unit	

Now you should have 2 global security groups: Staffs and Students plus 3 domain local groups: Staff\_Shared Permission, Student\_Shared Permission and Public Permission.



# Assign permissions to Staff\_Shared



The screenshot shows a Windows File Explorer window for the 'DATA (F:)' drive. The 'Staff\_Shared' folder is selected. The 'Staff\_Shared Properties' dialog box is open, with the 'Security' tab selected. The 'Group or user names' list includes 'CREATOR OWNER', 'SYSTEM', 'Administrators (WIT\Administrators)', and 'Users (WIT\Users)'. The 'Permissions for CREATOR OWNER' table is visible, with columns for 'Allow' and 'Deny'. The 'Advanced' button is highlighted. Arrows point from the text instructions to the 'Staff\_Shared' folder and the 'Advanced' button.

Right click on the Staff\_Shared folder -> Properties, select Security -> Advanced

Activate Windows  
Go to System in Control Panel to activate Windows.

# Assign permissions to Staff\_Shared

The screenshot shows a Windows File Explorer window displaying the 'DATA (F:)' drive. The 'Staff\_Shared' folder is selected, and its 'Advanced Security Settings' dialog box is open. The 'Permissions' tab is active, showing a list of permission entries for the folder. The 'Disable inheritance' button is highlighted with a red arrow, and a text box below it says 'Click Disable Inheritance to disable inherited permissions from the parent folder.'

Type	Principal	Access	Inherited from	Applies to
Allow	Administrators (VIT\Adminin...	Full control	None	This folder only
Allow	Administrators (VIT\Adminin...	Full control	F\	This folder, subfolders and files
Allow	Users (VIT\Users)	Special	F\	This folder and subfolders
Allow	Users (VIT\Users)	Read & execute	F\	This folder, subfolders and files
Allow	CREATOR OWNER	Full control	F\	Subfolders and files only
Allow	SYSTEM	Full control	F\	This folder, subfolders and files

Click Disable Inheritance to disable inherited permissions from the parent folder.

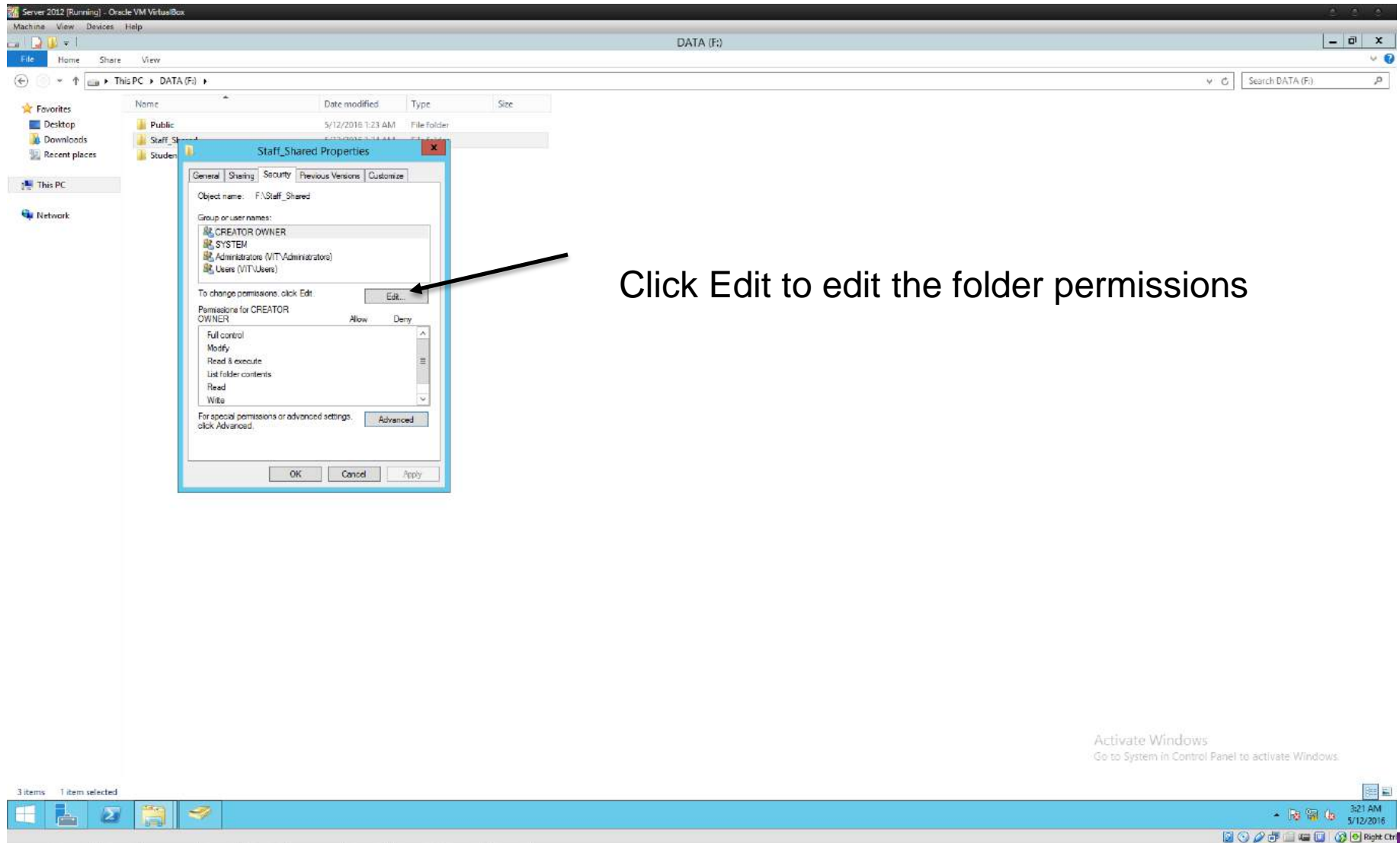
# Assign permissions to Staff\_Shared

The screenshot shows a Windows File Explorer window for the 'DATA (F:)' drive. The 'Staff\_Shared' folder is selected. The 'Staff\_Shared Properties' dialog is open, showing the 'Security' tab. The 'Advanced Security Settings for Staff\_Shared' dialog is also open, displaying a 'Block Inheritance' warning. A black arrow points from the text 'Copy the parent's permissions for editing' to the 'Convert inherited permissions into explicit permissions on this object' option in the 'Block Inheritance' dialog.

Copy the parent's permissions for editing

Activate Windows  
Go to System in Control Panel to activate Windows

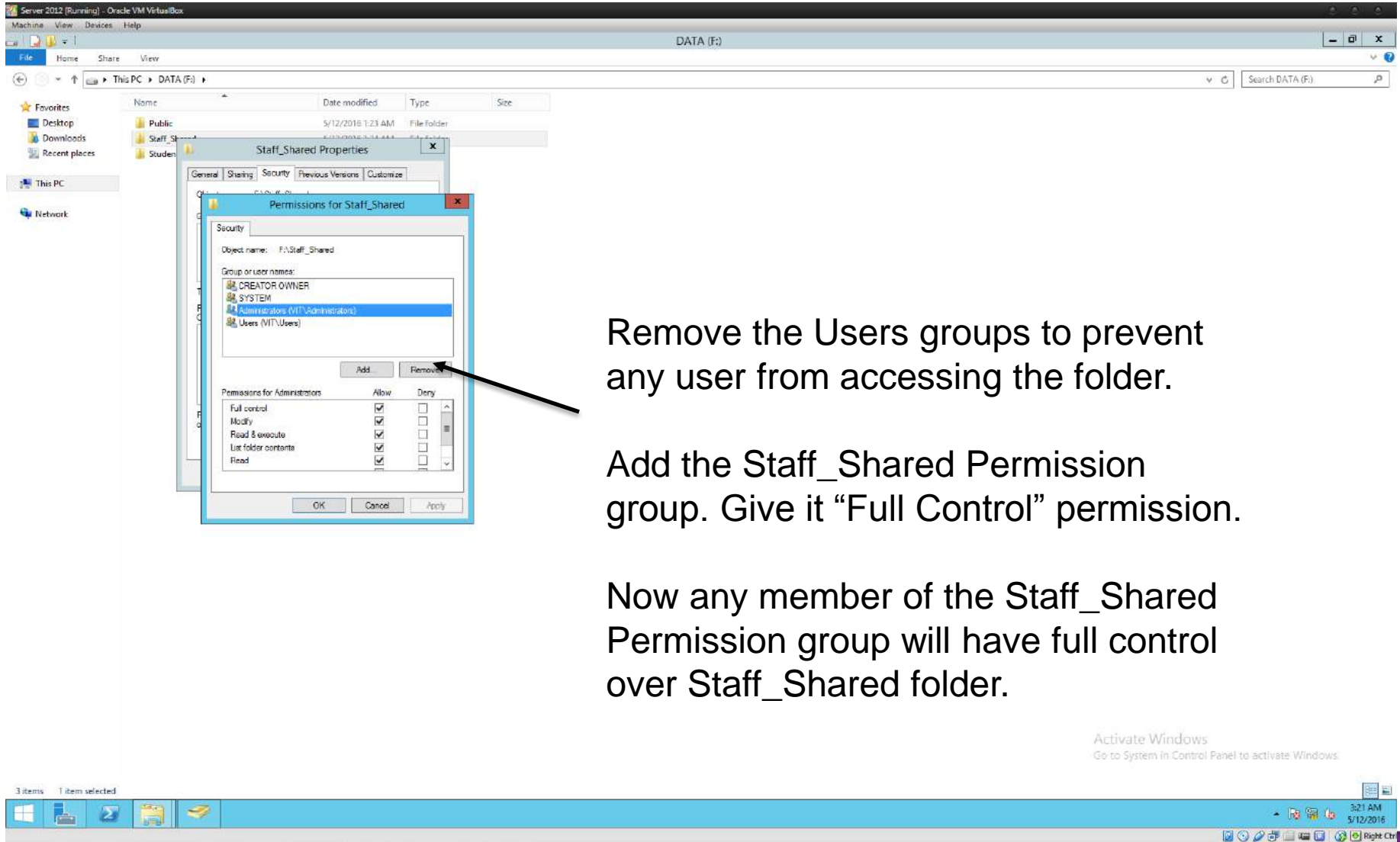
# Assign permissions to Staff\_Shared



The screenshot shows a Windows File Explorer window titled 'DATA (F:)'. The address bar shows 'This PC > DATA (F:)'. The left sidebar shows 'Favorites' with 'This PC' selected. The main pane shows a list of folders: 'Public', 'Staff\_Shared', and 'Students'. The 'Staff\_Shared' folder is selected, and its 'Properties' dialog box is open. The 'Security' tab is active, showing the object name 'F:\Staff\_Shared'. Under 'Group or user names', there is a list: 'CREATOR OWNER', 'SYSTEM', 'Administrators (VIT\Administrators)', and 'Users (VIT\Users)'. Below this list is an 'Edit...' button, which is highlighted by a black arrow. The 'Permissions for CREATOR OWNER' section shows a list of permissions: 'Full control', 'Modify', 'Read & execute', 'List folder contents', 'Read', and 'Write'. At the bottom of the dialog are 'OK', 'Cancel', and 'Apply' buttons. In the bottom right corner of the screen, there is a watermark: 'Activate Windows. Go to System in Control Panel to activate Windows.' The taskbar at the bottom shows the time as 3:21 AM on 5/12/2016.

Click Edit to edit the folder permissions

# Assign permissions to Staff\_Shared

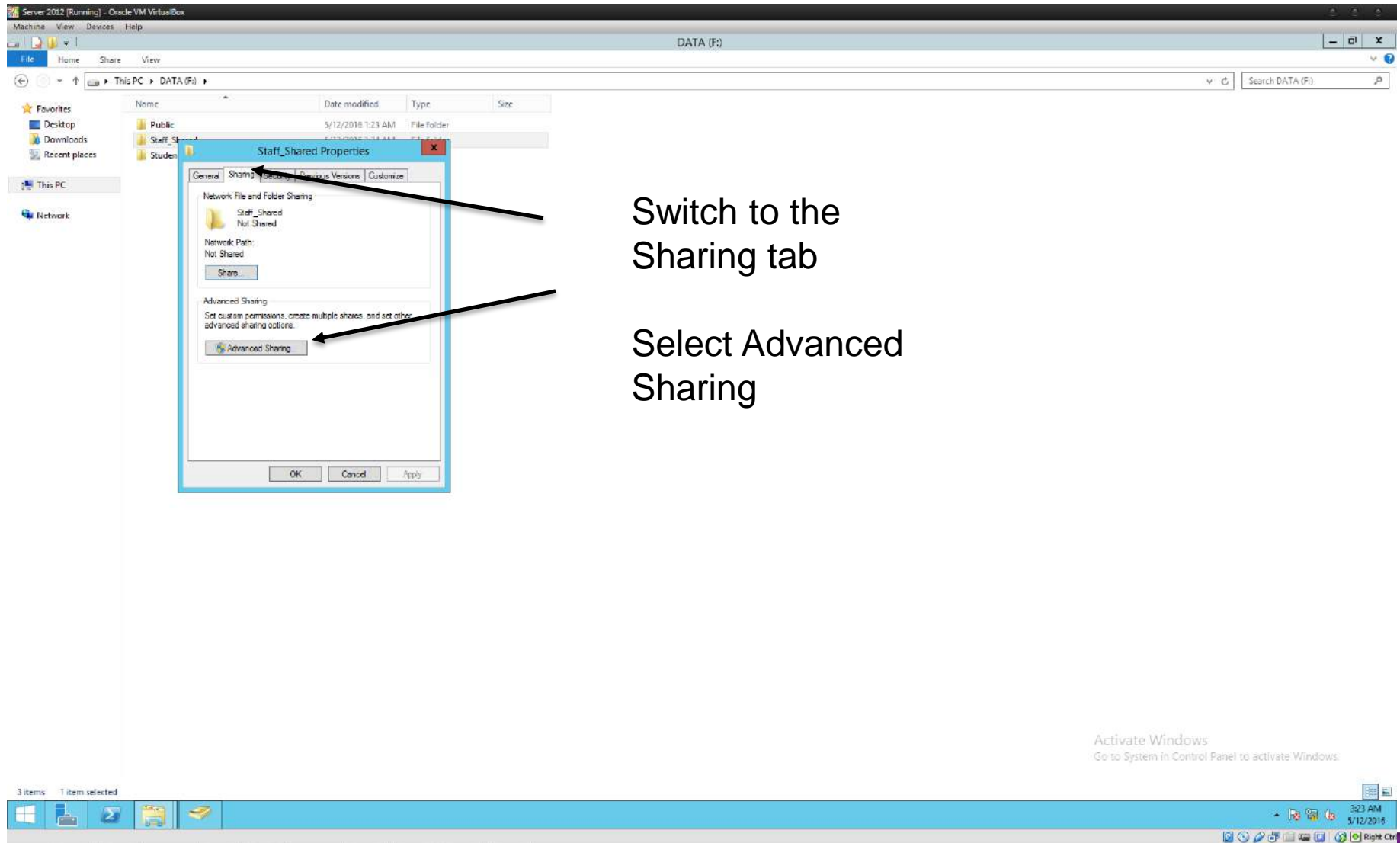


Remove the Users groups to prevent any user from accessing the folder.

Add the Staff\_Shared Permission group. Give it "Full Control" permission.

Now any member of the Staff\_Shared Permission group will have full control over Staff\_Shared folder.

# Assign permissions to Staff\_Shared

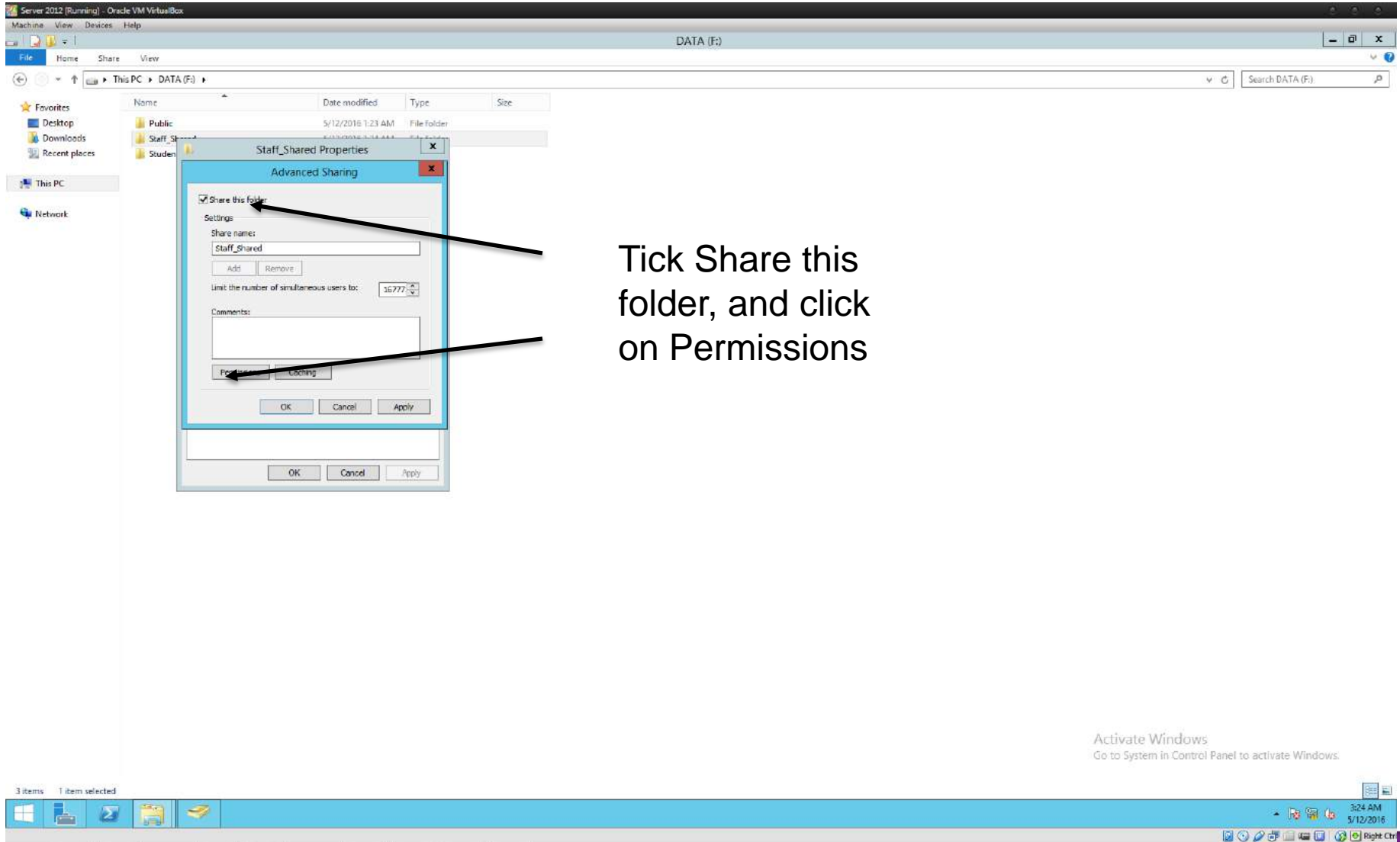


The screenshot shows a Windows File Explorer window for the 'DATA (F:)' drive. A 'Staff\_Shared Properties' dialog box is open, with the 'Sharing' tab selected. The dialog box has four tabs: 'General', 'Sharing', 'Security', and 'Advanced Versions'. The 'Sharing' tab is active, showing 'Network File and Folder Sharing' with 'Staff\_Shared' listed as 'Not Shared'. Below this, the 'Network Path' is 'Not Shared' and there is a 'Shares...' button. The 'Advanced Sharing' section is visible, with a description: 'Set custom permissions, create multiple shares, and set other advanced sharing options.' The 'Advanced Sharing' button is highlighted with a blue border. Two black arrows point from the text on the right to the 'Sharing' tab and the 'Advanced Sharing' button. The taskbar at the bottom shows the system tray with the time '3:23 AM' and date '5/12/2016'. An 'Activate Windows' watermark is visible in the bottom right corner of the screenshot.

Switch to the Sharing tab

Select Advanced Sharing

# Assign permissions to Staff\_Shared



DATA (F:)

File Home Share View

This PC > DATA (F:)

Staff\_Shared Properties

Advanced Sharing

Share this folder

Settings

Share name: Staff\_Shared

Limit the number of simultaneous users to: 16777

Permissions

Tick Share this folder, and click on Permissions

Activate Windows  
Go to System in Control Panel to activate Windows.

3 items 1 item selected

3:24 AM  
5/12/2016

# Assign permissions to Staff\_Shared

Remove the Everyone group, and add Staff\_Shared Permission. Give it Full Control

Permissions for Everyone	Allow	Deny
Full Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Change	<input type="checkbox"/>	<input type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Activate Windows  
Go to System in Control Panel to activate Windows.



# Assign permissions to Staff\_Shared

Remember that the combined permission is the most restricted one.  
If we assign read only shared permission to the folder then the combined permission will be read-only.

Activate Windows  
Go to System in Control Panel to activate Windows.

# Assign permissions to Staff\_Shared

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- Now the last step is to add Staffs group as a member of Staff\_Shared Permission group.
- After you complete this step, any member of Staffs group will be able to have full access to Staff\_Shared folder.
- To verify the access permission, add user **teacher** that you have created as member of Staffs group and try to logon to the domain from Windows XP client as the teacher.

# Assign permissions to Student\_Shared

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- Repeat the steps used to assign permission to Staff\_Shared for Student\_Shared (from slide 17).
  - Remember to add both Staffs and Students as members of Student\_Shared Permission group so both staffs and students can access the folder.
- Apply permission for Public\_Shared folder using similar steps that were used for Staff\_Shared and Student\_Shared.
  - Add **Everyone** group as member of Public\_Shared permission group

# Verify the permission

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- Try to logon to the domain from Windows XP client as the teacher, student and an another user to verify if the permissions were correctly assigned.