

Configuring of a simple Active Directory

I configured a simple active directory environment from scratch on my home computer using open-source software.

In the early 2000s the only way one could have built an IT lab was to purchase physical servers or re-purpose old computers. While this can be very beneficial as far as IT experience and skills, it can be much faster simply to build a free virtual IT lab and configure an Active directory..

Let's dive in!

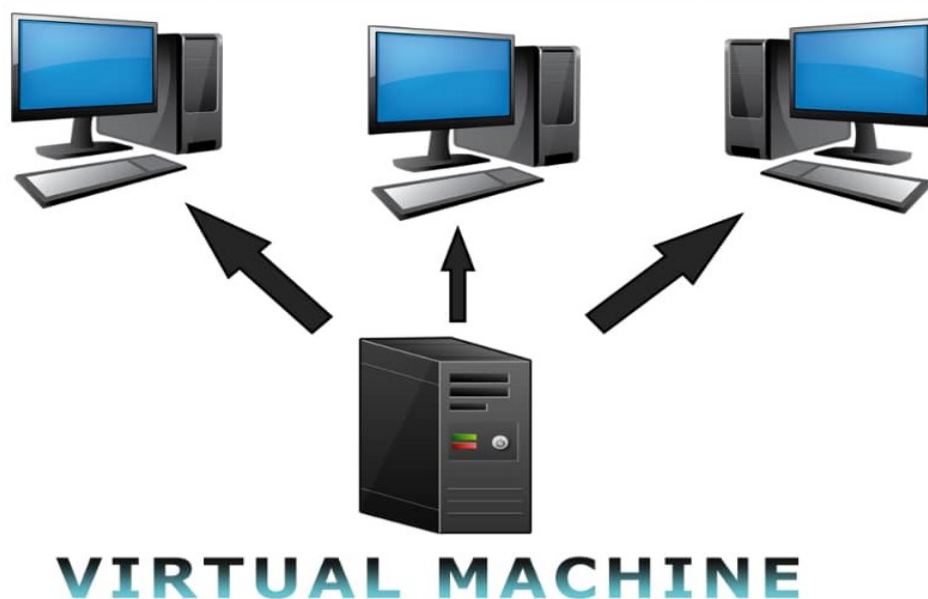
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Active Directory Overview

So what is an Active Directory? Basically, the IT term Active Directory refers to the practice of emulating (or simulating) a computer. You can use a Virtual Machine to run a computer as an application on your host computer.

On the image below the below computer would be the Host computer. The three computers above the host are referred to as guest virtual machines.



Virtual machines act like real computers, but run as a software program. So you can start, restart, shut down, install software and operating systems just like you would on a normal computer.

This makes virtual machines perfect for IT labs.

Configure the VLAN and make all devices including the server to be on the same subnet

This is very simple, first thing to do is to click on settings on the left side, click on the VLAN, network setting, then click on NatNetwork and edit.

After setup,

What we need to do is to select each device, go to settings and select the network created under the Nat Network , ensure all the device are on the same subnet.

From below example, Operation subnet is used for all the PC(users) and the domain controller(Server). Pls ensure this is perfectly configured.

The screenshot shows the Oracle VM VirtualBox Manager interface. On the left, a list of virtual machines is displayed under two categories: 'operation network' and 'IT network'. The 'operation network' category includes 'hr pc', 'sales pc', and 'windows machine', all powered off. The 'IT network' category includes 'ubuntu', 'kali machine', and 'Parrot machine', also powered off. On the right, the 'Network' settings for the 'operation network' are shown. The 'NAT Networks' tab is selected, displaying a table of network configurations. The table has columns for Name, IPv4 Prefix, IPv6 Prefix, and DHCP Server. The 'operation network' is highlighted, showing an IPv4 Prefix of 10.0.2.0/24 and an IPv6 Prefix of fd17:625c:f037:2::/64, with DHCP Server enabled. Below the table, the 'General Options' tab is selected, showing the Name as 'IT network', IPv4 Prefix as 10.0.2.0/24, and the 'Enable DHCP' checkbox checked. The 'Enable IPv6' checkbox is unchecked.

Name	IPv4 Prefix	IPv6 Prefix	DHCP Server
IT network	10.0.2.0/24	fd17:625c:f037:2::/64	Enabled
NatNetwork	10.0.2.0/24	fd17:625c:f037:2::/64	Enabled
operation network	10.0.2.0/24	fd17:625c:f037:2::/64	Enabled

General Options

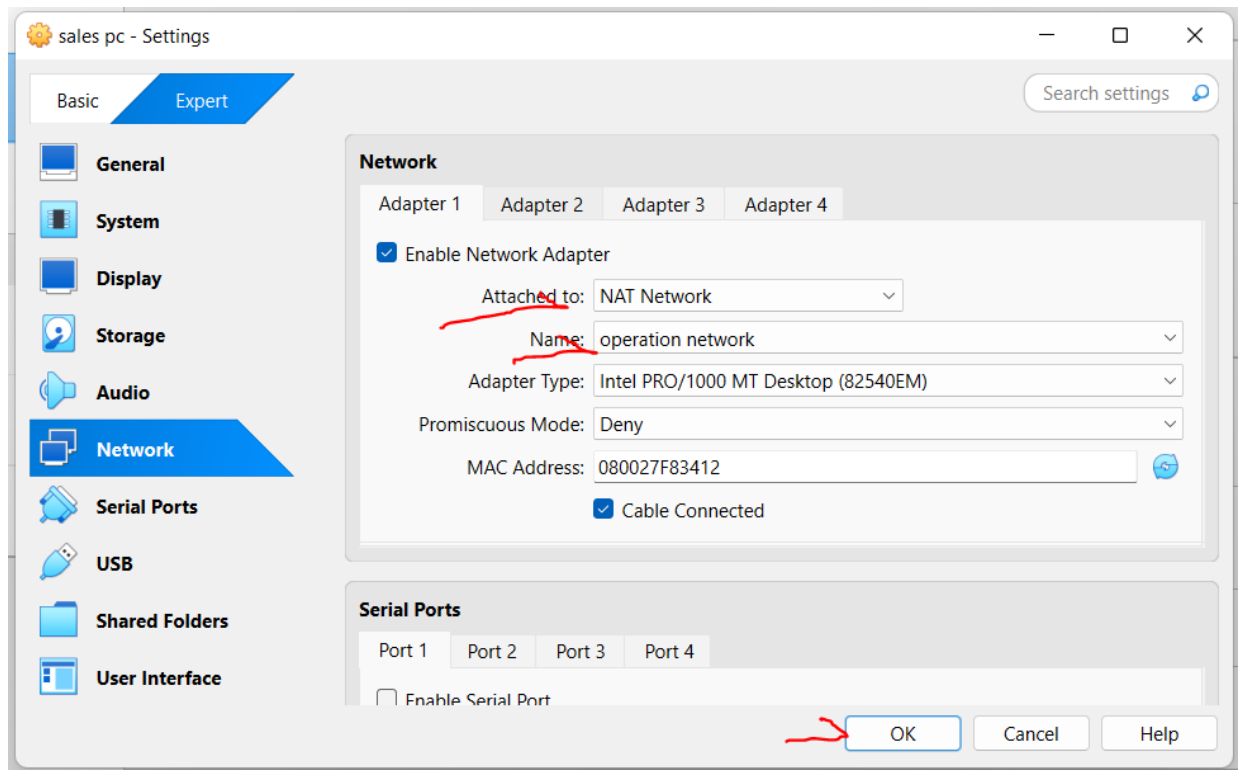
Name: IT network

IPv4 Prefix: 10.0.2.0/24

☒ Enable DHCP

☐ Enable IPv6

IPv6 Prefix: fd17:625c:f037:2::/64

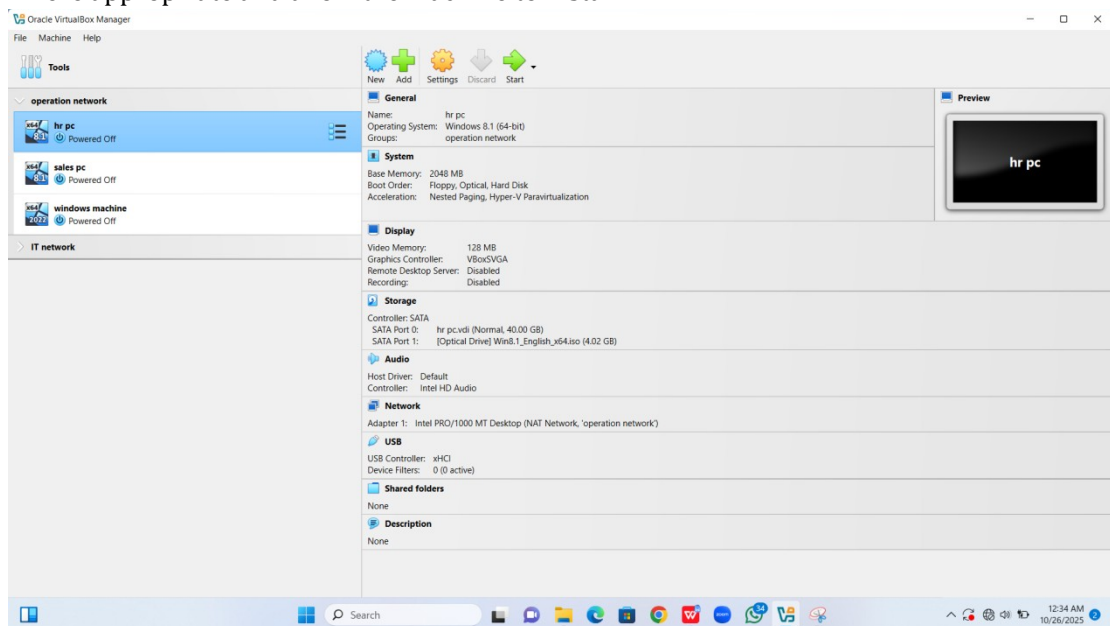


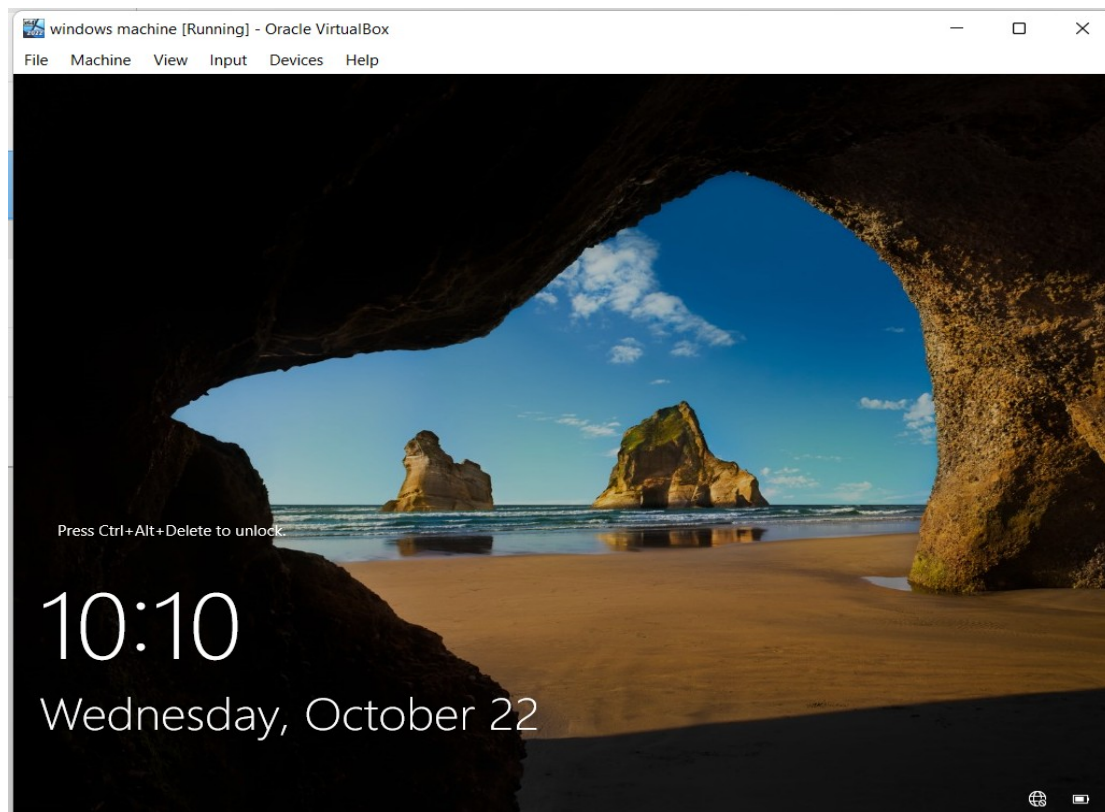
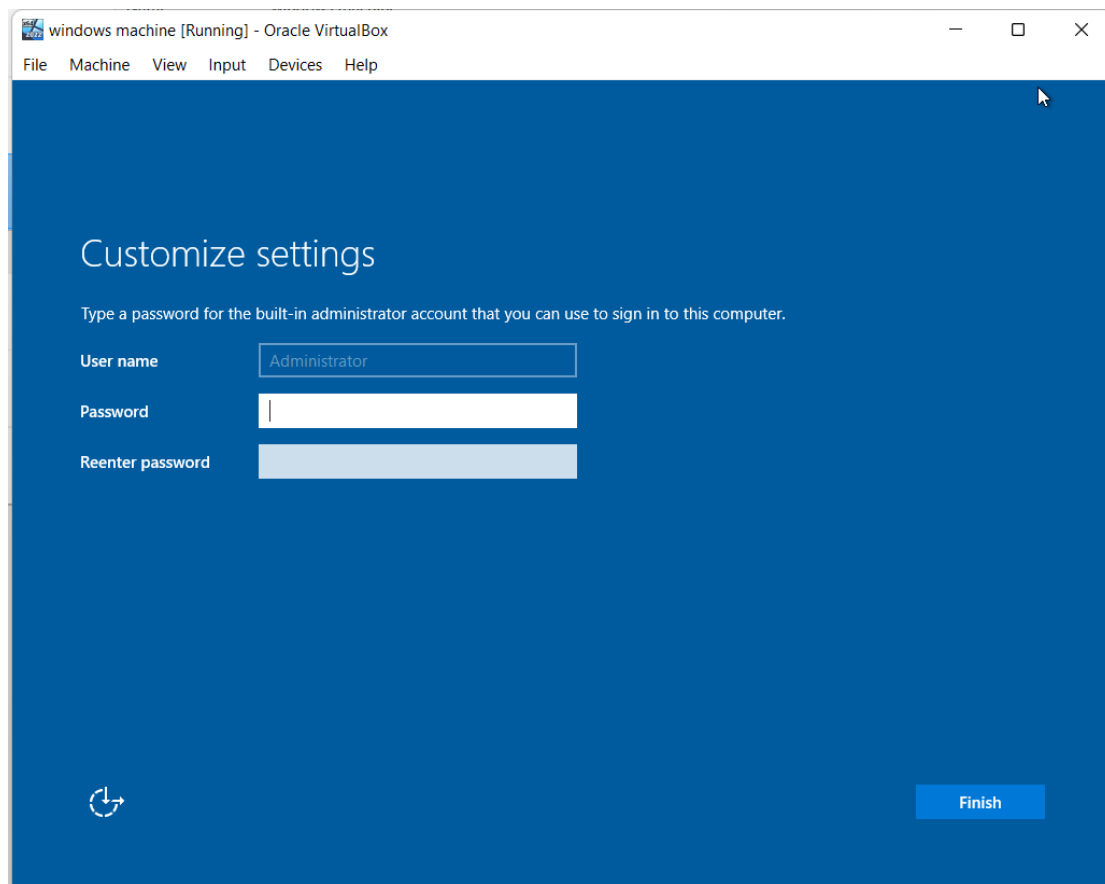
What we have ensure so far is....

We have configured the Vlan and ensured that all devises are on the same subne. What we don next is to start all the virtual machine at the same time, including the servier.

Start all the virtual machine at the same time including the server

Ensure you follow the instruction, set up a user name where appropriate, input password where appropriate and allow the machine to install.





Above is a complete configuration, you will repeat same process for all the machine and ensure they are properly setup.

We Start the window server dashboard and configure it

This is very simple, Go to input, click on keyboard, click on the CTR+Alt+Device to unlock

I Proceeded through the installation using all of the default options. Any prompts that are a yes/no you need to select 'yes' or next

Click next...

Click finish