13.2.3 Creating a Virtual Machine

Click one of the buttons to take you to that part of the video.

Create a Virtual Machine 0:00-0:31

In this demonstration, we will demonstrate creating a virtual machine. To do that, we first need to run the virtualization manager. It's best to do that as the super user of the system, so let's go ahead and elevate our privileges. We'll go ahead and put in our password, and there we go. The program is called 'virt-manager'. We'll go ahead and run that. That brings up our virtual machine manager.

VM Options 0:32-1:46

The first thing we need to do is create a virtual machine, You can see currently were just using the KVM system. Let's go ahead and create a new virtual machine. We have several options here. The first is to do a local install. That's when we have an ISO image or a CD-ROM connected to our local system. We can do a network install. We can do that via the HTTP protocol, FTP or NFS protocols. We can do a network boot with PXE, pre-execution environment, or we can even import an existing disk image, if one exists. In this case were going to go ahead and use the ISO image of Windows 10. We'll create the ISO image, press browse, and on this system, we have a default directory called the disks and in that directory we have the Win10 ISO. We'll go ahead and choose that as the volume.

The system, KVM, automatically detects that this is the Windows operating system and we are installing Microsoft Windows 10. Yes, we are installing Microsoft Windows 10 on a Linux system. We'll go ahead and go forward.

RAM, CPU and Storage 1:47-2:22

We can set our RAM and our CPUs. We'll just set that at the defaults, then go ahead and click forward. Here we can enable storage. We can create something, or we can even create custom storage, if we wish. But, the disk image hereby the default is 40 GB. We can go ahead and change that, if we wish. We'll choose forward, and again what are we going to call it? We know that it's Windows 10. It's a local ISO file. Here's our memory and here's CPUs and notice the storage change did indeed get reflected.

Network 2:23-2:44

We can also choose our network selection, we can choose to use NAT. We can also use the host device, which is like bridging, or we can even use a shared device name. In this case, will just go ahead and use NAT. We'll click on this button here, 'Customize configuration before install', and choose 'Finish'.

Customize Configuration 2:45-4:34

Now we have all the fine tuning of what we can do in order to create our virtual machine. In this case, we can have a name, title in the description. I believe it's always good to have a description, 'Windows 10 for demonstration purposes'. The hypervisor is KVM were using a 64-bit architecture, we could choose either BIOS or UEFI, if UEFI were found on the system.

And we can specify the chipset, which the system is not allowing me to make changes, so that the chipset were going to use. I can click on CPUs. I made at made a change here, so it's asking me to apply them now. Every individual setting that we make has to be saved individually. I'm currently using two CPUs. If I wanted to, I could specify--let's use two however--if we need more it will allow us to allocate up to four. Here in configuration of the CPU, this is where we can get into a little trouble. What we have is several, as you can see absolutely several, different choices here of what we can choose for our CPUs. If you don't know what it is, then that could be a problem. So the best choice here is all the way at the top where it says, "Hypervisor Default." That's always a good choice because what it's using is what your CPU is using for virtualization itself. That works out well. We'll go ahead and apply that.

RAM and Boot Options 4:35-5:08

For RAM, we have our choices. You can see I have total of 8 GB of RAM in this system. I could choose any of that if I wanted to. I can go ahead and go to, say, 6000, 6124. I'm not really sure what the number is. I can apply that. And now I can use the four gigs, but I can go up to six.

For boot options, I can choose to start this virtual machine when I boot my machine. I'm not going to do that here . We'll just go ahead and choose the defaults.

Storage Options 5:09-6:48

IDE disk 1--personally, I'm not a fan of IDE. I like to use SATA instead. That's what most virtualization engines use. Let's go ahead and do that. Notice here at the end, I have 'VirtIO'. If this is a paravirtualized system (paravirtualized means that the system understands that it's being virtualized), it is able to use the pass-through I/O for the disk arrays, or for the CD-ROM, or what have you. In this case will just go ahead and let's choose SATA, just to make sure that were using the SATA driver. We'll choose 'Apply'. And notice, it changed are device type from IDE disk to SATA disk. Let's do the same thing for the CD-ROM. We'll go ahead and choose SATA, and choose 'Apply'.

Notice 'Source path' is blank. Let's go ahead and make sure that that image that we chose earlier, is still valid. So we'll go ahead and choose our volume, choose 'OK'. You see it now shows up here. That's very good. We'll go ahead and choose our NIC. For our NIC (we're using NAT as we said before), we could use the host device, if we want to do that, or we could specify shared device name. For our device model, we could use the hypervisor default, we could use an Intel, or we could use the virtual IO. Let's go ahead and use the Intel here, because we are using NAT.

Miscellaneous Options 6:49-7:41

Then we have a few others here. We have tablet, if we're using any kind of a touch tablet. We have our display information. All of the rest of this were going to go ahead and use the defaults. We'll go ahead and begin our installation. It's creating the virtual machine, and as you can see we are now installing Windows. We're ready for the Windows setup program. We'll go ahead and do the install and come back when it is complete.

After several minutes of the install process, here we have the Windows operating system running inside of our KVM, running on Linux.

Summary 7:42-7:43

In this demonstration, we showed you how to install a virtual machine.

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