

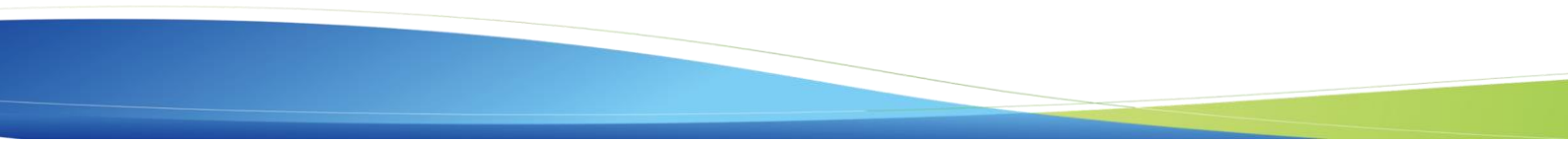


## **Sangfor STA Deployment Guide**

**Version: STA 3.0.25C**

**Released On: 2021-4-29**

# **Sangfor Technologies Inc.**



## STA 3.0.25C Deployment Guide

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## Preface

### About This Document

This document introduces how to deploy STA 3.0.25C.

### Product Version

Product	Version
STA	3.0.25C

This document will be updated when configuration is changed in new versions.

### Intended Readers

- Network design engineer
- O&M personnel

### Revision History

The revision history includes each document update. The latest document version contains updates from all previous document versions.

Version	Released On	Description
01	2021-4-29	This is the first release of this document.

### Technical Support

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### Feedback

If you have any suggestions or comments for this document, you are welcomed to contact us in the following ways:

- Sangfor Community: <https://community.sangfor.com>

## STA 3.0.25C Deployment Guide

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# 1. Overview

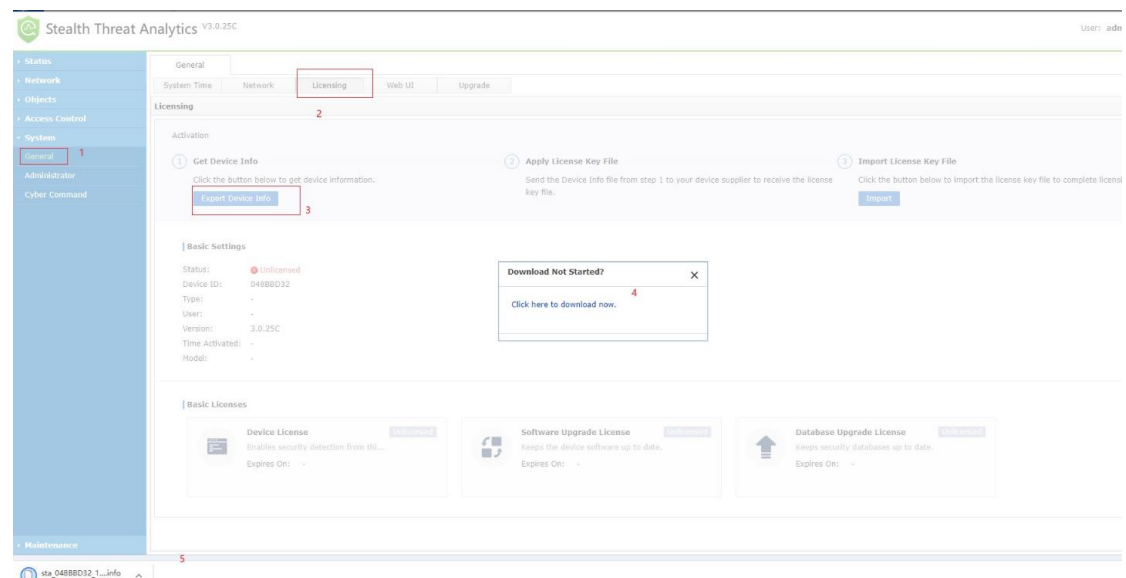
## 1.1. About This Version

### 1.1.1. What Is New

- New: The Licensing module is reconstructed.

The administrator can export the device info and send it to the device supplier to obtain the offline license key file

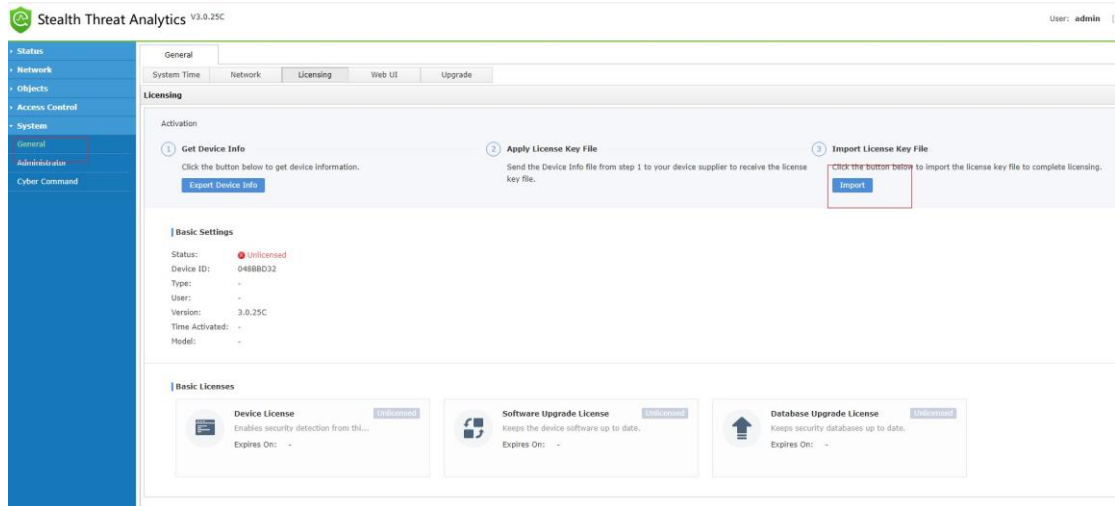
1. Go to the Licensing module, export and save the device information.



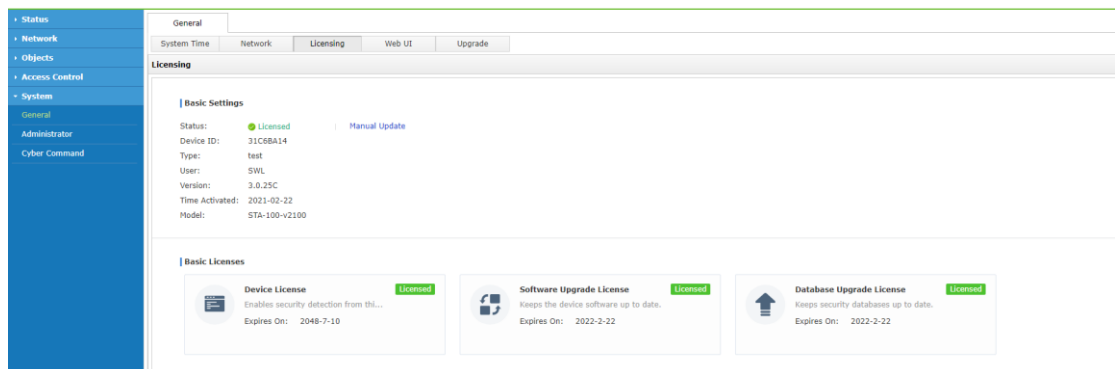
2. Send the device information file to device supplier and you can receive the license file.

3. Go to Licensing module on STA, and import the obtained license file to get licensed.

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4.Refresh the page after the license is imported successfully, and you can see the successfully licensed status.



●New: This version can be deployed on VMware ESXi.

This version can be deployed on VMware EXSi by using Cyber Command 3.0.25C iso file.

### 1.1.2. Others

None

### **1.1.3. Connection with Third-Party Products**

None

## **1.2. Deployment Impacts**

The installation may take 1.5 hours.

### **1.2.1. Impacts on Business**

None

### **1.2.2. Impacts on O&M**

ISO installation may take 1.5 hours.

### **1.2.3. Impacts on Network**

Deployment in bypass mode will have no impacts on network.

### **1.2.4. Others**

None

## **1.3. Deployment Preparation Related to Customers**

### **1.3.1. Resources Required for Deployment**

1. You need to access the VMware cloud environment of the customer and be familiar with the customer's network configuration.
2. Uploading the image to the cloud platform may take 30 minutes, and the entire deployment may take 1.5 hours.
3. The deployment environment should have enough resources and space (at least 8C8G+64G+1T).

### **1.3.2. Deployment Notification**

1. The English version of 3.0.25C image can only be deployed in VMware virtual environment and cannot be deployed with physical hardware.

## STA 3.0.25C Deployment Guide

2. The English version of 3.0.25C deployment is only compatible with VMware ESXI5.0 \VMware ESXI 6.0\VMware ESXI 7.0.

3. AVX must be supported by the host of cloud STA.Supported host CPU models:

the following cpu models are measured: (Include but not limited)

48 CPUs x Intel(R) Xeon(R) Gold 5220R CPU @ 2.20GHz
28 CPUs x Intel(R) Xeon(R) CPU E5-2680 v4 @ 2.40GHz
44 CPUs x Intel(R) Xeon(R) CPU E5-2699 v4 @ 2.20GHz
20 CPUs x Intel(R) Xeon(R) Silver 4210 CPU @ 2.20GHz

4. The virtual machine should be configured with at least three virtual NICs, and the NIC only supports VMXNET3.

5. Compatibility List

		<i>Configuration</i>			
<b>Scenario</b>	<i>Supported</i>	<i>Memory</i>	<i>CPU</i>	<i>Disk</i>	<i>NICs</i>
<b>Virtual Environment Deployment</b>					
<i>VMware ESXi</i> <i>5.0.0/6.0.0/7.0.0</i>	<i>Yes</i>	<i>8G</i>	<i>8 cores</i>	<i>System: 64G</i> <i>Data: 1T</i>	<i>3-6</i>
	<i>Yes</i>	<i>16G</i>	<i>16 cores</i>	<i>System: 64G</i> <i>Data: 1T</i>	<i>3-6</i>
<b>Physical Hardware Deployment</b>	<i>No</i>				

Notes for deploying and using cloud STA:

- NIC only supports VMXNET3 virtual network card, does not support VMXNET2, e1000
- System disk, 1 system disk, at least 64G in size

### 1.4. Deployment Process

- Prepare the ISO image of STA 3.0.25C.

- Import the image, configure environment and start auto installation. This may take 1.5 hours.

## **1.5. Business Verification After Deployment**

1. Check whether you can log in normally without errors displayed.
2. When traffic can be detected, there will be traffic information.
3. Check as required whether customer business is normal.

## **1.6. Rollback**

None

## **2. Deployment Instruction**

### **2.1. Preparation Before Deployment**

#### **2.1.1. Deployment Tools**

Prepare the ISO image of STA 3.0.25C.

#### **2.1.2. Deployment Environment**

None

#### **2.1.3. Customer Resources**

Refer to the chapter *Deployment Preparation Related to Customers*.

### **2.2. Confirmation Before Deployment**

Refer to the chapter *Deployment Impacts*.

### **2.3. Deployment Procedure**

#### **2.3.1. Deployment Procedure**

##### **1. STA 3.0.25C Deployment**

Step 1: Get the ISO image of 3.0.25C and import it to the customer's VMware cloud environment.

Step 2: Configure the virtual machine. Select ISO image of 3.0.25C for the virtual CD/DVD drive.

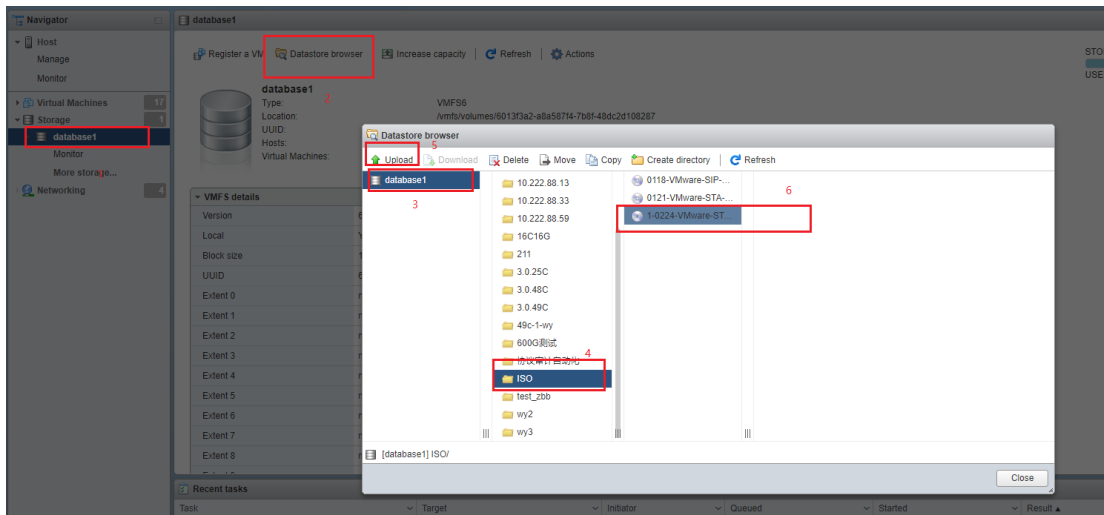
Step 3: Power on the virtual machine and select automatic installation

Step 4: Wait for the system to install automatically.

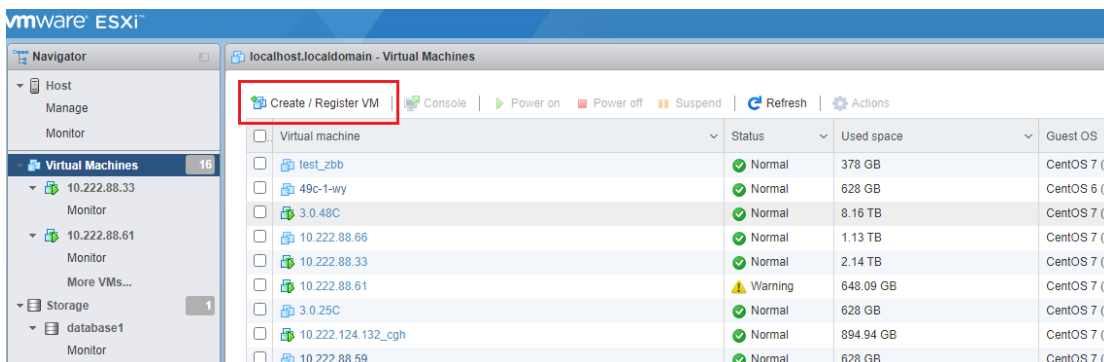
##### **2. VMware esxi Deployment**

**2.1 Upload the obtained image to VMware, which may take about 30 minutes.**

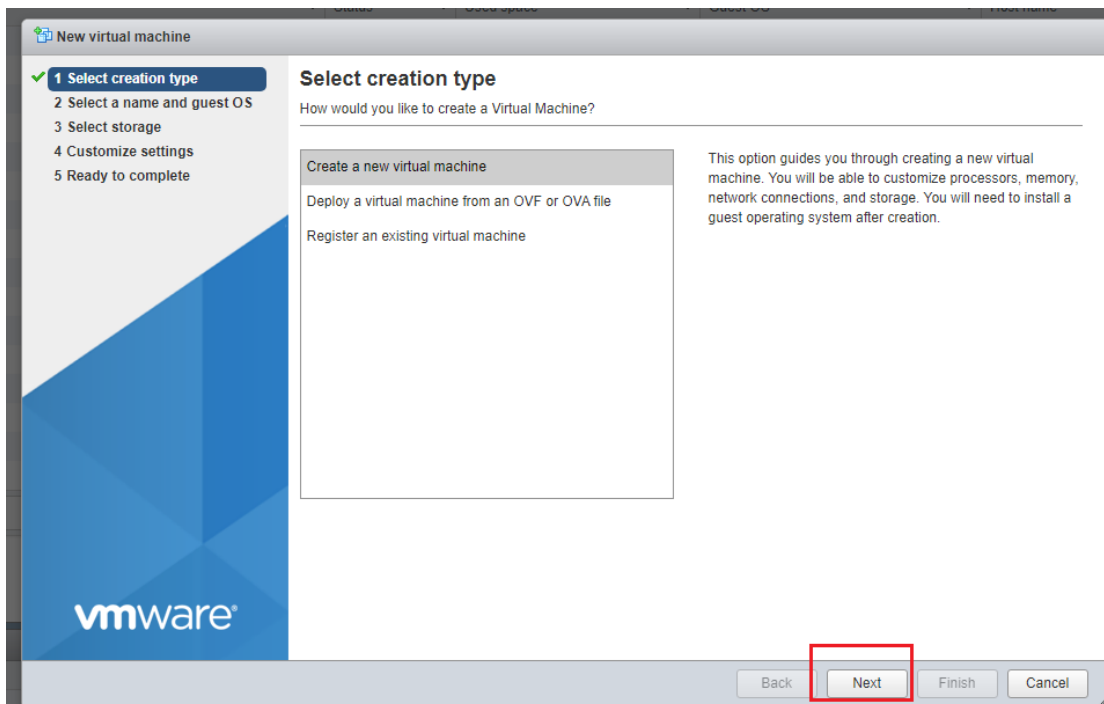
# STA 3.0.25C Deployment Guide



## 2.2 Create a new virtual machine.



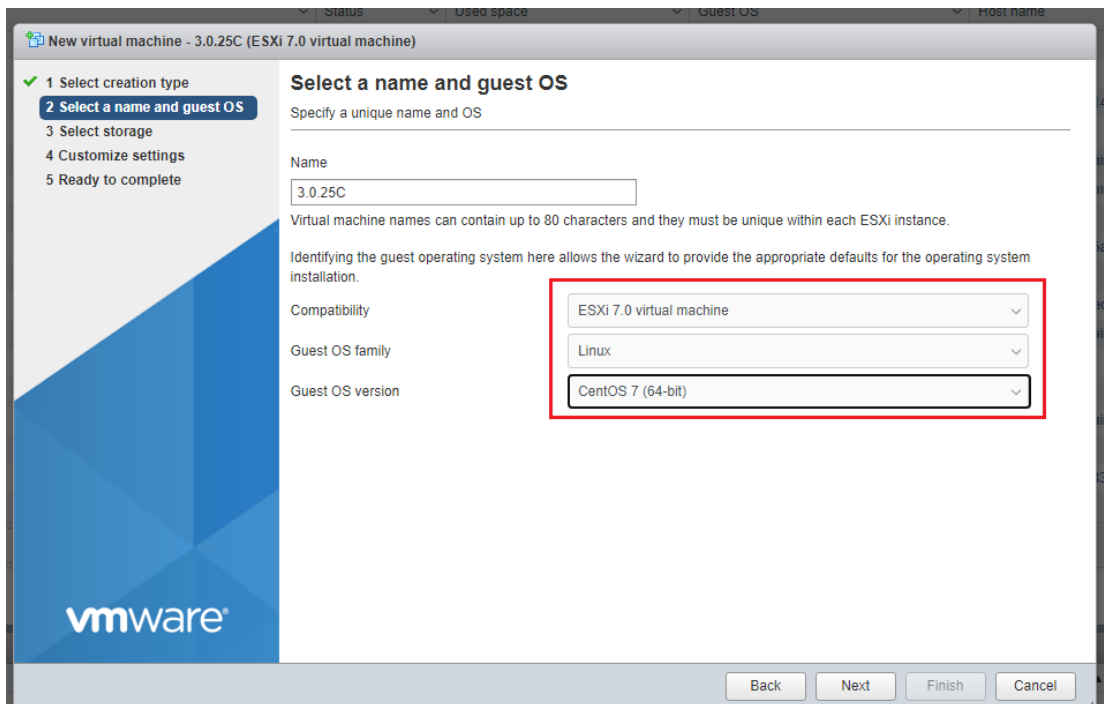
Select the option of creating a new virtual machine.



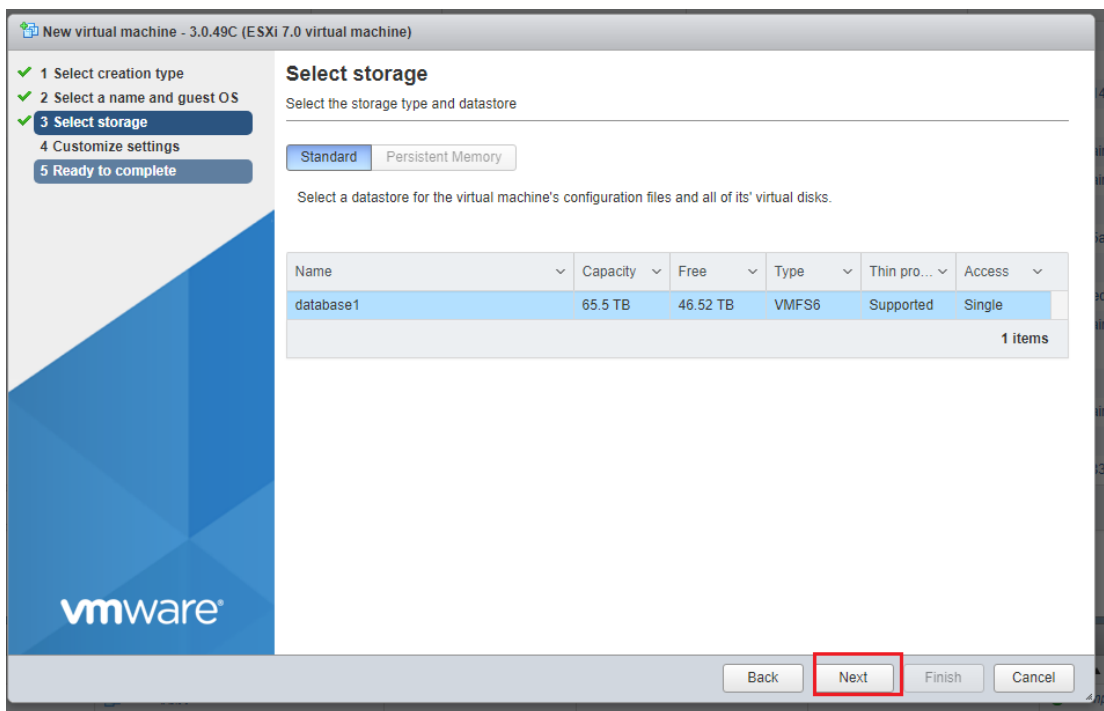
## STA 3.0.25C Deployment Guide

Select VMware ESXi 7.0 (you can also select VMware ESXi 5.0 or VMware ESXi 6.0).

Select Linux OS and CentOS 7 (64-version) as below.



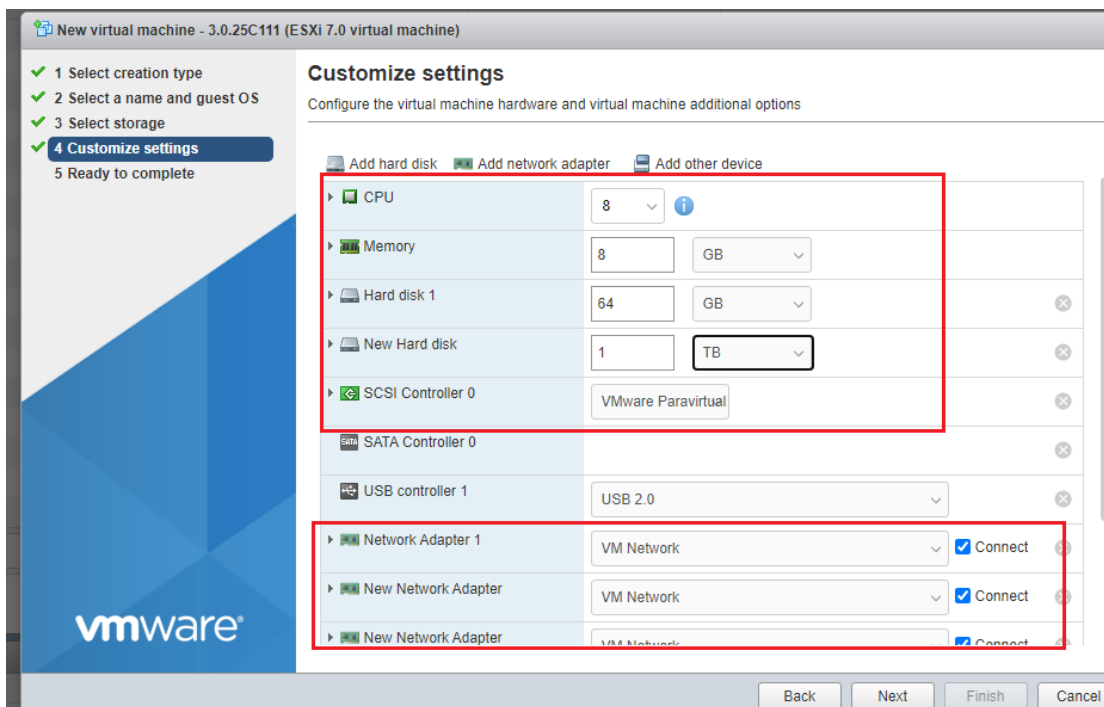
Select storage, ensuring that the environment have enough space. Then, click Next.



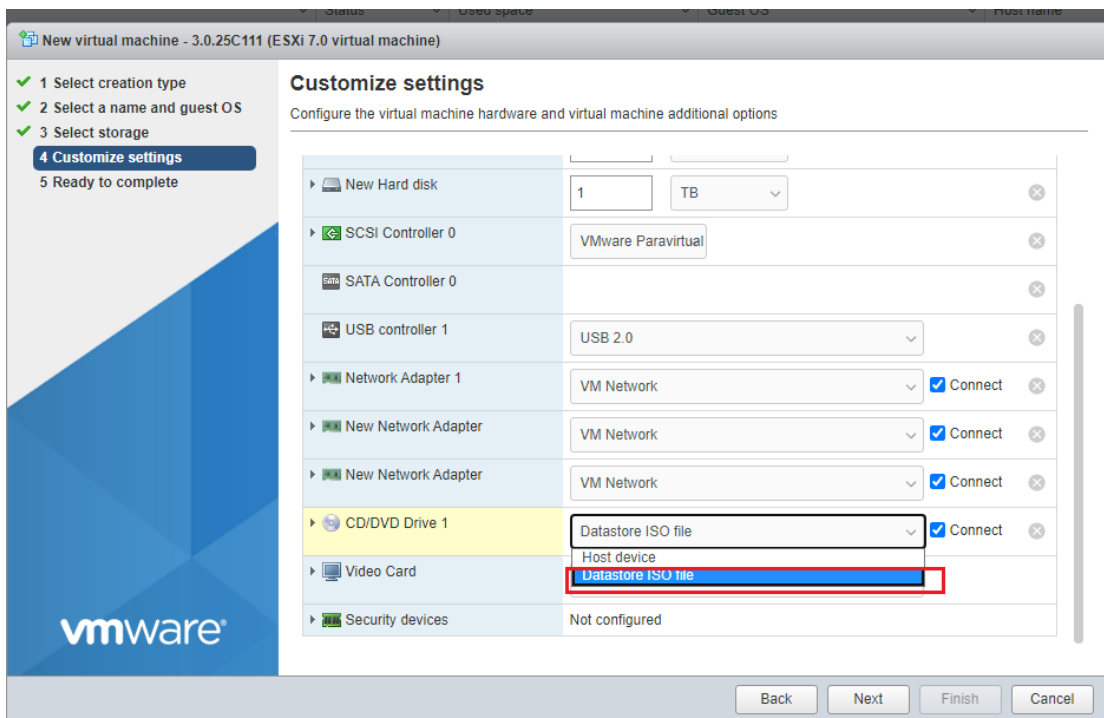
Configure the virtual machine as following: 8-core CPU, 8 GB memory, 64 GB system disk, and 1 TB data disk. 3.0.25C supports 3 to 6 VMXNET3 NICs. There is 1 management port and 5 mirror ports. The first and fifth mirror ports are turned on by default, and the other ports are turned off by default.



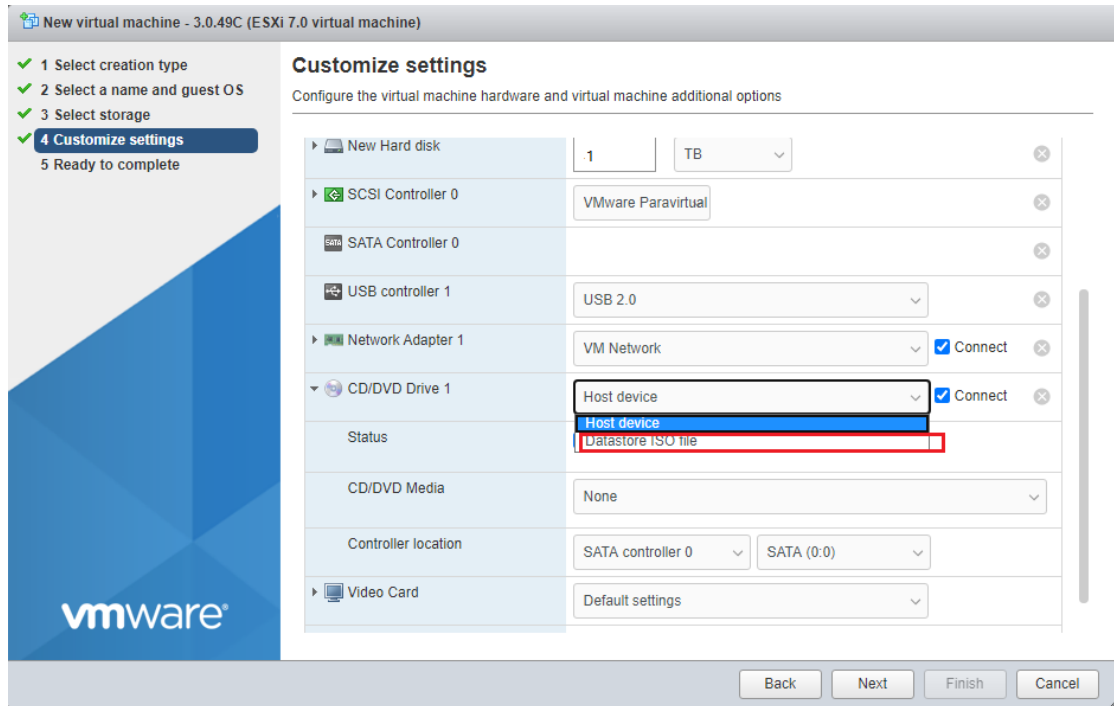
# STA 3.0.25C Deployment Guide



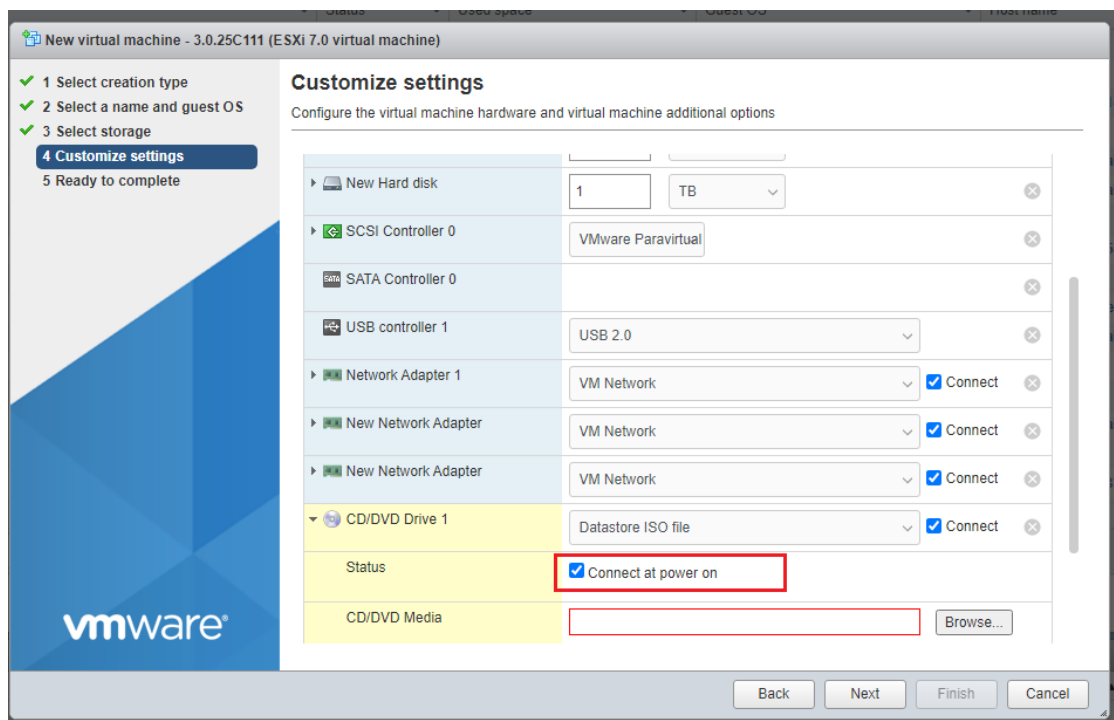
Select an image to be added to virtual CD/DVD drive.



## STA 3.0.25C Deployment Guide

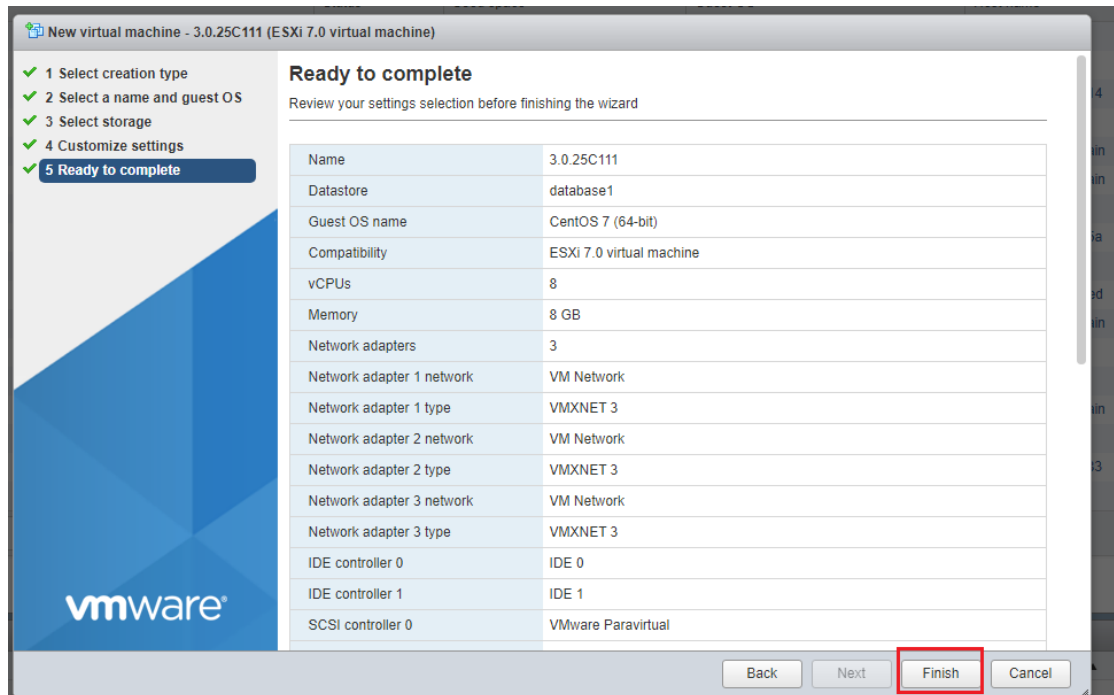


Select the option to connect at power on.

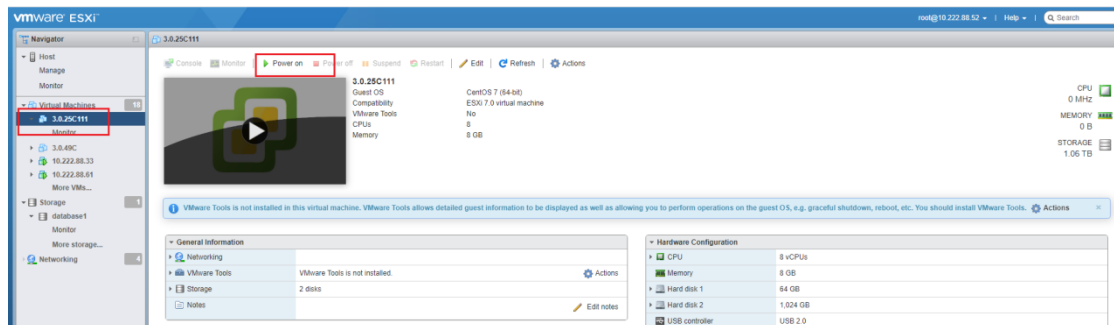


Click to finish the creation.

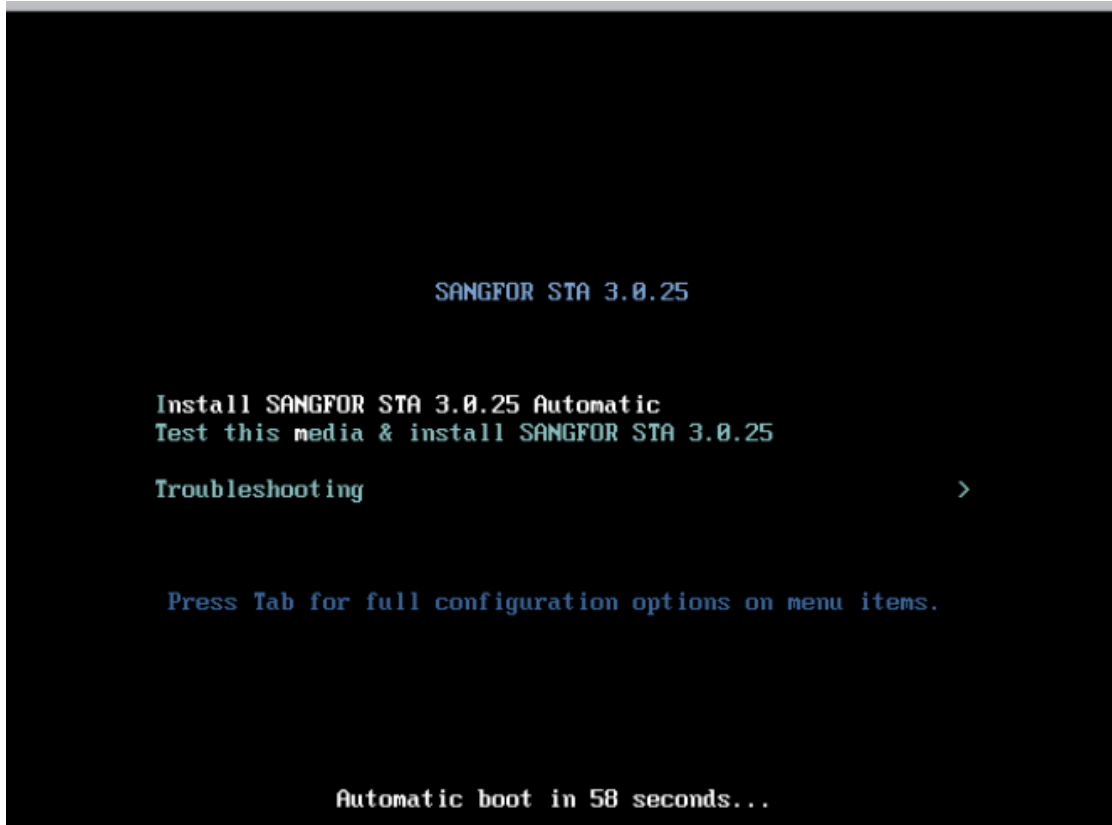
## STA 3.0.25C Deployment Guide



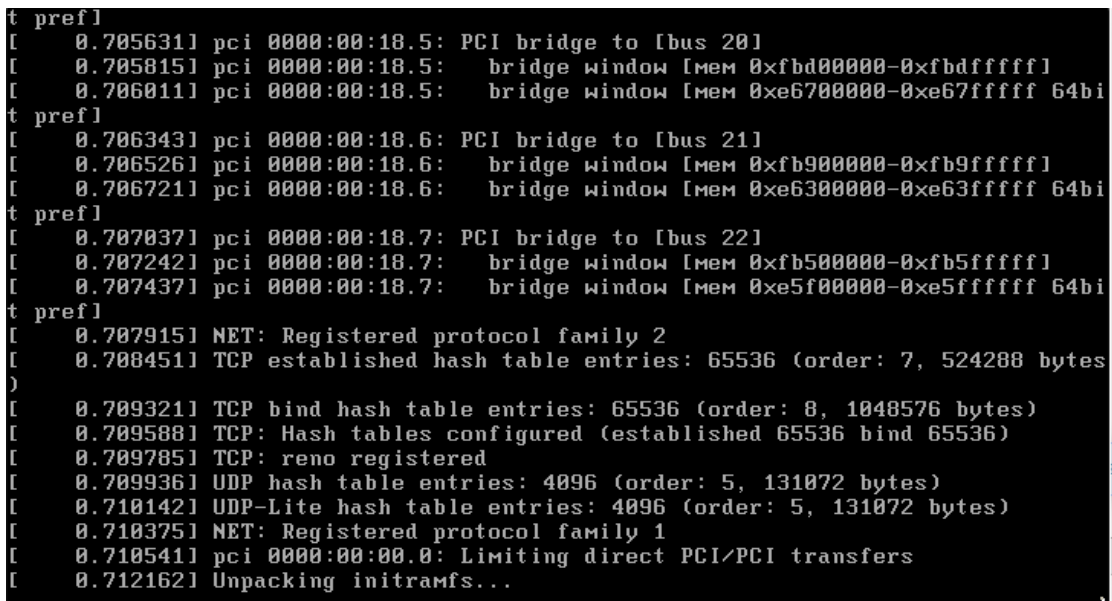
When the virtual machine is created, select the new virtual machine and power it on.



You will go to the installation page. Press Enter to select automatic installation.



Wait for automatic installation, which may take 1 hour.

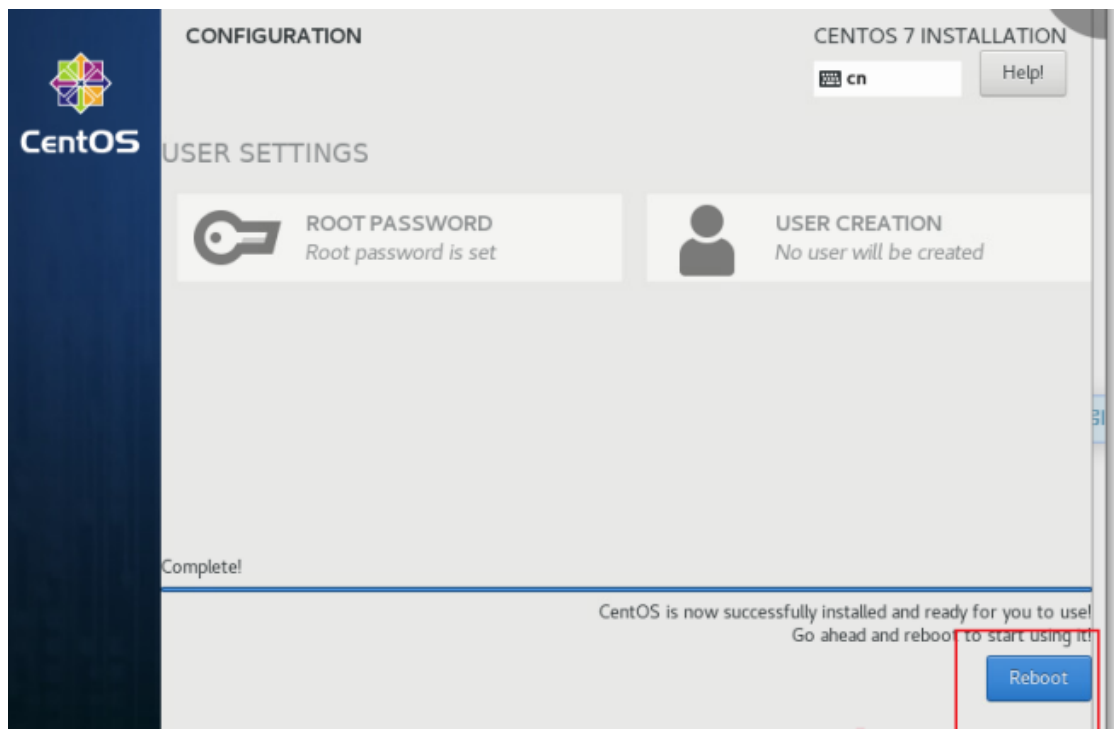


Do not perform any operations while waiting.

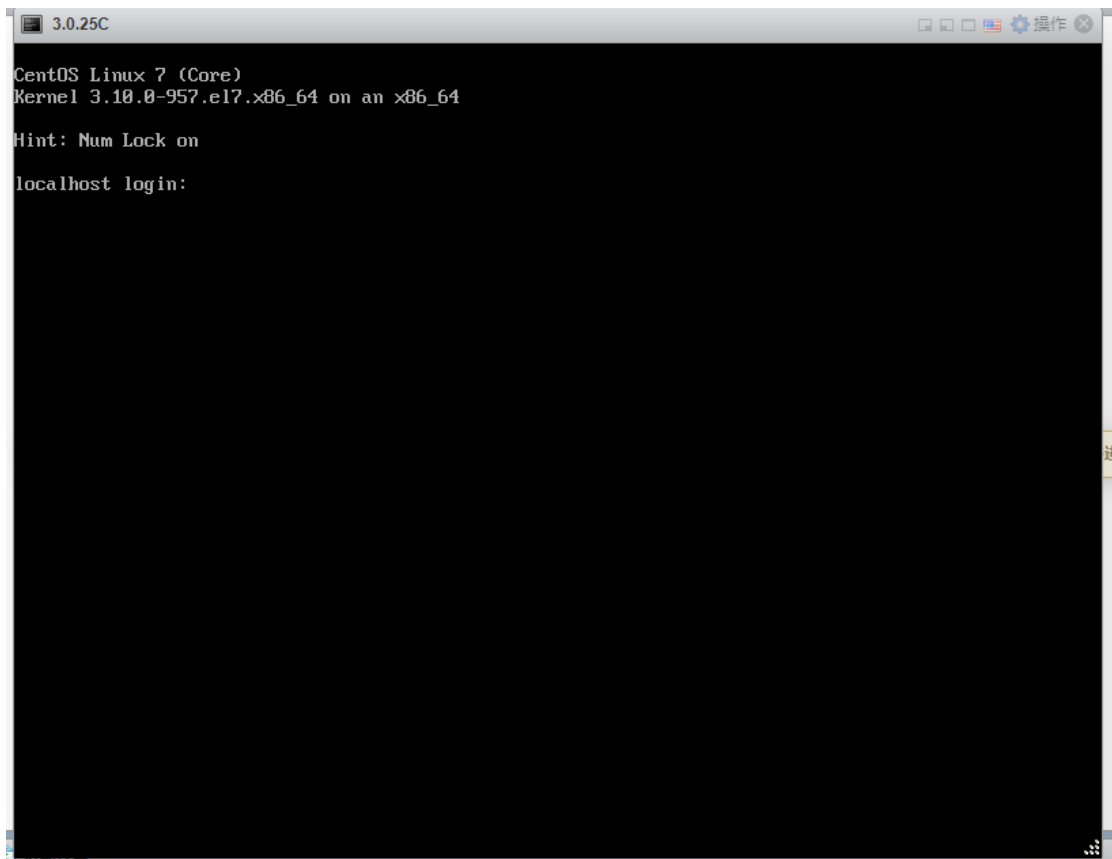
## STA 3.0.25C Deployment Guide



After the automatic installation is complete, click Reboot.

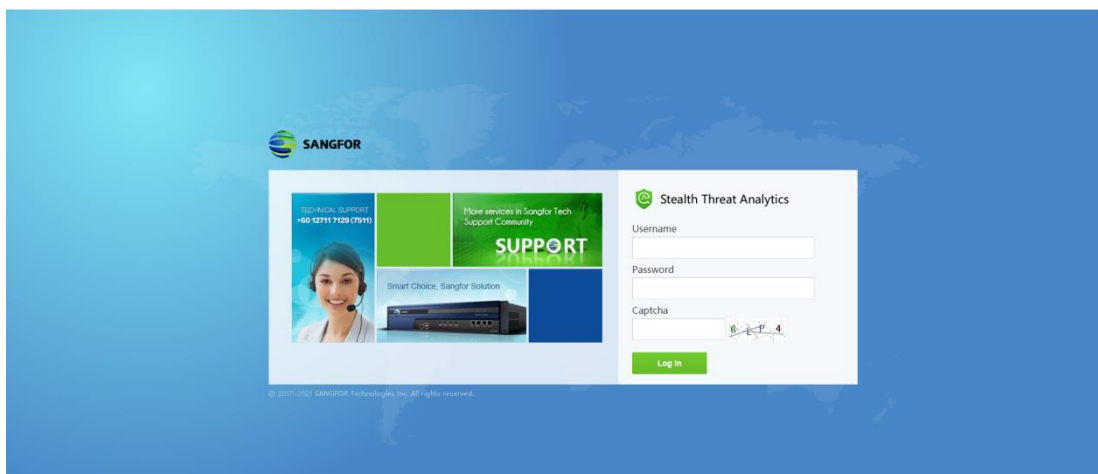


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After installation, you need to enter the background to configure the IP address. You required to find a PC which same IP segment with the vSTA 10.251.251.251 to continue the setup. After configuring the IP address, you can log into the console.

## STA 3.0.25C Deployment Guide



The default login account is "admin" with the password "admin".

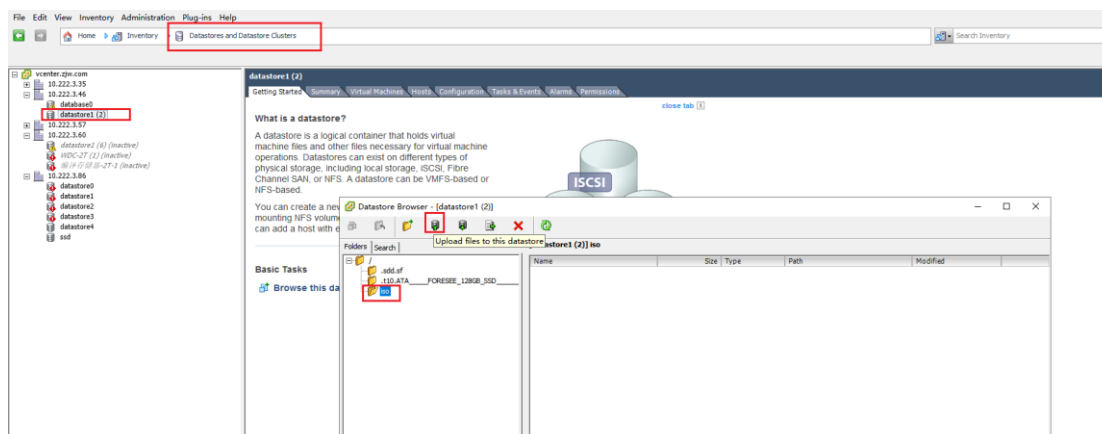
To use the product normally, licensing is required. For details, see the previous part about new features of the version.

### Note:

**Virtualization deployment requires a basic configuration. If CPU cores, memory size, system disk and data disk size are non-standard, the system may fail to start normally or the gateway may be unreachable.**

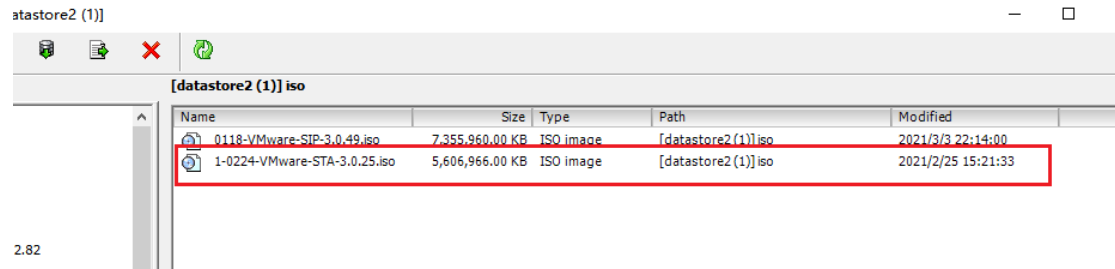
## 3. VMware vSphere Client Deployment

Upload ISO file to VMware datastore.

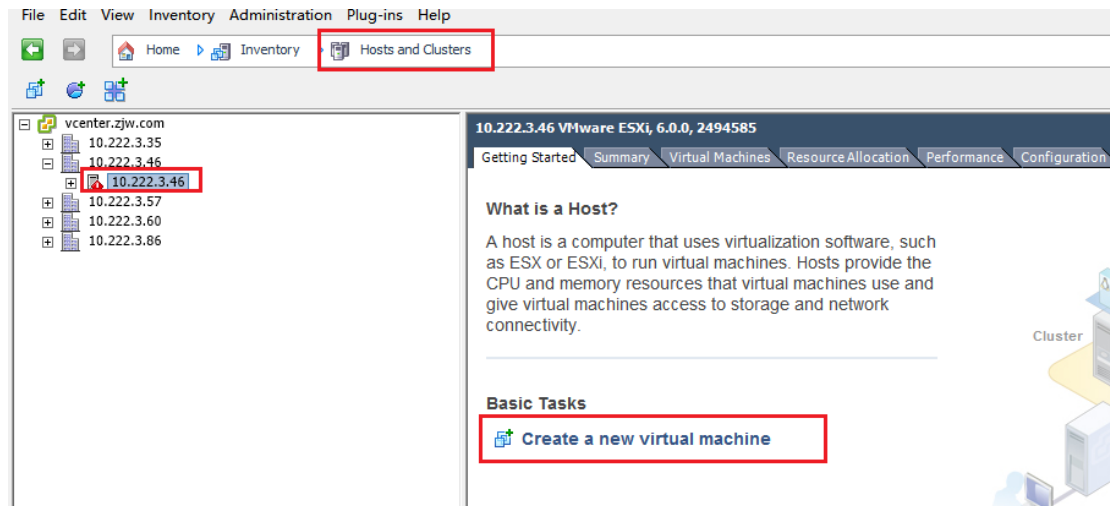


The upload may take 30 minutes.

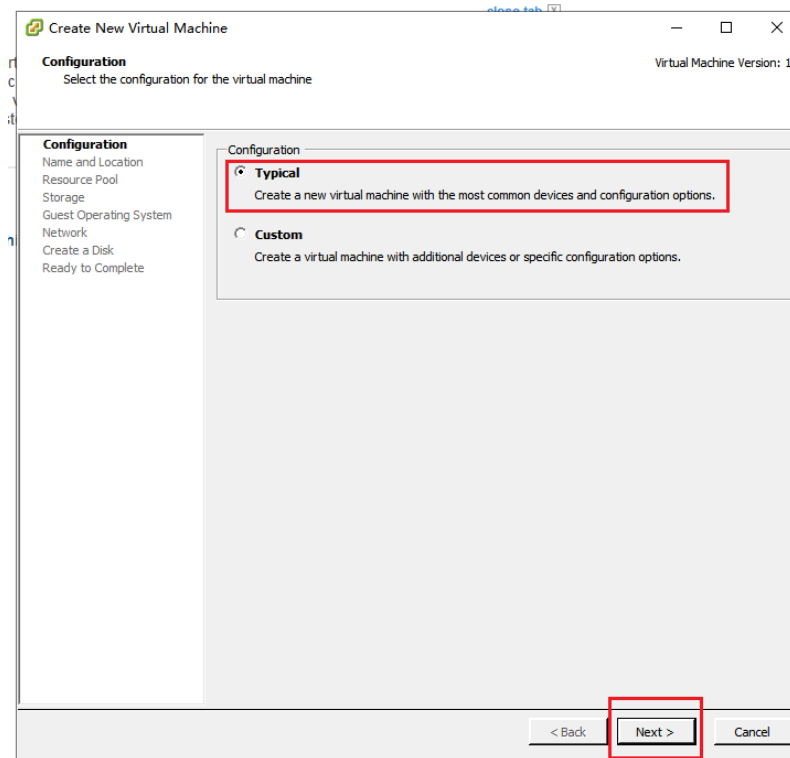
## STA 3.0.25C Deployment Guide



Create a new virtual machine.



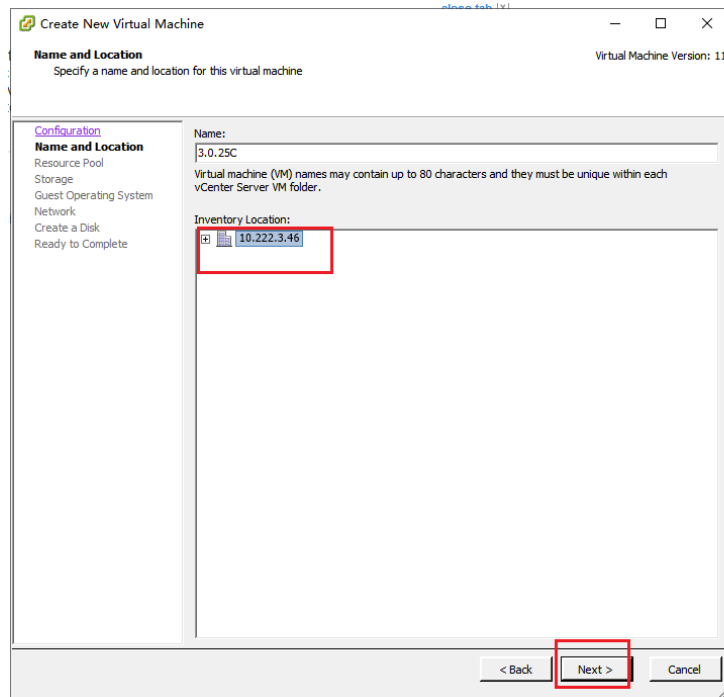
Click the button to create a new virtual machine and then click Next.



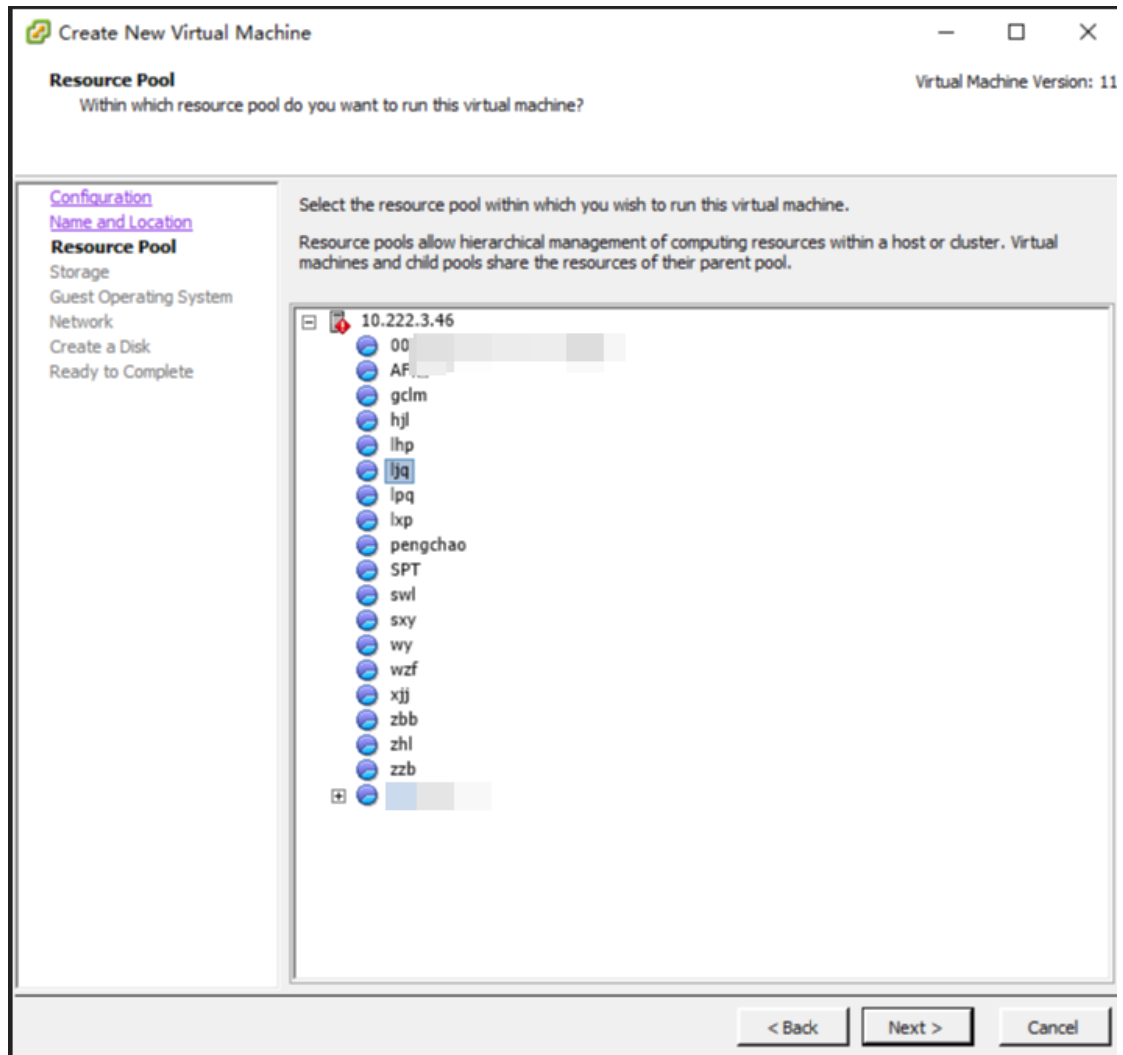


## STA 3.0.25C Deployment Guide

Select a host and click Next.

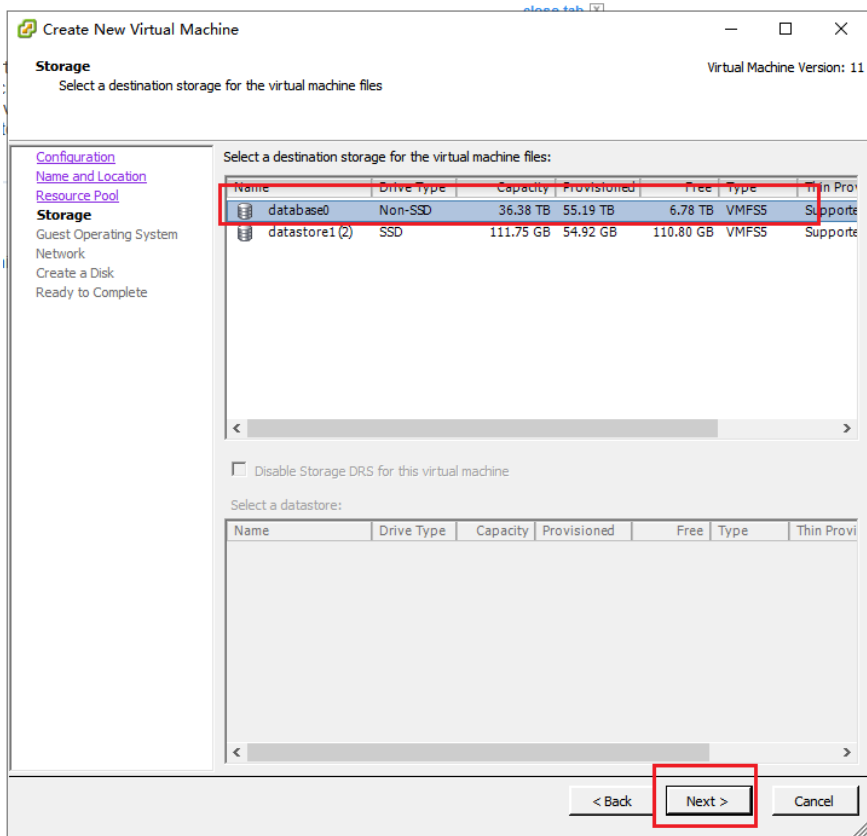


Select a resource pool and click Next.



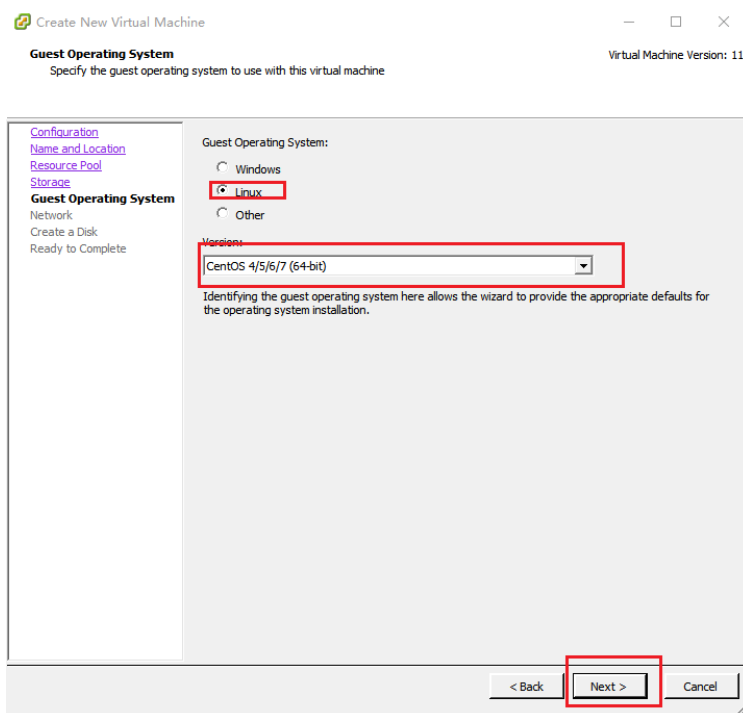
Select storage size, ensuring it is large enough.

# STA 3.0.25C Deployment Guide



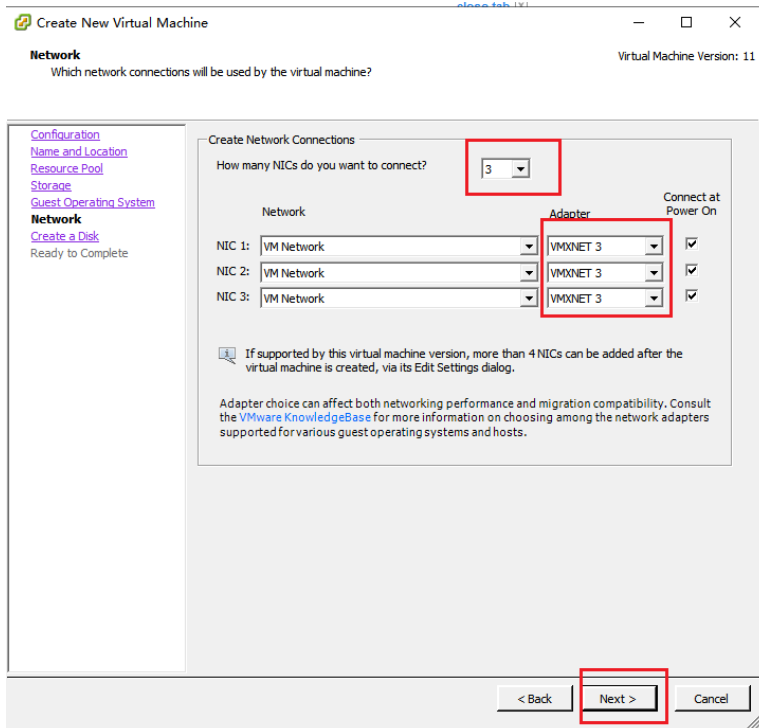
Select Linux OS and CentOS 4/5/6/7 (64-bit) version for the virtual machine.

Then, click Next.

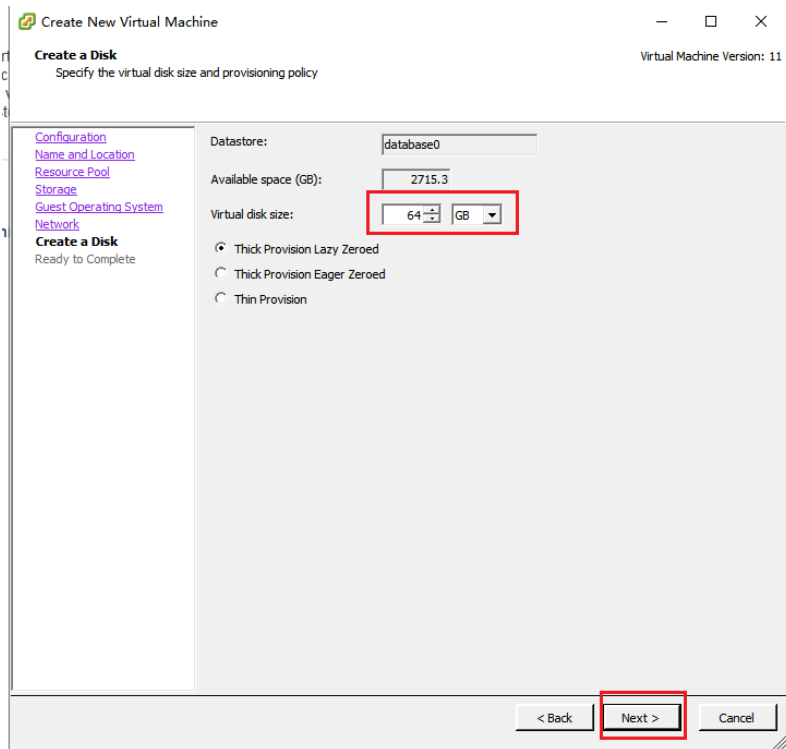


Version 3.0.25C supports 3 to 6 NICs. Supported NIC type: VMXNET3

# STA 3.0.25C Deployment Guide

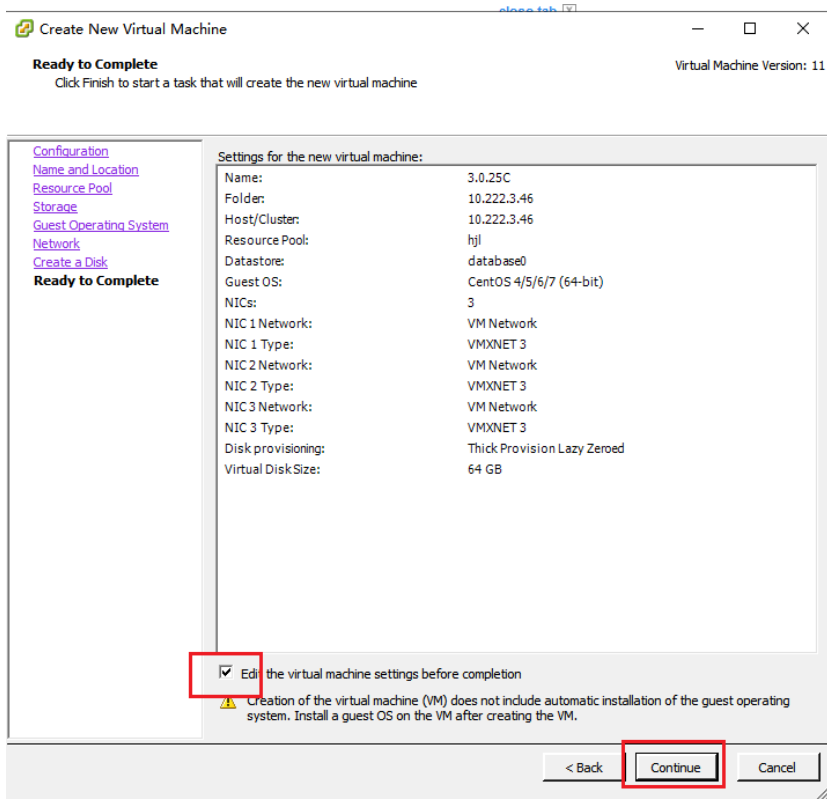


Add a 64 GB system disk. Then, click Next.

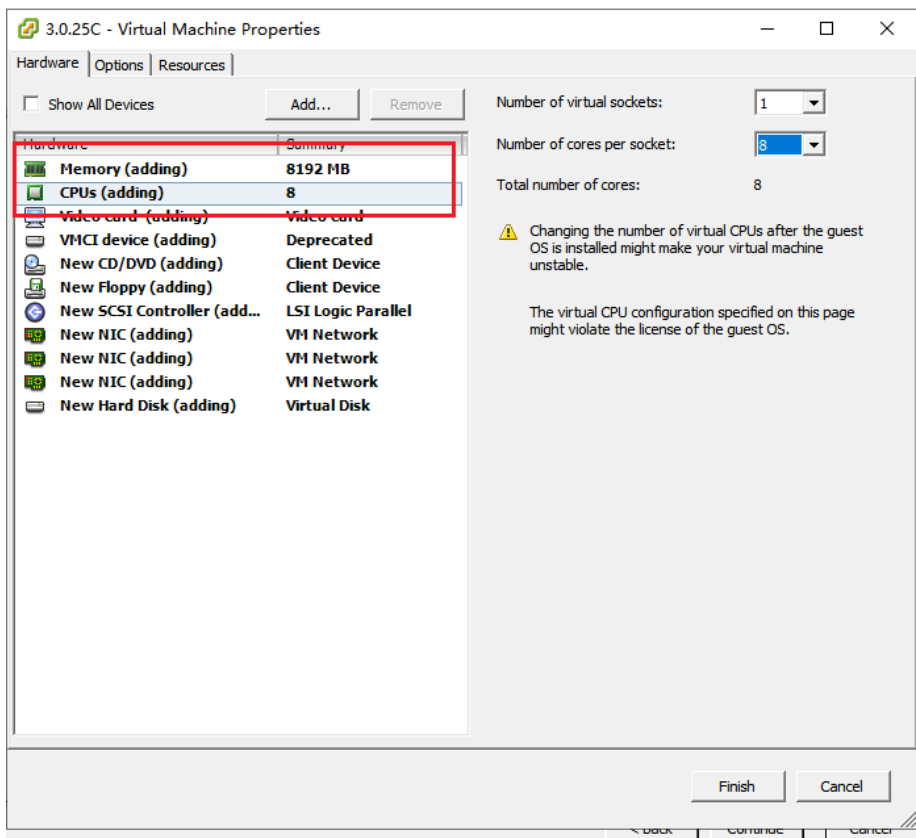


Click Continue to finish specific configurations for the virtual machine.

# STA 3.0.25C Deployment Guide

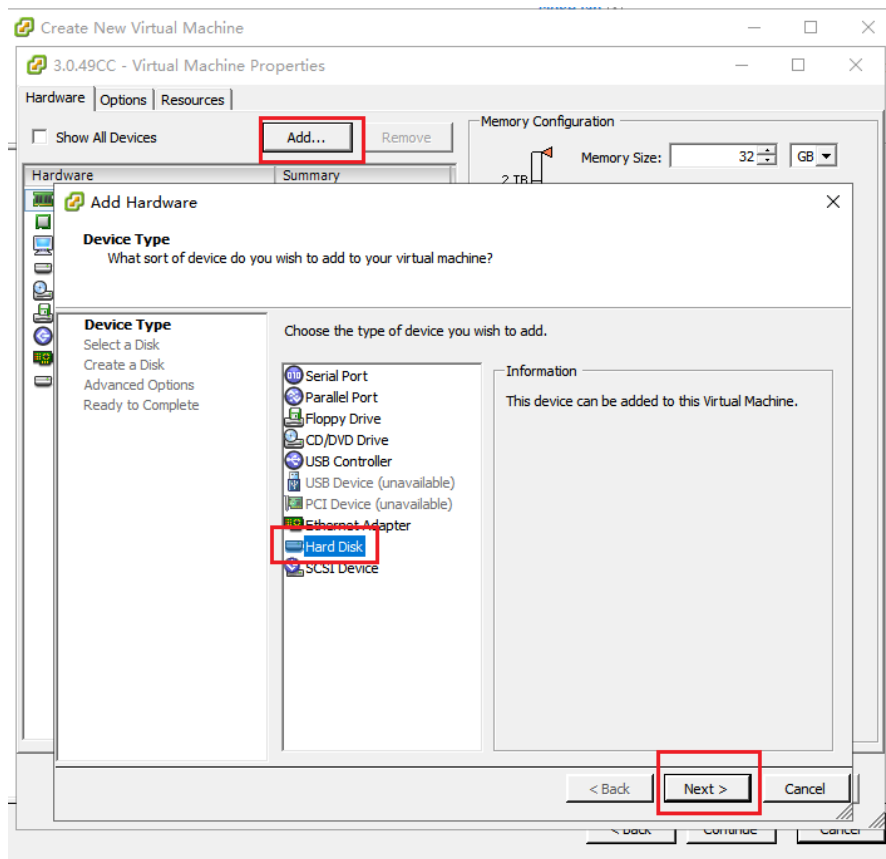


Change CPU to 8 cores and change memory size to 8 GB.

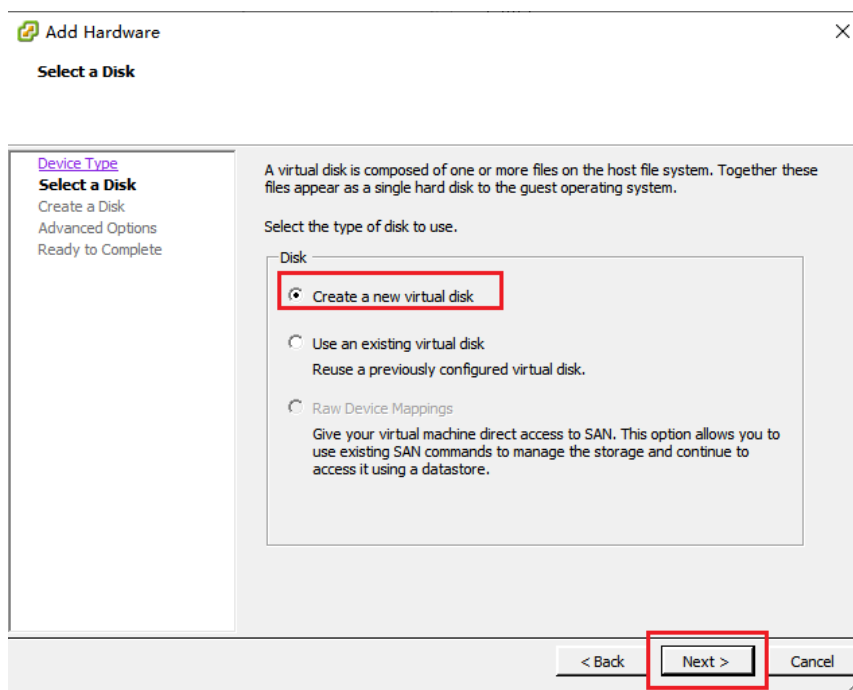


Add a 1-TB data disk, ensuring that the environment has sufficient resources.

## STA 3.0.25C Deployment Guide



Click Next.



Click Next.

## STA 3.0.25C Deployment Guide

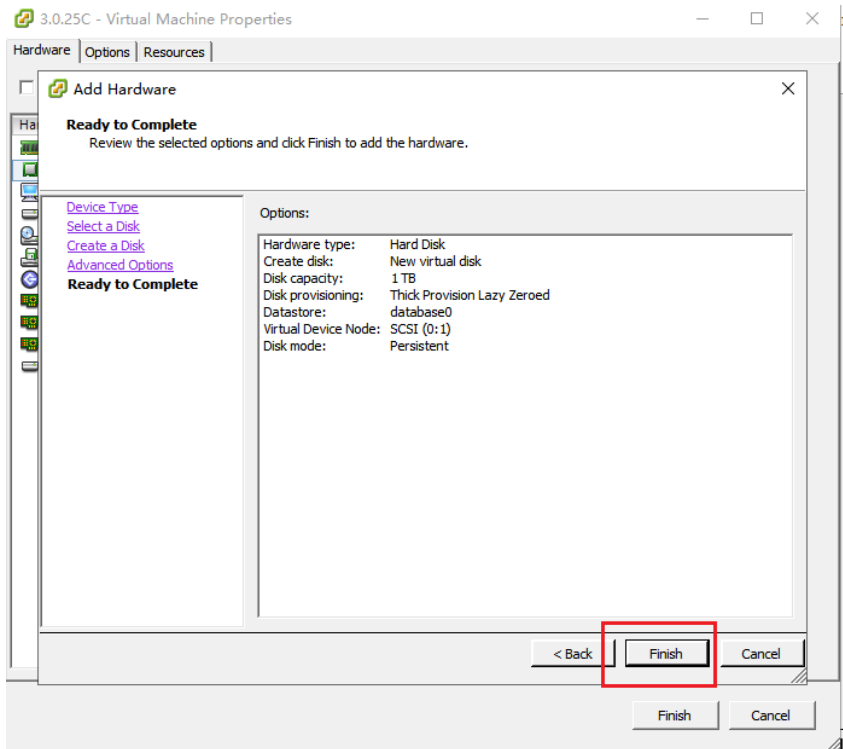
The screenshot shows the 'Add Hardware' wizard window with the 'Create a Disk' step selected. The window title is 'Add Hardware' and the subtitle is 'Create a Disk'. Below the subtitle is the instruction 'Specify the virtual disk size and provisioning policy'. On the left side, there are navigation links: 'Device Type', 'Select a Disk', 'Create a Disk' (highlighted), 'Advanced Options', and 'Ready to Complete'. The main area is divided into three sections: 'Capacity', 'Disk Provisioning', and 'Location'. In the 'Capacity' section, the 'Disk Size' is set to '1 TB', with a red box around the input field. In the 'Disk Provisioning' section, 'Thick Provision Lazy Zeroed' is selected. In the 'Location' section, 'Store with the virtual machine' is selected. At the bottom right, there are buttons for '< Back', 'Next >', and 'Cancel', with a red box around the 'Next >' button.

Click Next.

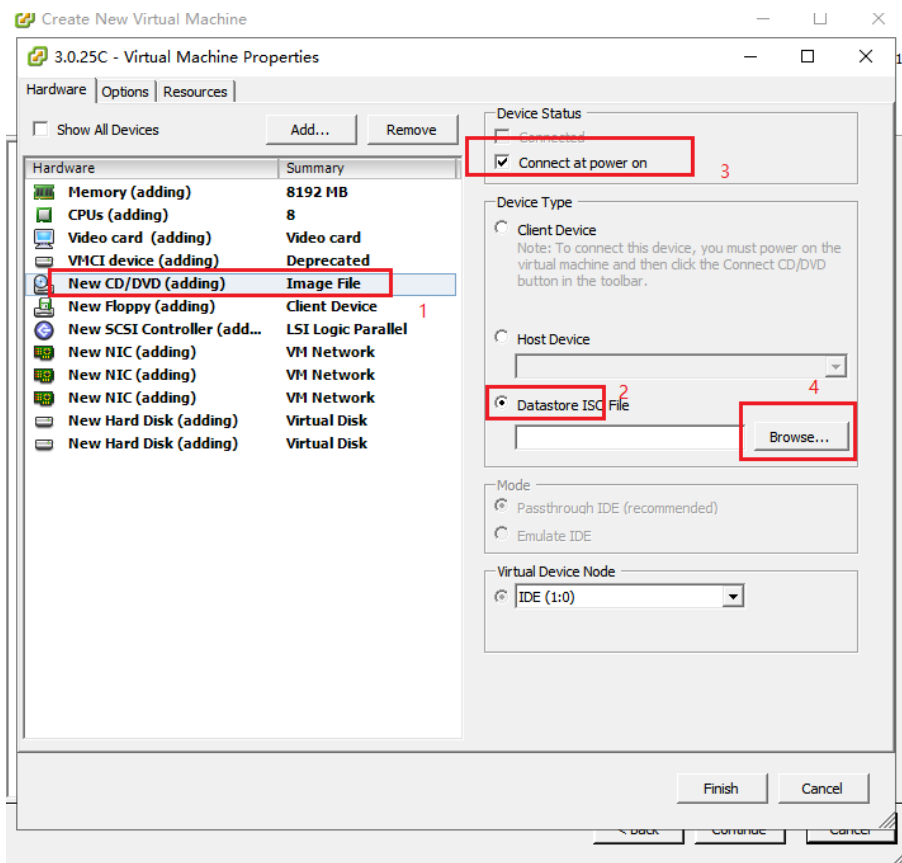
The screenshot shows the 'Add Hardware' wizard window with the 'Advanced Options' step selected. The window title is 'Add Hardware' and the subtitle is 'Advanced Options'. Below the subtitle is the instruction 'These advanced options do not usually need to be changed.' On the left side, there are navigation links: 'Device Type', 'Select a Disk', 'Create a Disk', 'Advanced Options' (highlighted), and 'Ready to Complete'. The main area is divided into two sections: 'Virtual Device Node' and 'Mode'. In the 'Virtual Device Node' section, 'SCSI (0:1)' is selected, with a red box around the dropdown menu. In the 'Mode' section, 'Independent' is selected, and 'Nonpersistent' is chosen under the 'Independent' mode. At the bottom right, there are buttons for '< Back', 'Next >', and 'Cancel', with a red box around the 'Next >' button.

Click Finish to complete the steps to add a disk.

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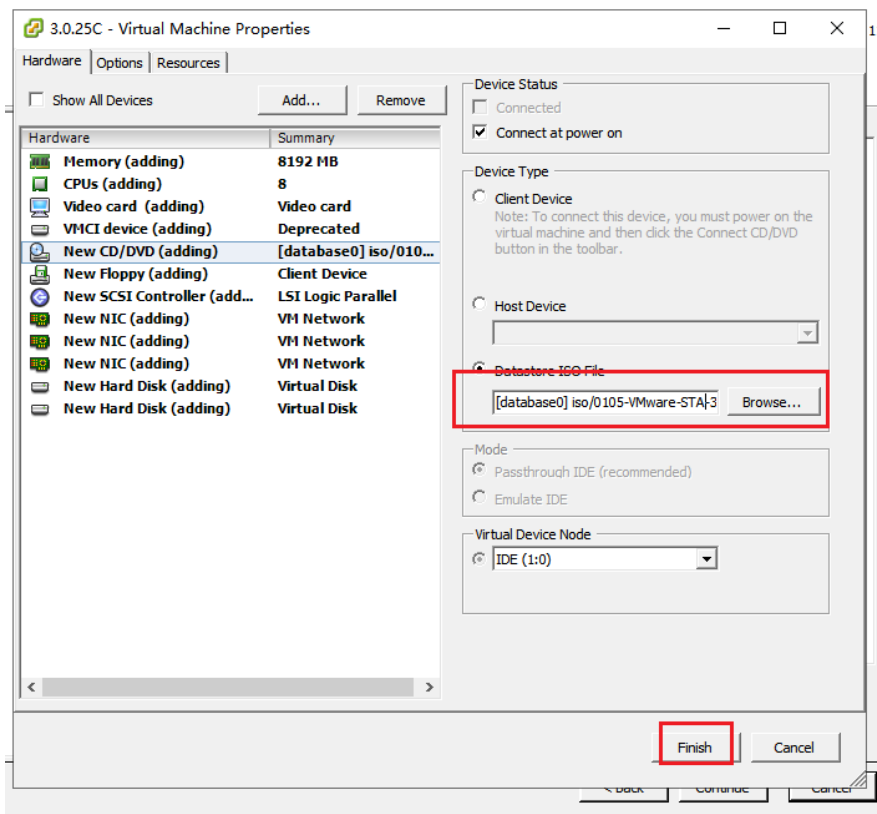


Select an image to be added to virtual CD/DVD drive. Select the option to connect at power on.



Select the directory to start uploading ISO.





After the file is added successfully, click Finish and wait for VMware to create a new virtual machine.

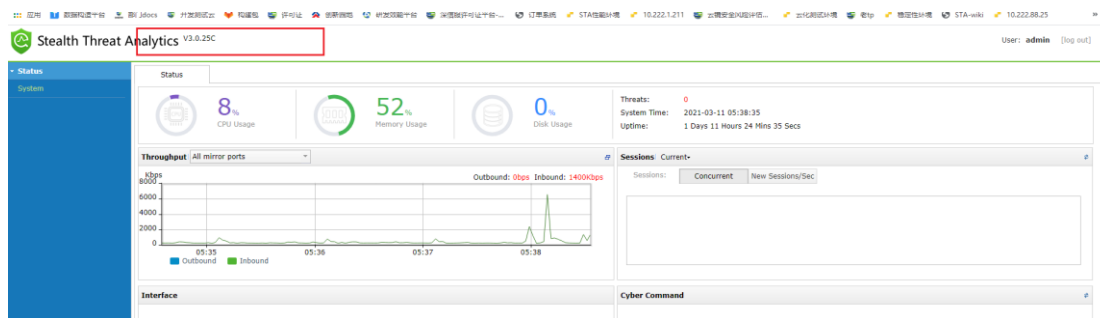
Name	Target	Status	Details	Initiated by	vCenter Server	Requested Start Time	Start Time	Con
Create virtual machine	10.222.3.46	45%	Copying Virtual Machine configuration	VSPHERE.LO...	vcenter.zjw.c...	2021/3/10 20:29:47	2021/3/10 20:29:47	

Select the newly created virtual machine and turn on the power to go to the automatic installation page. The operation steps are the same as VMware EXSi and will not be repeated here.

## 2.4. Check After Deployment

### 2.4.1. STA Check

1. Log in to web console to check that the version is 3.0.25C.



## 2.4.2. Business Verification

Verify basic functions used by customers.

Check whether traffic statistics are changed when there is traffic connected.

## 2.5. Handling of Deployment Failure

### ● Scenario 1: Fail to start automatic installation.

#### Troubleshooting:

1. Check whether the host resources on the deployment environment are sufficient
2. Check whether the option to connect at power on is not selected when the image is selected for the added virtual CD/DVD drive.

### ● Scenario 2: Console cannot be accessed when deployment is finished and network has been configured.

#### Troubleshooting:

1. Check the resource configuration of the deployment environment. Check whether the data disk is configured and whether the data disk size is too small.
2. Check whether the MAC address of the management interface matches the MAC address of the NIC that the virtual machine uses to access the network.

### ● Scenario 3: NIC status cannot be changed after you log in to the console

#### Troubleshooting:

1. Check licensing status.
2. View the startup status of the main process `ad_appd` in the background.
3. Check whether the `systemstart.sh` script has finished running

## **2.6. Rollback**

None

Precaution