



Vinchin Backup & Recovery v7.0

Installation Guide

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Architecture Components

Vinchin Backup & Recovery architecture components are listed as follows, please read the explanations of each component and decide which component(s) should be used to build your Vinchin backup infrastructure. If needed, you can contact Vinchin Support for more information.

Vinchin Backup & Recovery Server (main component)

Vinchin Backup & Recovery Server (hereinafter called Vinchin backup server) is the main component. It's an all-in-one solution component which provides all data protection functionalities and also management web console to manage the backup infrastructure.

In most cases, a single Vinchin backup server deployment can fulfil the small and medium environment data protection needs.

Vinchin Backup & Recovery Node (optional component)

Vinchin Backup & Recovery Node (hereinafter called Vinchin backup node) is an optional component, it is used to expand Vinchin backup infrastructure to support backing up large-scaled virtual environments. When there are more than 200 VMs or more than 50 terabyte of production data to be backed up, users can consider deploying Vinchin backup node to accelerate the data protection process.

Except backing up large-scaled virtual environments, Vinchin backup node can be also deployed in ROBO (Remote Office/Branch Office) with a Vinchin backup server deployed in HQ to achieve unified data protection with a single web console.

Vinchin backup node has built-in data protection functionalities but it does not have a web console, it will be centrally managed from the web console of Vinchin backup server.

Vinchin Backup & Recovery Proxy (optional component)

Vinchin Backup & Recovery Proxy (hereinafter called Vinchin backup proxy) is an optional component dedicated for VMware virtual platform, it utilizes the HotAdd technology of the ESXi server for efficient VM backup.

If you plan to backup your VMware virtual platform through LAN, and your Vinchin backup server is installed outside the ESXi cluster, you can choose to install a Vinchin backup proxy VM on the ESXi cluster for implementation of HotAdd transmission.

If you plan to install Vinchin backup server as a VM on the ESXi cluster, then Vinchin backup proxy installation is not required, because the backup proxy functionality is already built-in on the Vinchin backup server VM.

System Requirements

Backup Server System Requirements

Physical Machine System Requirements

To deploy Vinchin backup server on a physical machine, the recommended system configurations are as below.

Hardware	Requirements
CPU	2*Quad-core CPU
RAM	16GB or more
Network	2*1Gb ETH or faster
OS Disk	2*120GB SSD
OS Disk RAID Level	RAID 1
Data Disk	1.5 times (or more) capacity of the production data size, if other storage media will be used as backup storage, then backup disk is not required.
Data Disk RAID Level	RAID 5
Fibre Channel HBA (optional)	8Gb Fibre Channel or faster

Note

Fibre Channel HBA is optional, only if your backend storage of the virtual infrastructure uses FC SAN, and you wish to run backups through SAN (LAN-free Backup) then you need to equip the physical server with an FC HBA.

Virtual Machine System Requirements

To deploy Vinchin Backup Server as a virtual machine on your virtual platform, the recommended system configurations are as below.

Hardware	Requirements
CPU	8*vCPUs or more
RAM	16GB or more
Guest OS	CentOS Linux 7 (64-bit)
Virtual Disk	100GB or more (for OS installation)
Backup Storage	1.5 times (or more) capacity of the production data size.

Note

If you wish to install Vinchin backup server as a virtual machine on the virtual platform, please do not use virtual disk as backup storage, otherwise there's possibility of losing both your production data and backup data. You could choose to use external NAS server or other storage servers to provide iSCSI or NFS/CIFS shares to Vinchin backup server VM as backup storage.

Backup Node System Requirements

Vinchin backup node is an optional architecture component, if you are not sure when a backup node is needed, please refer to [Architecture Components](#).

As for the system requirements of Vinchin backup node, it's recommended the same configurations as Vinchin backup server, please refer to [Backup Server System Requirements](#).

Backup Proxy System Requirements

Vinchin backup proxy is an optional architecture component, if you are not sure when a backup proxy is needed, please refer to [Architecture Components](#).

Vinchin backup proxy needs to be deployed as a VM inside the ESXi cluster and then registered to Vinchin backup server which is deployed outside the VMware virtual platform. If you had installed Vinchin backup server as a VM inside the ESXi cluster, then backup proxy is not needed, because the backup proxy functionalities had been enabled with backup server already.

The recommended VM system configurations of Vinchin backup proxy are as follows:

Hardware	Requirement
CPU	4*vCPUs or more
RAM	8GB or more
Guest OS	CentOS 7 Linux (64-bit)
Virtual Disk	50GB or more (for operating system installation only)

Prepare Installation Media

Download ISO Image

Vinchin Backup Server

Go to Vinchin product trial page using the link below:

<https://www.vinchin.com/en/support/vm-backup-free-trial.html>

Simply register for your free trial with your full name, Email address and your hypervisor name. Then the latest ISO image will be downloaded automatically, at the same time you'll receive an email with a 60-day free trial license attached.

Please keep the free trial license safe, as after installation you'll need it to activate Vinchin backup server for 60 days of full-featured free trial.

Vinchin Backup Node and Proxy

The download link of Vinchin backup node is as below:

<https://www.vinchin.com/download/node/latest>

The download link of Vinchin backup proxy is as below:

<https://www.vinchin.com/download/proxy/latest>

Prepare Installation Media for Installing Virtual Machine

If you are going to install Vinchin backup server or backup node as virtual machine on the virtual platform, just directly use the downloaded ISO file as installation media. And proceed to Backup Server Installation or Backup Node Installation.

As for Vinchin backup proxy, it should be installed as a VM in the VMware ESXi cluster, you can also skip this part and continue from Backup Proxy Installation.

Prepare Installation Media for Installing Physical Machine

Preparation for IPMI remote console Install

To install Vinchin backup server/node from IPMI console, you can directly use the downloaded ISO image file to install, so please skip this part and continue from Install Backup Server on Physical Machine or Backup Node Installation.

Preparation for bootable USB drive Install

If you wish to install Vinchin server/node from bootable USB drive, please use the downloaded ISO image file to create a bootable USB drive.

To create a bootable USB drive, prepare an 8GB or larger capacity USB drive, and backup all data of the USB drive before you start to create bootable USB drive with it.

Attach the USB drive to your Windows PC and run UltraISO to create the bootable USB drive with the downloaded ISO file.

Preparation for bootable DVD disc Install

If you wish to install Vinchin server/node from bootable DVD disc, please use the downloaded ISO file to create a bootable DVD disc.

To create a bootable DVD disc, please make sure your PC has a working R/W DVD drive, otherwise, attach a USB DVD drive.

Insert a blank or rewritable DVD disc into the DVD drive, run UltraISO to create the bootable DVD disc with the downloaded ISO file. To guarantee the correctness of the bootable DVD disc, please set the Write Speed to the lowest rate then start burning the DVD disc.

Vinchin Backup Server Installation

Install Vinchin Backup Server on Physical Machine.

Before you begin to install Vinchin backup server on the physical server, please first make sure that the following preconditions are met.

- RAID configurations had been done

Please refer to [Physical Machine System Requirements](#) for recommended RAID configurations.

- RAID volumes had been initialized

If RAID volumes are not initialized, please run a fast initialization for the RAID volumes.

- Server boot mode is BIOS

The server boot mode must be BIOS, if it's UEFI, please change it to BIOS then proceed.

Install from IPMI console

To install Vinchin backup server on a physical machine, please follow the below steps. Here we take Dell PowerEdge server as an example to install from its IPMI console (iDRAC version 9).

1. Open the iDRAC web console and log in.
2. On the **Dashboard** screen, click on the Virtual Console preview window or click on **Start the Virtual Console** button to open the virtual console of the server.
3. In the Virtual Console window, click on **Virtual Media** button, in the **Virtual Media** dialog click on **Connect Virtual Media** button, in the **Map CD/DVD** section, click on **Choose File** button to select Vinchin backup server ISO file from your local desktop and then click on **Map Device**. When done, click on **Close** to end the dialog.
4. In the Virtual Console window, click on **Boot** button. In the **Boot Controls** dialog please select **Virtual CD/DVD/ISO**.
5. In the **Confirm Boot Action** dialog, click on **Yes** to confirm.
6. Go back to the iDRAC window and click on the dropdown list button next to the **Graceful Shutdown** button to show more options, select **Reset System(warm boot)** to reboot the server.
7. After rebooting, you'll see the Vinchin server installation screen in the server virtual console. Please refer to [Installation Process](#) to complete the installation of Vinchin backup server.

Install from Bootable USB Drive

To install Vinchin backup server on a physical machine, please follow the below steps. Here we take Dell PowerEdge server as an example to install from a bootable USB drive.

Step 1: Plug the bootable USB drive to the server.

The bootable USB drive should be prepared in advance, if you haven't done this yet, please refer to [Prepare Installation Media](#) to create a bootable USB drive with ISO image provided by Vinchin.

Step 2: Turn on the server.

If the server is already on, shut it down and turn it on again.

Step 3: Enter Boot Manager menu

As soon as you see the message "F11 = Boot Manager", please press F11 to enter Boot Manager menu.

Step 4: Select USB drive as boot media

In the **Boot Manager Main Menu**, select **One-shot BIOS Boot Menu**, then select the USB drive as the boot option.

Step 5: Start Installation

When the server boot from the bootable USB drive, please refer to [Installation Process](#) to complete the installation.

Install from Bootable DVD Disc

To install Vinchin backup server on a physical machine, please follow the below steps. Here we take Dell PowerEdge server as an example to install from a bootable DVD disc.

Step 1: Insert the bootable DVD disc into the CD/DVD drive.

The bootable DVD disc should be prepared in advance, if you haven't done this yet, please refer to [Prepare Installation Media](#) to create a bootable DVD disc with ISO image provided by Vinchin.

If there's no CD/DVD drive built into your server, please use an external USB CD/DVD drive and attach it to the server USB interface and then insert the bootable DVD disc to continue.

Step 2: Turn on the server.

If the server is already on, shut it down and turn it on again.

Step 3: Enter Boot Manager menu

As soon as you see the message "F11 = Boot Manager", please press F11 to enter Boot Manager menu.

Step 4: Select CD/DVD drive as boot media

In the **Boot Manager Main Menu**, select **One-shot BIOS Boot Menu**, then select the CD/DVD drive as the boot option.

Step 5: Start Installation

When the server boot from the bootable DVD disc, please refer to [Installation Process](#) to complete the installation.

Install Vinchin Backup Server as Virtual Machine

In this document, installing Vinchin backup server as a virtual machine on VMware vSphere (version 7.0 U2) virtual platform is given as an example for your reference. The principles of installing Vinchin backup server on other virtual platforms should be similar, if you are not sure how to do it, please contact Vinchin Support for help.

Install from VMware vCenter Web Console

If your VMware vSphere virtual platform is managed by vCenter Server, to install Vinchin backup server as a VM from vCenter Server web console, please open the VMware vCenter web console and create a new VM.

1. Select a creation type

Select **Create a new virtual machine** and click on **Next**.

2. Select a name and folder

In the **Virtual machine name** field, please specify a name for the new VM for identification.

In the **Select a location for the virtual machine** field, please select a VM folder to place the new VM.

3. Select a compute resource

Select a host on which you wish Vinchin backup server to run.

4. Select storage

Select a storage on which you wish Vinchin backup server VM virtual disk to be stored.

5. Select compatibility

Please select the latest version in the **Compatible with** dropdown list.

6. Select a guest OS

In the **Guest OS Family** dropdown list, please select **Linux**.

In the **Guest OS Version** dropdown list, please select **CentOS 7 (64-bit)**.

7. Customize hardware

Please refer to the [Backup Server System Requirements](#) for more information of the Vinchin backup server VM hardware configurations to setup the **CPU**, **Memory** and **New Hard disk** settings.

In the **New Network** field, select the virtual network which you wish Vinchin backup server to be connected to, and then select the **Connect...** checkbox. Make sure the virtual network you selected here is reachable to the vCenter Server and ESXi hosts and other workloads which you wish to backup, otherwise you may not be able to run backups.

In the **New CD/DVD Drive** dropdown list, please select the Vinchin backup server ISO file from the ISO store and select the **Connect...** checkbox. If you haven't uploaded the ISO file to any of the VMware ISO store, you can leave this option unconfigured.

8. Ready to complete

Review the VM configurations and click on **FINISH** to complete creating Vinchin backup server VM.

After creating the VM, power it on and choose **LAUNCH WEB CONSOLE** or **LAUNCH REMOTE CONSOLE** to start the installation process.

If you haven't selected the Vinchin backup server ISO file from VMware ISO store during creating the VM, please start the installation from VMware Remote Console. By selecting **VMRC > Removable Devices > CD DVD drive 1 > Connect to Disk Image File (iso)...** you are able to select the ISO file from your local desktop as the installation media.

For more detailed information of the installation process, please refer to [Installation Process](#).

Install from ESXi Server Web Console

If you are running a standalone ESXi server and you wish to install Vinchin backup server as a VM on the ESXi server, please open the ESXi server web console and create a new VM.

1. Select a creation type

Select **Create a new virtual machine** and click on **Next**.

2. Select a name and guest OS

In the **Name** field, give the VM a name for identification.

In the **Compatibility** dropdown list, please select the latest version.

In the **Guest OS family** dropdown list, please select **Linux**.

In the **Guest OS version** dropdown list, please select **CentOS 7 (64-bit)**.

3. Select storage

Select a datastore to place the VM virtual disk.

4. Customize settings

Please refer to the [Backup Server System Requirements](#) for more information of the Vinchin backup server VM hardware configurations to setup the **CPU**, **Memory** and **Hard Disk** settings.

In the **Network Adapter** field, select the virtual network which you wish Vinchin backup server VM to be connected to, and then select the **Connect...** checkbox. Make sure the virtual network you selected here is reachable to the ESXi host and other workloads which you wish to backup, otherwise you may not be able to run backups.

In the **CD/DVD Drive** dropdown list, please select the Vinchin backup server ISO file from the ISO store and select the **Connect...** checkbox. If you haven't uploaded the ISO file to any of the VMware

ISO store, you can leave this option unconfigured.

Step 5. **Ready to complete**

Review the VM configurations and click on **Finish** to complete creating Vinchin backup server VM. Once the VM is successfully created, power on the VM and click on **Console**, select **Open browser console** or **Launch remote console** to start the installation.

If you haven't selected the Vinchin backup server ISO file from VMware ISO store during creating the VM, please start the installation from VMware Remote Console. By selecting **VMRC > Removable Devices > CD DVD drive 1 > Connect to Disk Image File (iso)...** you are able to select the ISO file from your local desktop as the installation media.

For more detailed information of the installation process, please refer to [Installation Process](#).

Installation Process

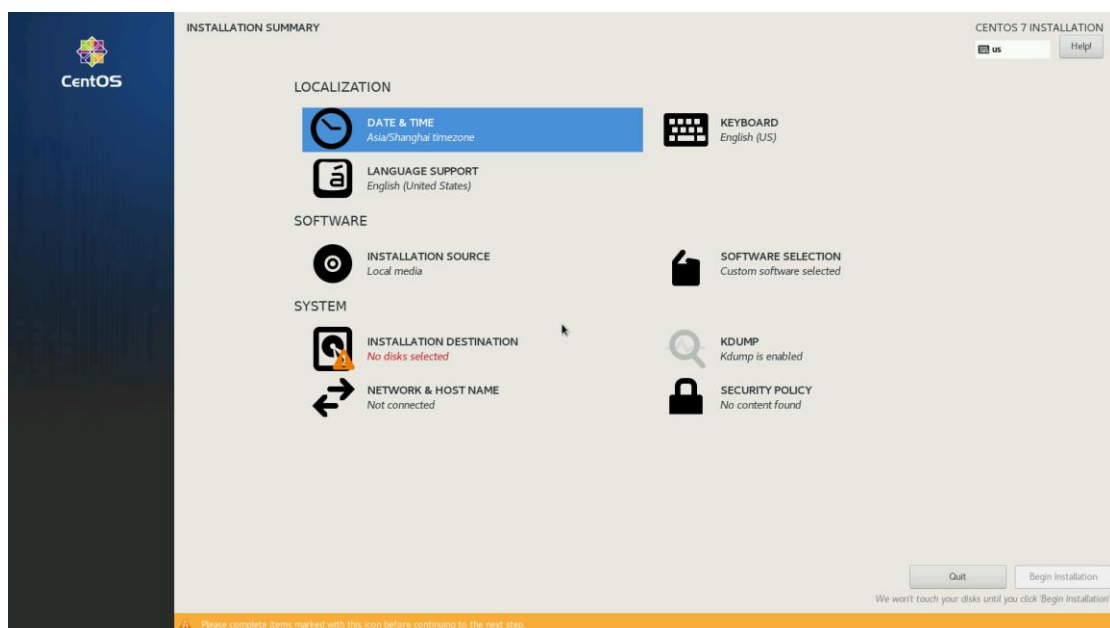
Step 1: Start Installation Process

By selecting **Install CentOS 7** and press Enter to start the installation process.



Step 2: Configure system time zone

By selecting **DATE & TIME** to configure system time zone.



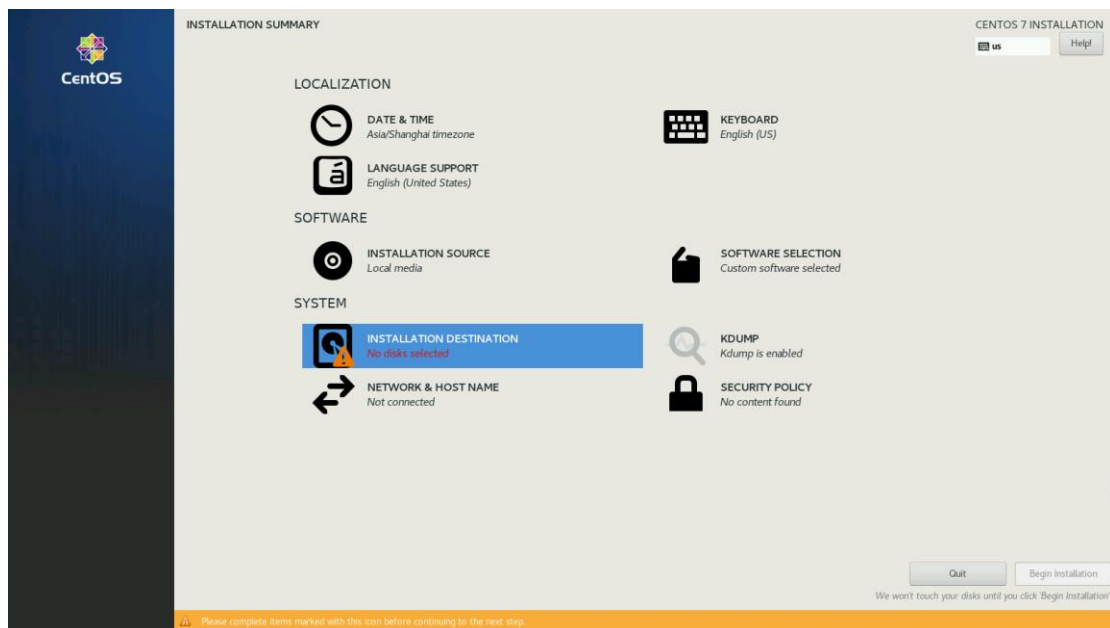
Select the time zone where you are located in.



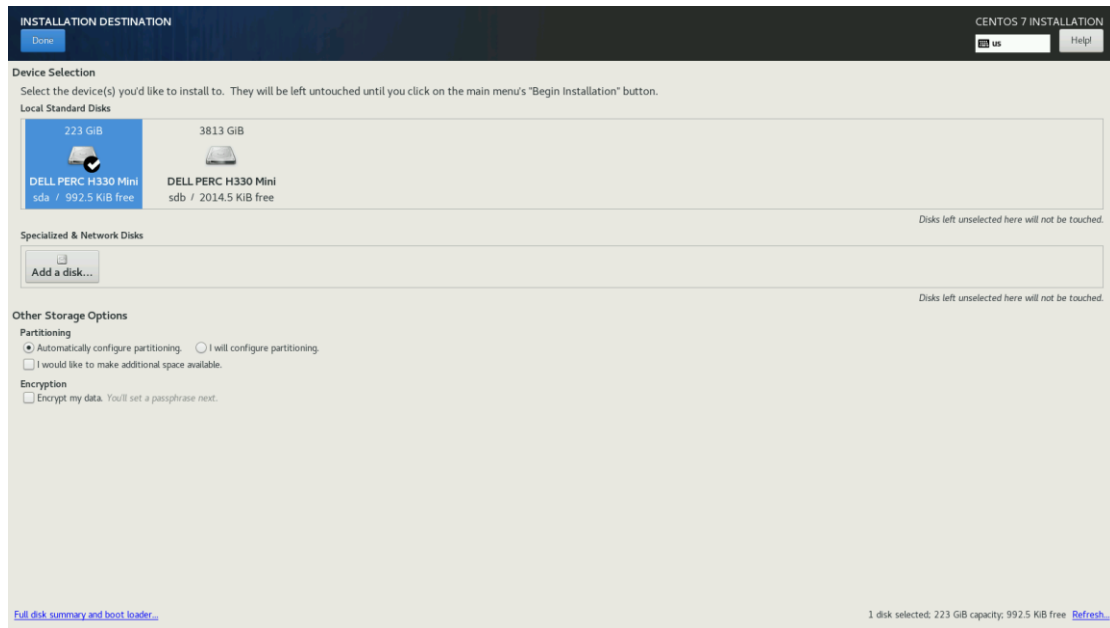
Select **Done** to continue to the next step.

Step 3: Configure Installation Destination

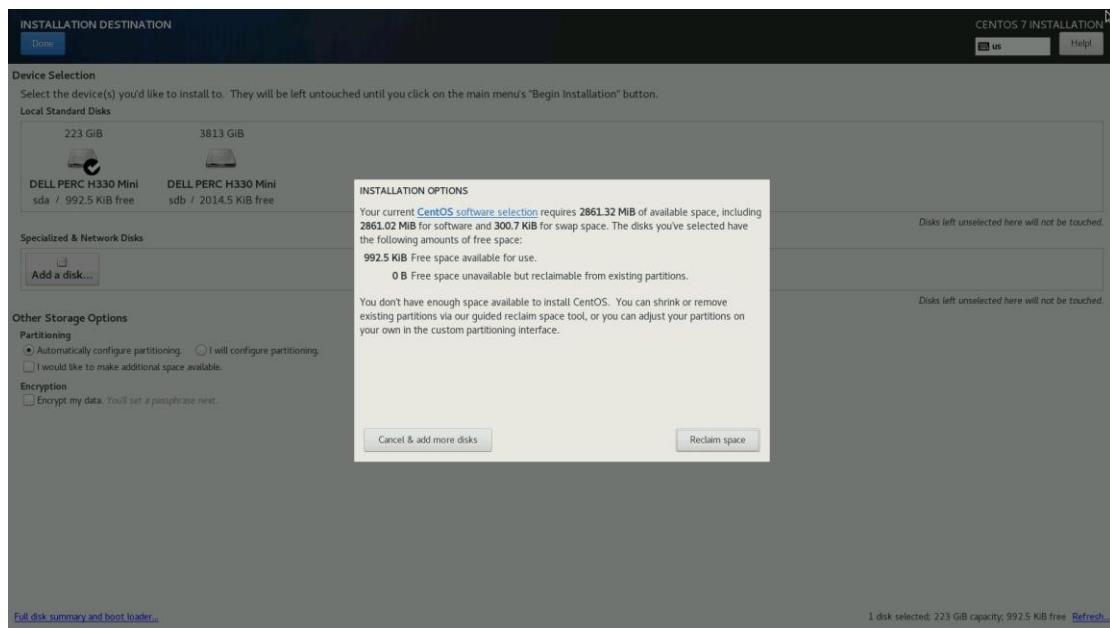
By selecting **INSTALLTION DESTINATION** to configure on which disk the system will be installed.



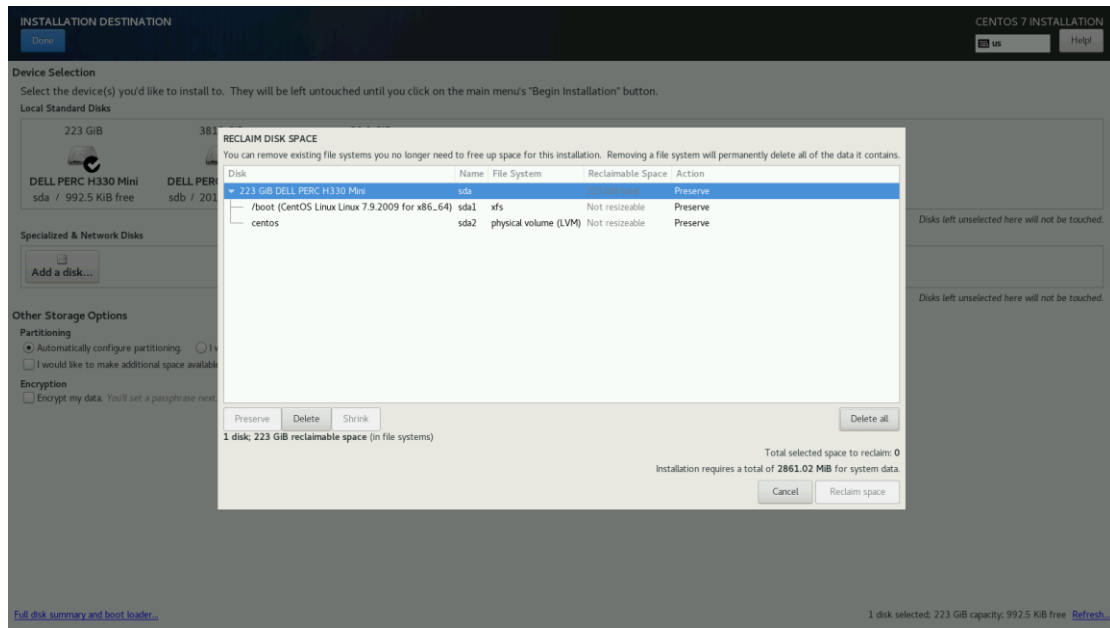
Select only the disk for operating system installation, the data disk (if any) should be left unselected.
Select **Done** to continue.



If the disk contains partitions, select **Reclaim space** to proceed.



Select **Delete All** and then select **Reclaim space** to continue.

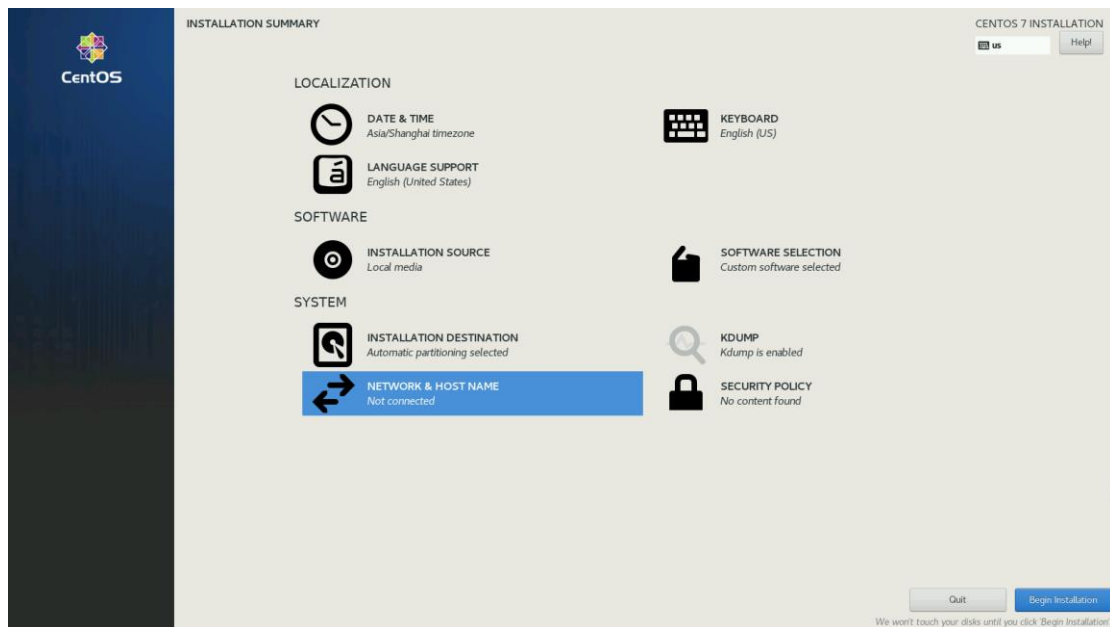


Warning

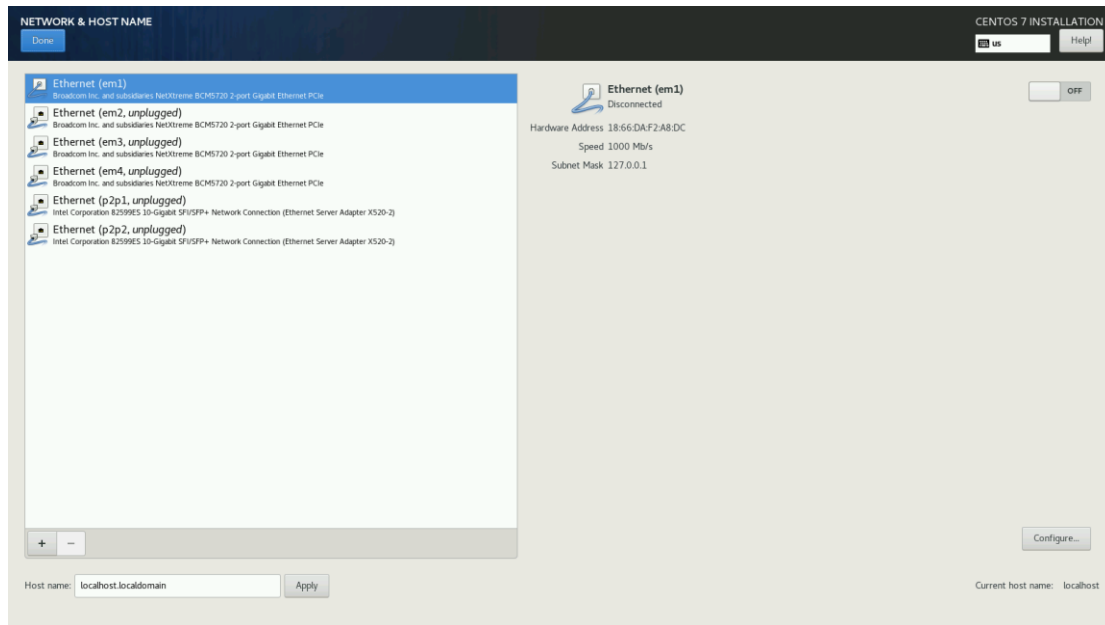
Reclaim space will erase all data on the selected disk. Please make sure that you had made backup of the data or if the data is no longer useful then to proceed, otherwise please quit installation process.

Step 4: Configure Network Settings

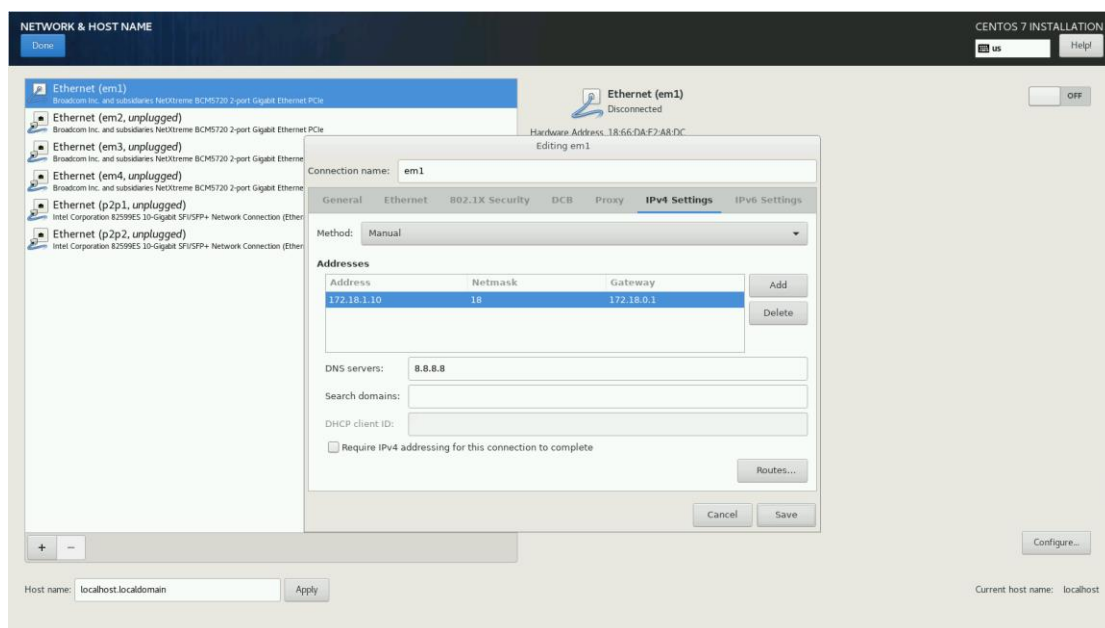
By selecting **NETWORK & HOST NAME** to configure network settings of the backup server.



Select the network interface which you wish to setup its network profile then select **Configure**.



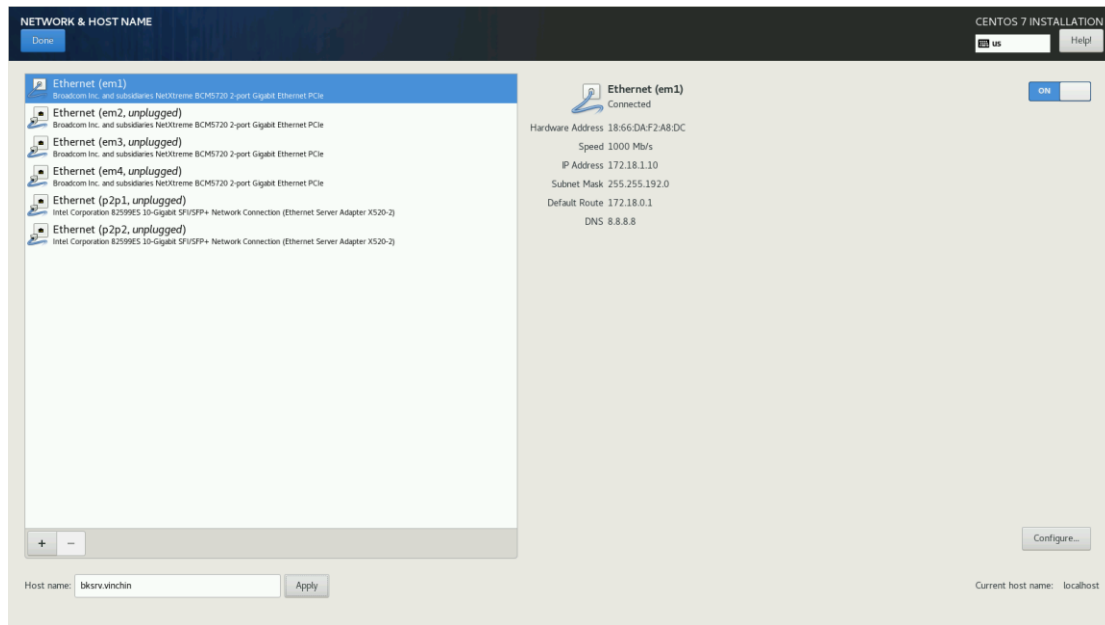
Select **IPv4 Settings**, then in the **Method** dropdown list select **Manual**.



Select **Add** to add an IP address for the network interface, a valid netmask and gateway should also be specified. Please make sure that the IP you assigned to the server is reachable to the virtual platform and other workloads which you wish to backup.

In the **DNS Servers** field, input a valid DNS server IP then select **Save**.

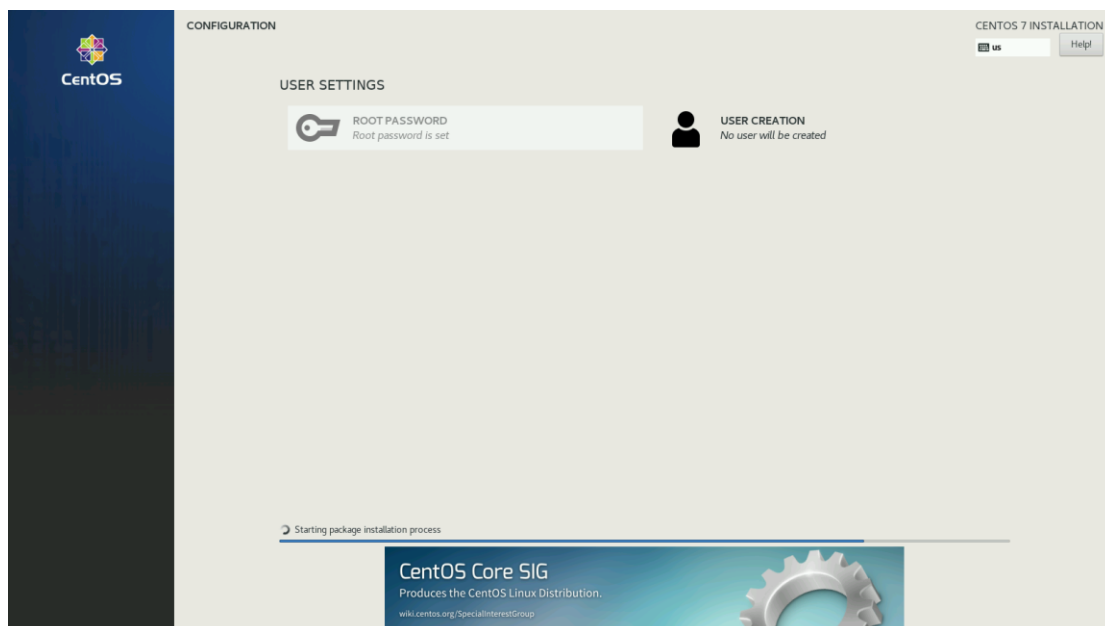
Once the network settings had been configured, switch the network interface from **OFF** to **ON** to enable the network interface to auto start up with the server. And in the **Host name** field, you can optionally specify a host name for the server.



Once turned the network interface on and configured host name, please select **Done** to continue.

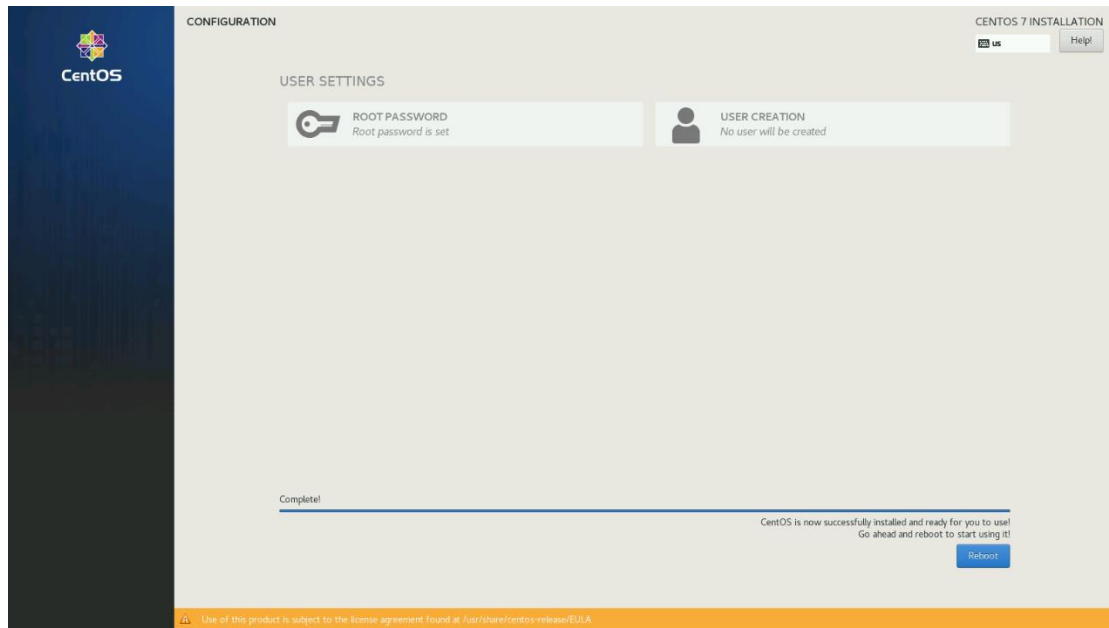
Step 5: Begin Installation

Select **Begin Installation** to confirm the server installation.



Please wait a while for the installation process to be completed. During the installation process, you DO NOT have to configure root password or create any new user.

When the installation process is completed, you will be requested to reboot the server.



Select **Reboot** to complete the installation process.

Warning

Vinchin software packages will be installed during the first reboot, please wait patiently for the first reboot to be completed and DO NOT power off or restart the server, otherwise installation of the Vinchin software will fail!

Vinchin Backup Node Installation

The installation of Vinchin backup node is quite similar to Vinchin backup server installation. Please refer to the [Vinchin Backup Server Installation](#) section to install your Vinchin backup node.

Vinchin backup node uses a separated ISO image for installation, please refer [Download ISO Image](#) for more information. And during installation please use a new IP address and host name for the backup node.

Once the installation is completed, please refer to [Connect Backup Node to Backup Server](#) to connect the newly installed Vinchin backup node to backup server for centralized management.

Vinchin Backup Proxy Installation

The installation of Vinchin backup proxy is quite similar to Vinchin backup server installation. Except Vinchin backup proxy can be only installed as a VM on the VMware ESXi cluster. Please refer to the [Install Vinchin Backup Server as Virtual Machine](#) section to install your Vinchin backup proxy. Vinchin backup proxy uses a separated ISO image for installation, please refer [Download ISO Image](#) for more information. And during installation, please use a new IP address and host name for the backup proxy.

Once the installation is completed, please refer to [Connect Backup Proxy to Backup Server](#) to connect the newly installed Vinchin backup proxy to backup server for centralized management.

Basic Settings

Web Console Login

Only Vinchin Backup Server has management web console. Both Vinchin backup node and backup proxy have no web console, they will be managed by Vinchin backup server.

Use your web browser (Google Chrome is recommended) to open Vinchin backup server web console by using the IP address that you have configured during the installation.

Use the default credentials to log in.

Default username: **admin**

Default password: **123456**

Change Password

After you have logged in to the Vinchin backup server web console, we recommend you to modify the admin password at first priority for backup server safety.

Click on **admin > Change Password** to change the default password.

The suggested new password should be at least 6 characters, and should consist of uppercase and lowercase letters and numbers.

Connect Backup Node to Backup Server

After installation, the backup node needs to be restarted. When you see the command line login prompt. Please log in the command line interface using the below credentials:

Username: **root**

Password: **Backup@3R**

```
CentOS Linux 7 (Core)
Kernel 3.10.0-1062.el7.x86_64 on an x86_64

vinchin650 login: root
Password:
Last login: Tue Nov 16 15:59:05 from 192.168.129.188
[root@vinchin650 ~]#
```

Then please configure the backup node to be connected to the Backup Server with below command:

```
config_server
```

Then type in the IP address of the Backup Server and press Enter.

```
[root@vinchin650 ~]# config_server
Current server ip is: 0.0.0.0, Please input new server ip: 192.168.64.74
Need to reboot system now [Y/n]?Y
```

Now the backup node needs to be restarted, please type **Y** and then press **Enter** to reboot.

After rebooting, Vinchin backup node will be successfully connected to Vinchin backup server. And by now, the backup node had been successfully deployed, no further settings need to be done from the backup node side, as it will be managed by the backup server from now on.

Connect Backup Proxy to Backup Server

If you have installed Vinchin backup proxy, to register the backup proxy to backup server, please go to **Resources > Virtual Infrastructure > Backup Proxy** screen. Click on **Add** to add the Backup Proxy.

Simply input the IP address of the backup proxy in the **IP Address** field.

Give it a name for identification in the **Name** field.

The port number should not be changed.

Click on **OK** to add the Vinchin backup proxy to the Vinchin backup server.

License

Before you starting to test Vinchin Backup & Recovery products, please upload the trial license we sent you by email after you have registered to download Vinchin backup server installation ISO image. It is a 60-day full featured trial license key.

To upload a license key, please go to **System > System License** page. Click on **Upload License** to browse the free trial license, and then upload it to activate Vinchin backup server for a 60-day evaluation.

If you wish to buy perpetual license for Vinchin Backup & Recovery, please contact our sales team. Please find our contact information on the last page of this document.



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