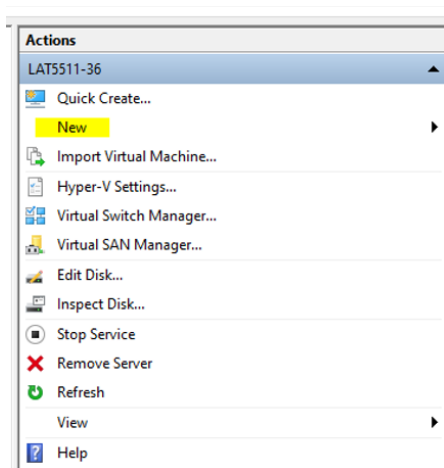
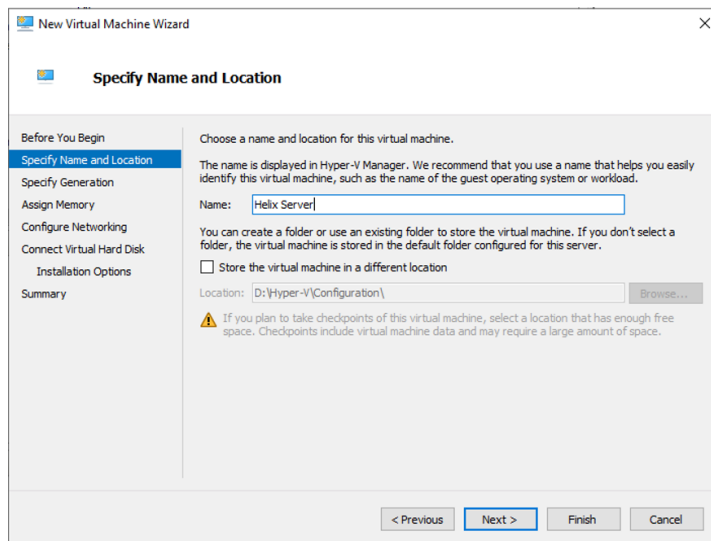


SERVER SETUP INSTRUCTIONS

1. Download the Helix Server iso image
2. Open a virtual machine manager of your choice
(For this demonstration, we will be using Hyper-V Manager)
3. Create an empty virtual machine



4. Specify the name of the Virtual Machine



5. Choose Generation 1 Virtual Machine

The screenshot shows the 'Specify Generation' step of the 'New Virtual Machine Wizard'. The left sidebar lists the steps: 'Before You Begin', 'Specify Name and Location', 'Specify Generation' (selected), 'Assign Memory', 'Configure Networking', 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area is titled 'Specify Generation' and contains the text: 'Choose the generation of this virtual machine.' Below this, there are two radio button options: 'Generation 1' (selected) and 'Generation 2'. The 'Generation 1' option is described as: 'This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V.' The 'Generation 2' option is described as: 'This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system.' A warning icon and text state: 'Once a virtual machine has been created, you cannot change its generation.' At the bottom, there is a link: 'More about virtual machine generation support'. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

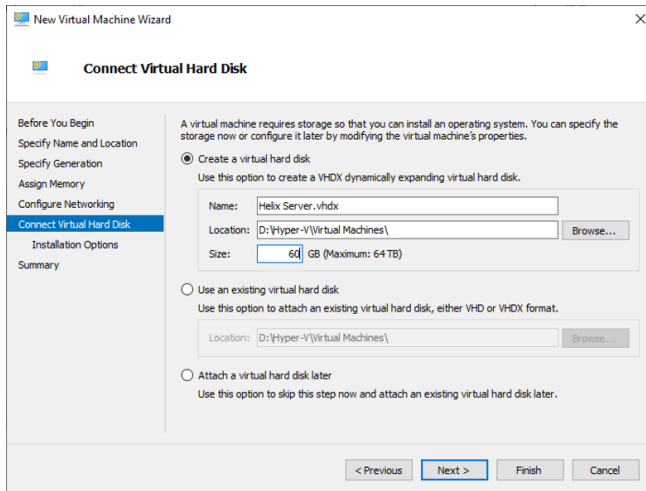
6. Assign Memory

The screenshot shows the 'Assign Memory' step of the 'New Virtual Machine Wizard'. The left sidebar lists the steps: 'Before You Begin', 'Specify Name and Location', 'Specify Generation', 'Assign Memory' (selected), 'Configure Networking', 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area is titled 'Assign Memory' and contains the text: 'Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 251658240 MB. To improve performance, specify more than the minimum amount recommended for the operating system.' Below this, there is a 'Startup memory' field with a value of '4096 MB'. A checkbox labeled 'Use Dynamic Memory for this virtual machine.' is checked. A tip icon and text state: 'When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.' Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

7. Connect to a network (Note: the Helix Server installation will still succeed even without a network connection)

The screenshot shows the 'Configure Networking' step of the 'New Virtual Machine Wizard'. The left sidebar lists the steps: 'Before You Begin', 'Specify Name and Location', 'Specify Generation', 'Assign Memory', 'Configure Networking' (selected), 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area is titled 'Configure Networking' and contains the text: 'Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected.' Below this, there is a 'Connection' dropdown menu with 'Wifi' selected. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

8. Assign the size of the Virtual Hard Disk



New Virtual Machine Wizard

Connect Virtual Hard Disk

Before You Begin
Specify Name and Location
Specify Generation
Assign Memory
Configure Networking
Connect Virtual Hard Disk
Installation Options
Summary

A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties.

☒ Create a virtual hard disk
Use this option to create a VHDX dynamically expanding virtual hard disk.

Name: Helix Server.vhdx
Location: D:\Hyper-V\Virtual Machines\ Browse...
Size: 64 GB (Maximum: 64 TB)

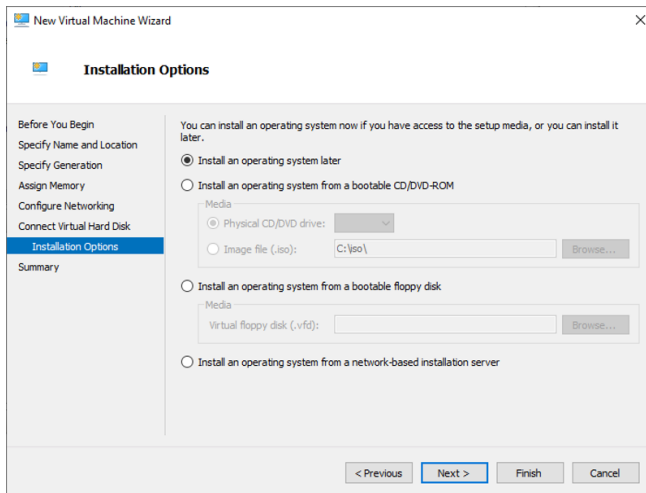
☐ Use an existing virtual hard disk
Use this option to attach an existing virtual hard disk, either VHD or VHDX format.

Location: D:\Hyper-V\Virtual Machines\ Browse...

☐ Attach a virtual hard disk later
Use this option to skip this step now and attach an existing virtual hard disk later.

< Previous Next > Finish Cancel

9. Install the OS later



New Virtual Machine Wizard

Installation Options

Before You Begin
Specify Name and Location
Specify Generation
Assign Memory
Configure Networking
Connect Virtual Hard Disk
Installation Options
Summary

You can install an operating system now if you have access to the setup media, or you can install it later.

☒ Install an operating system later

☐ Install an operating system from a bootable CD/DVD-ROM

Media
☒ Physical CD/DVD drive: [Dropdown]
☐ Image file (.iso): C:\iso\ Browse...

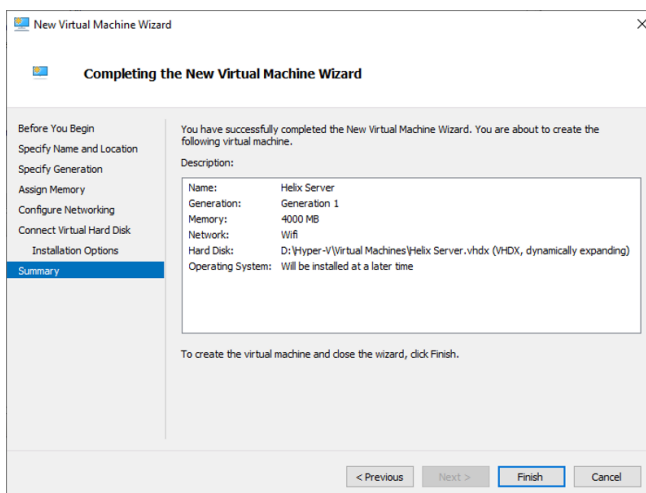
☐ Install an operating system from a bootable floppy disk

Media
Virtual floppy disk (.vfd): Browse...

☐ Install an operating system from a network-based installation server

< Previous Next > Finish Cancel

10. Finish creating the virtual machine



New Virtual Machine Wizard

Completing the New Virtual Machine Wizard

Before You Begin
Specify Name and Location
Specify Generation
Assign Memory
Configure Networking
Connect Virtual Hard Disk
Installation Options
Summary

You have successfully completed the New Virtual Machine Wizard. You are about to create the following virtual machine.

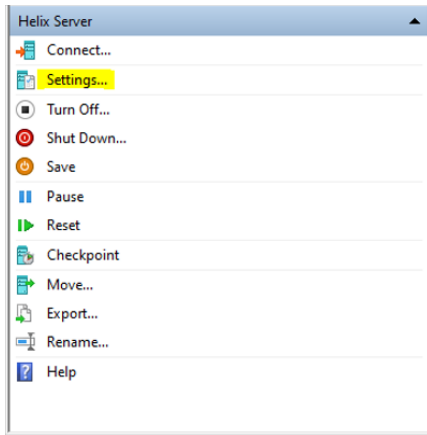
Description:

Name:	Helix Server
Generation:	Generation 1
Memory:	4000 MB
Network:	Wifi
Hard Disk:	D:\Hyper-V\Virtual Machines\Helix Server.vhdx (VHDX, dynamically expanding)
Operating System:	Will be installed at a later time

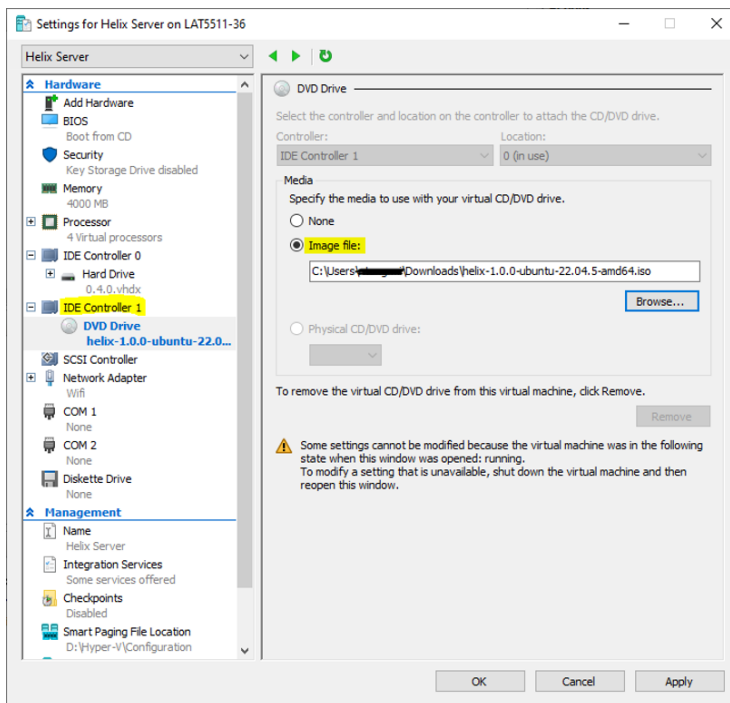
To create the virtual machine and close the wizard, click Finish.

< Previous Next > Finish Cancel

11. Go to the Settings of the Virtual Machine



12. Go to IDE Controller 1 / DVD Drive. Select Image file and select the Helix Server iso image. Click Apply.



13. Start the Helix Server. You should see the ZKX Solutions EULA

```
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For ZKX Helix and Helix Authenticator
Last Updated: November 12, 2024

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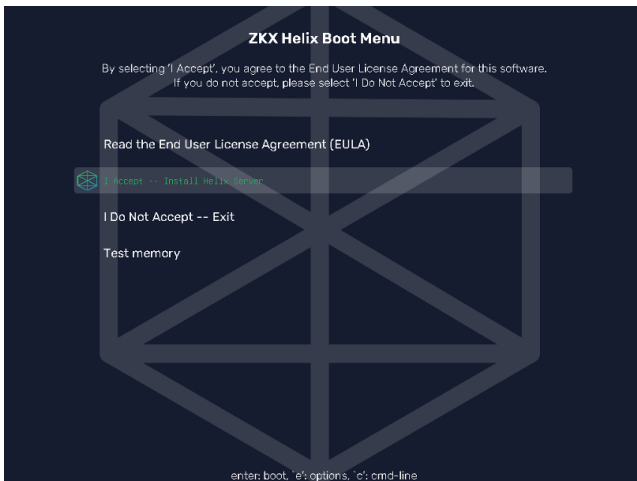
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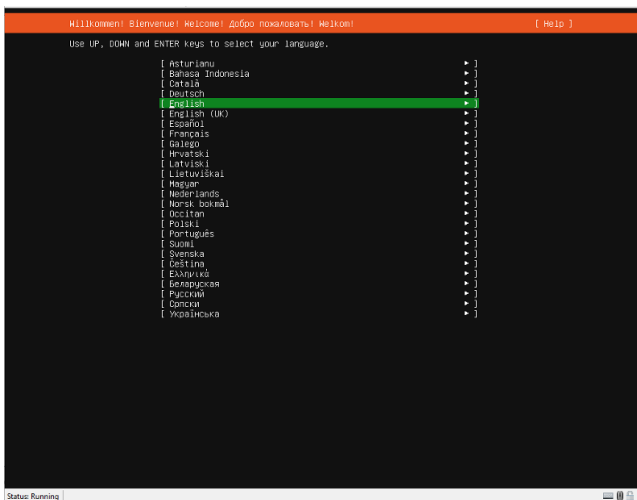
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--MORE--
```

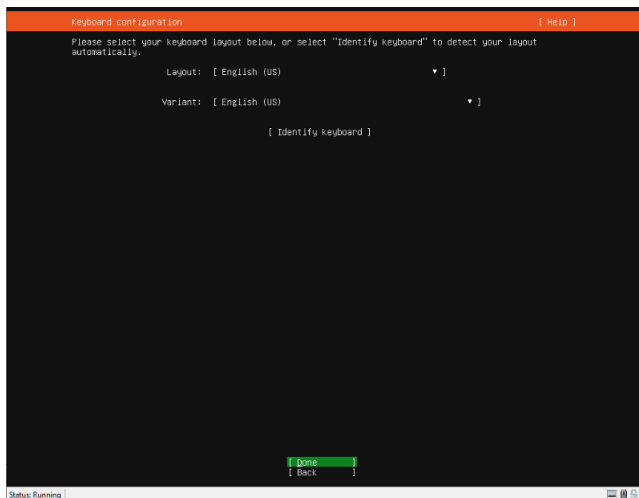
14. After reading the EULA, select I Accept - Install Helix Server



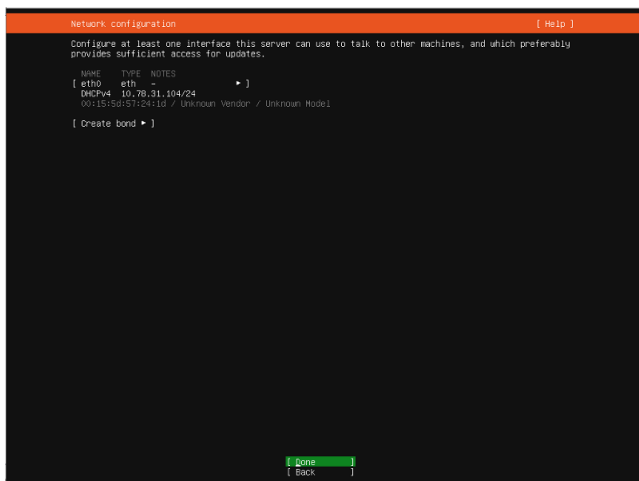
15. After the initialization, select your language



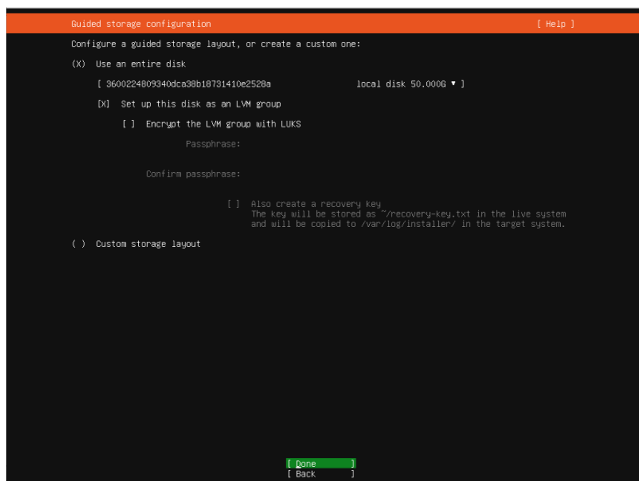
16. Select your keyboard configuration



17. Select your network configuration



18. Use the entire disk for your storage configuration



19. Continue

Storage configuration [Help]

FILE SYSTEM SUMMARY

MOUNT POINT	SIZE	TYPE	DEVICE TYPE
[/	23.596G	new ext4	new LVM logical volume ▶]
[/boot	2.000G	new ext4	new partition of local disk ▶]

AVAILABLE DEVICES

DEVICE	TYPE	SIZE
[ubuntu-vg (new)	LVM volume group	47.996G ▶]
free space		24.000G ▶]

[Create software RAID (md) ▶]
[Create volume group (LVM) ▶]

USED DEVICES

DEVICE	TYPE	SIZE
[ubuntu-vg (new)	LVM volume group	47.996G ▶]
ubuntu-lv	new, to be formatted as ext4, mounted at /	23.596G ▶]

[360022480940dc308e10721410e2520a

partition	new, BIOS grub spacer	50.000G ▶]
partition 1	new, to be formatted as ext4, mounted at /boot	1.000M ▶]
partition 2	new, PV of LVM volume group ubuntu-vg	2.000G ▶]
partition 3		47.997G ▶]

[Done]
[Reset]
[Back]

20. Confirm the destructive action

Storage configuration [Help]

FILE SYSTEM SUMMARY

MOUNT POINT	SIZE	TYPE	DEVICE TYPE
[/	23.596G	new ext4	new LVM logical volume ▶]
[/boot	2.000G	new ext4	new partition of local disk ▶]

AVAILABLE DEVICES

DEVICE	TYPE	SIZE
[ubuntu-vg (new)	LVM volume group	47.996G ▶]
free space		24.000G ▶]

[Create software RAID (md) ▶]
[Create vo

USED DEVICES

DEVICE	TYPE	SIZE
[ubuntu-vg (new)	LVM volume group	47.996G ▶]
ubuntu-lv	new, to be formatted as ext4, mounted at /	23.596G ▶]

[360022480940dc308e10721410e2520a

partition	new, BIOS grub spacer	50.000G ▶]
partition 1	new, to be formatted as ext4, mounted at /boot	1.000M ▶]
partition 2	new, PV of LVM volume group ubuntu-vg	2.000G ▶]
partition 3		47.997G ▶]

Confirm destructive action

Selecting Continue below will begin the installation process and result in the loss of data on the disks selected to be formatted.

You will not be able to return to this or a previous screen once the installation has started.

Are you sure you want to continue?

[No]
[Continue]

[Done]
[Reset]
[Back]

21. Configure the name of the server, admin username, and password

Profile configuration [Help]

Enter the username and password you will use to log in to the system. You can configure SSH access on a later screen, but a password is still needed for sudo.

Your name:

Your servers name:
The name it uses when it talks to other computers.

Pick a username:

Choose a password:

Confirm your password:

[Done]

22. Wait for the installation to complete and reboot the system

```

install complete!                                     [ Help ]

executing curtin install extract step
  curtin command install
    writing install sources to disk
      running 'curtin extract'
        curtin command extract
          acquiring and extracting image from cpi:///tmp/tp14yvpvz/mount
        configuring keyboard
      curtin command list-target
    executing curtin install curthooks step
  curtin command install
    configuring installed system
      running 'curtin curthooks'
        curtin command curthooks
          configuring apt
            installing missing packages
            installing packages on target system (['gnubg-pc'])
            configuring icssd service
            configuring raid (mdadm) service
            configuring NWE over TCP
            installing kernel
            setting up swap
            applying networking config
            writing etc/hosts
            configuring multipath
            updating packages on target system
            configuring polkitte user-agent on target
            updating initramfs configuration
            configuring target system boot loader
            installing grub to target devices
            copying metadata from /cdrom
          final system configuration
            calculating extra packages to install
            configuring cloud-init
            downloading and installing security updates
            curtin command in-target
            restoring apt configuration
            curtin command in-target
subiquity/late/run:
subiquity/late/run/command-0: curtin in-target -- /bin/sh /hellx/install/hellx_offline.sh

[ View full log ]
[ Reboot Now ]

```

23. Press the Enter key when you are prompted to remove the installation medium

```
[FAILED] Failed unmounting /cdrom.
Please remove the installation medium, then press ENTER:
[FAILED] Failed unmounting /cdrom.
```

24. Login to the Helix Server

[illegible]

From here, you can refer to the [Helix API Documentation](#) to begin using the Helix Server to protect your resources.