

Grandstream Networks, Inc.

SoftwareUCM Installation Guide - VirtualBox



SoftwareUCM is an on-premises solution that provides businesses with complete control over their telephony systems, eliminating the need for cloud services. It offers many advantages, such as scalability by expanding storage capacity, flexibility in integrating with third-party applications, and security within the internal network.

By using VirtualBox, users can run SoftwareUCM in a secure and isolated virtualized environment, separate from the primary operating system. This setup makes it easier to test, troubleshoot, and scale the SoftwareUCM installation without affecting the host system, ensuring a more efficient and risk-free deployment process.

This guide provides a step-by-step walkthrough for setting up a virtual machine on VirtualBox, along with the installation and configuration of SoftwareUCM.

Critical

Copying or changing the UUIDs (Universally Unique Identifier) of the LVM (Logical Volume Manager) will result in failure to mount the disks after startup.

Prerequisites

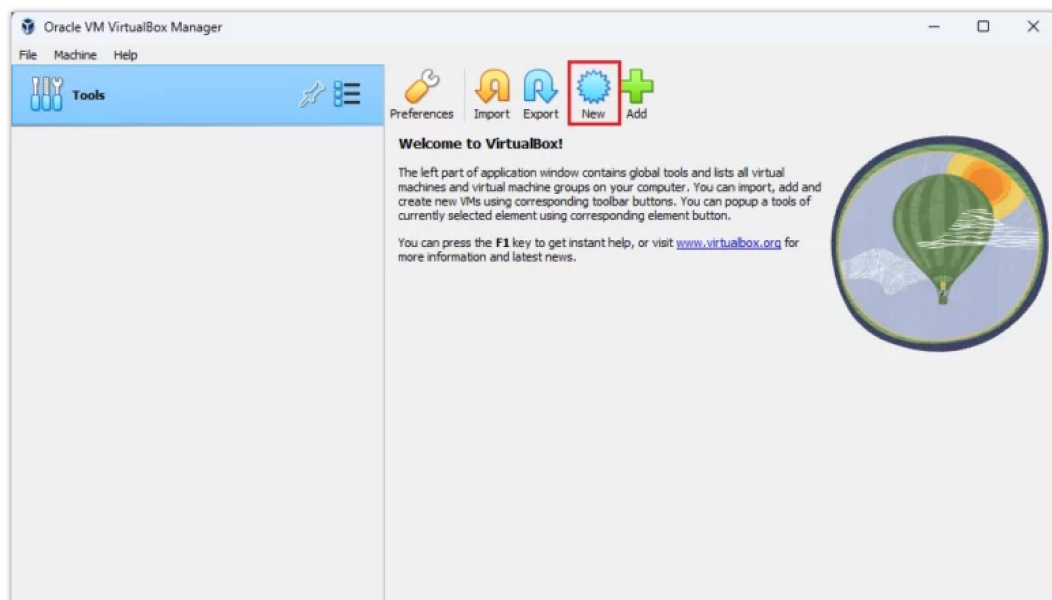
Before proceeding with the instructions in this guide, users should ensure the following criteria are met:

- **VirtualBox Installed:** Ensure that VirtualBox is properly installed on your host machine, version **7.0 or later**.
- **SoftwareUCM Image File Downloaded:** Ensure that you have the [SoftwareUCM image file](#) downloaded and ready for installation.

Create a Virtual Machine

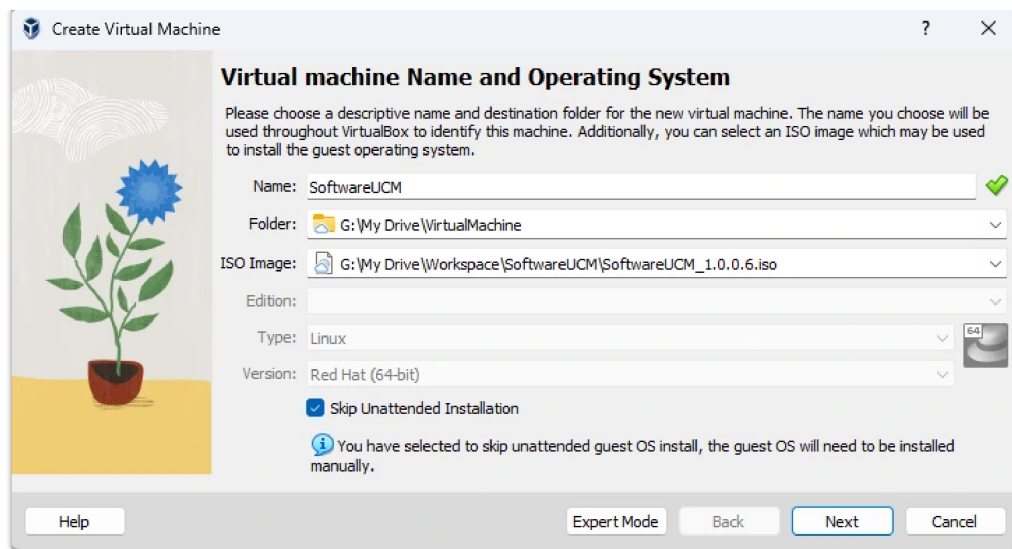
To create a virtual machine for SoftwareUCM, please follow the steps below:

1. Launch **VirtualBox**, and click **New**.



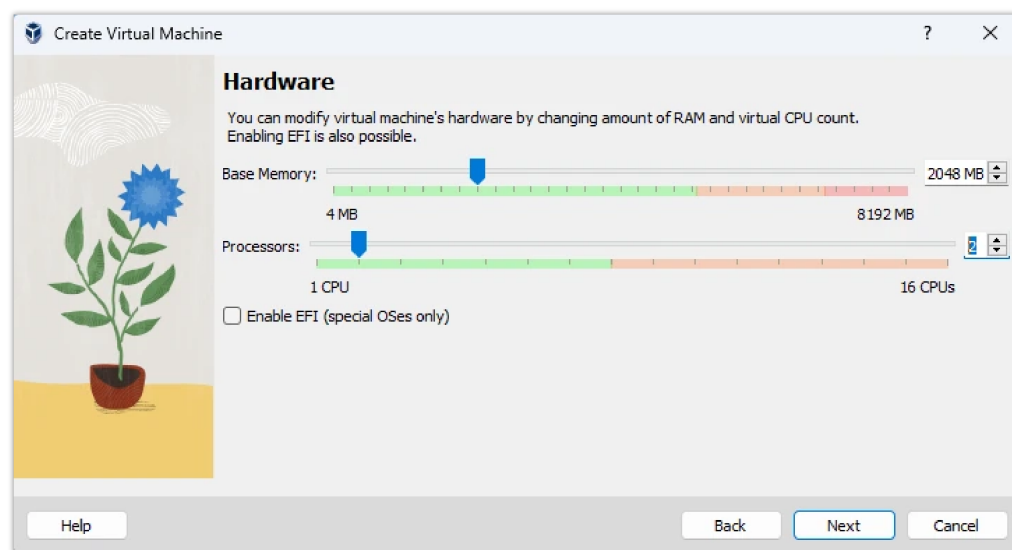
Create a New Virtual Machine

2. Choose a descriptive name and a destination folder for the new virtual machine. Specify the .iso image file of SoftwareUCM and select **Skip Unattended Installation**, then click **Next**.



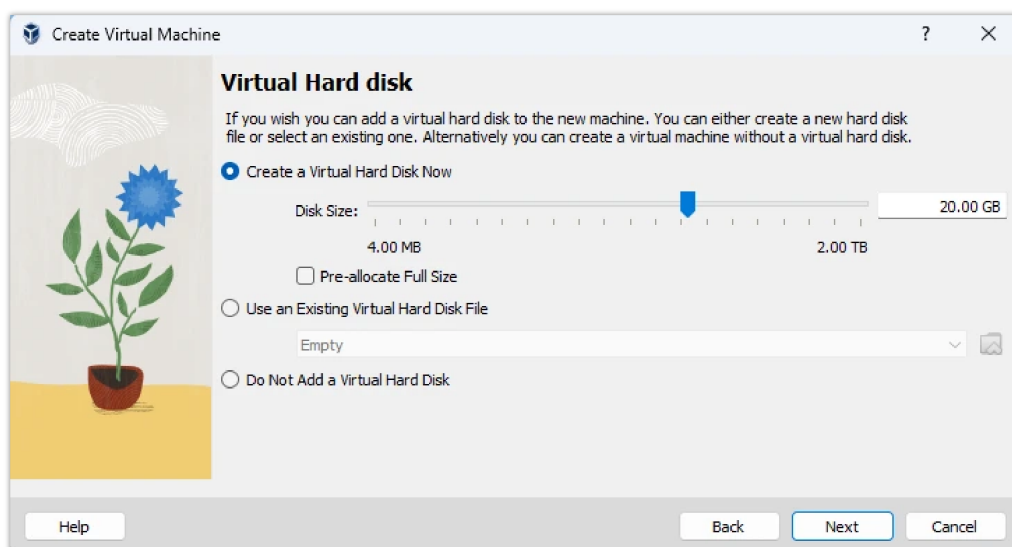
SoftwareUCM Installer Disc Image File

3. Set the **memory** and number of **CPU** cores of your system, then click **Next**.



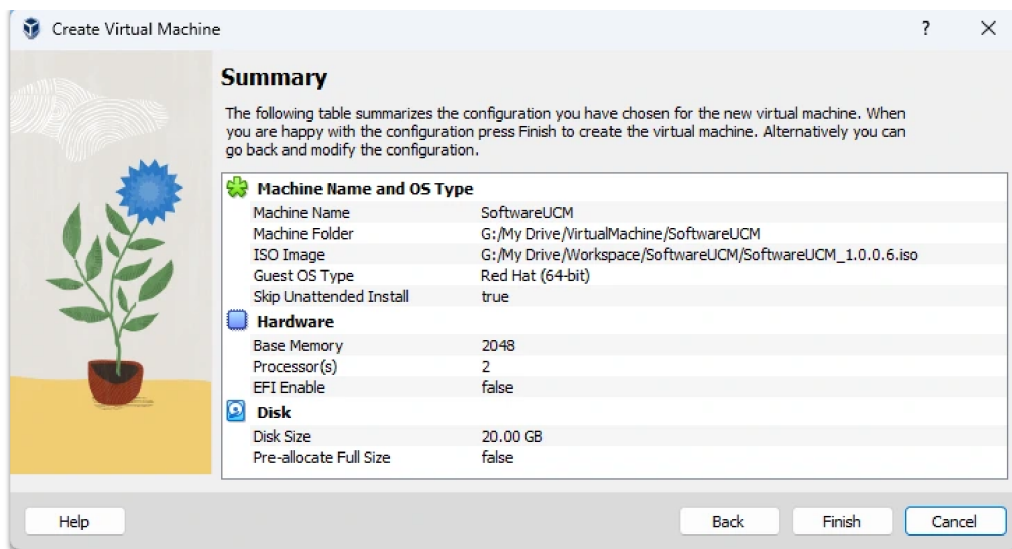
Memory and Processor Configuration

4. Specify disk space for the virtual machine, then click **Next**.



Virtual Hard Disk Configuration

5. Review configurations of the virtual machine to be created and click **Finish**.

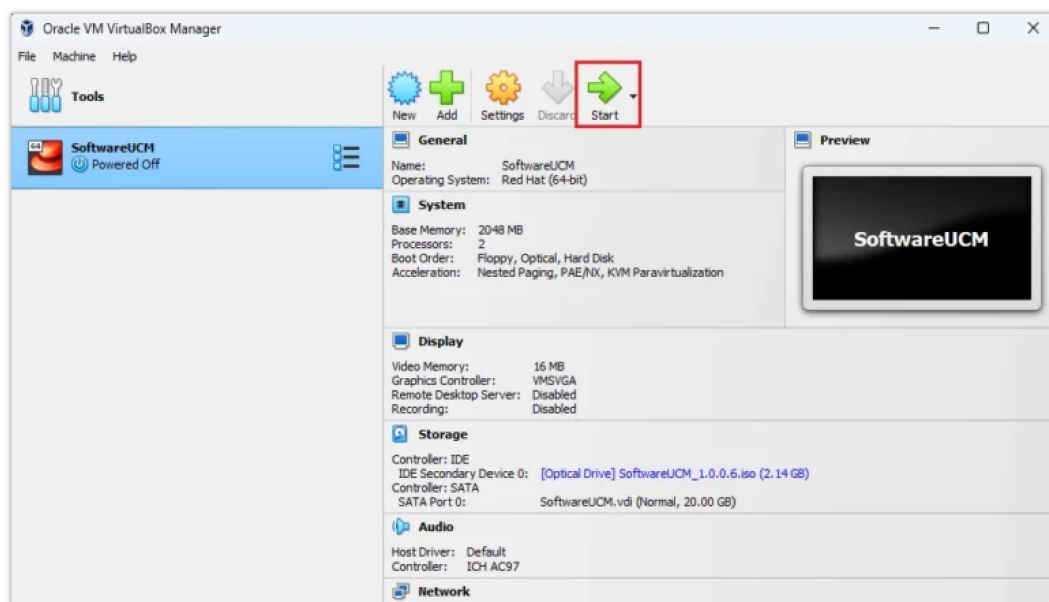


Configuration Summary

Installing and Configuring SoftwareUCM

After creating the virtual machine, follow the steps below to install SoftwareUCM:

1. Select the created virtual machine, and click **Start**.



Start Virtual Machine

2. Press **Enter** and wait until the installation process ends.

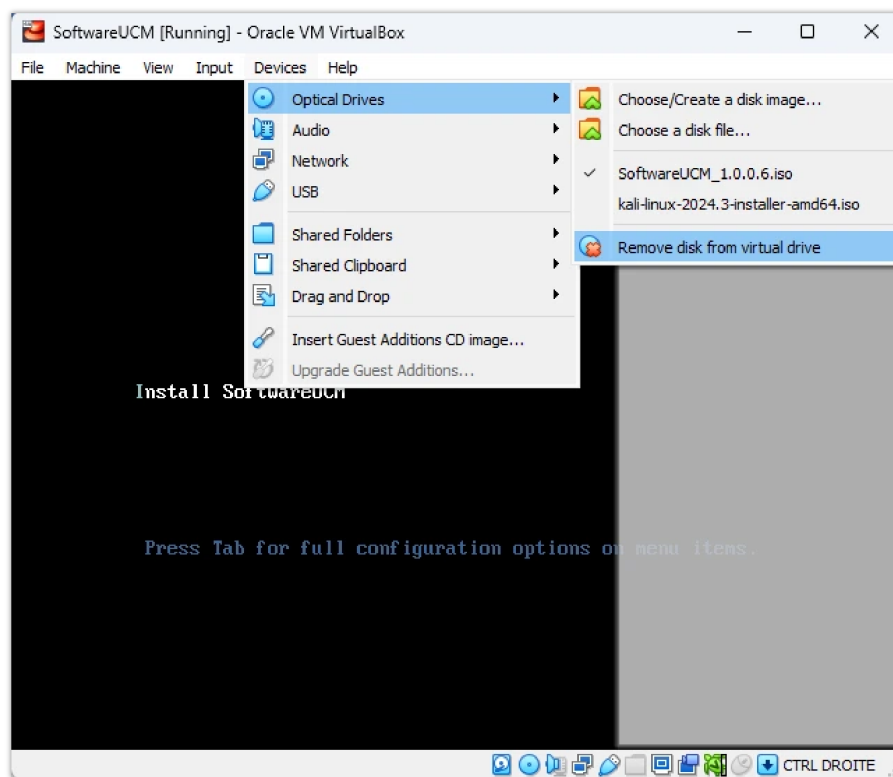
```

installing kpartx.x86_64 (194/351)
installing grub2-pc-modules.noarch (195/351)
installing authselect-libs.x86_64 (196/351)
installing elfutils-default-yama-scope.noarch (197/351)
installing elfutils-libs.x86_64 (198/351)
installing initscripts-service.noarch (199/351)
installing lptools.x86_64 (200/351)
installing libkcap1.x86_64 (201/351)
installing libkcap1-hmaccalc.x86_64 (202/351)
installing kbd.x86_64 (203/351)
installing libndp.x86_64 (204/351)
installing libnhttp2.x86_64 (205/351)
installing libpath_utils.x86_64 (206/351)
installing libini_config.x86_64 (207/351)
installing libpipeline.x86_64 (208/351)
installing libsss_nss_idmap.x86_64 (209/351)
installing libsss_sudo.x86_64 (210/351)
installing libxext.x86_64 (211/351)
installing krb5-libs.x86_64 (212/351)
installing cyrus-sasl-lib.x86_64 (213/351)
installing openldap.x86_64 (214/351)
installing libssh.x86_64 (215/351)
installing libcurl.x86_64 (216/351)
installing elfutils-debuginfod-client.x86_64 (217/351)
installing binutils-gold.x86_64 (218/351)
installing binutils.x86_64 (219/351)
installing tpm2-tss.x86_64 (220/351)
installing systemd-udev.x86_64 (221/351)
installing dracut.x86_64 (222/351)
installing kernel-modules-core.x86_64 (223/351)
installing kernel-core.x86_64 (224/351)
installing kernel-modules.x86_64 (225/351)

```

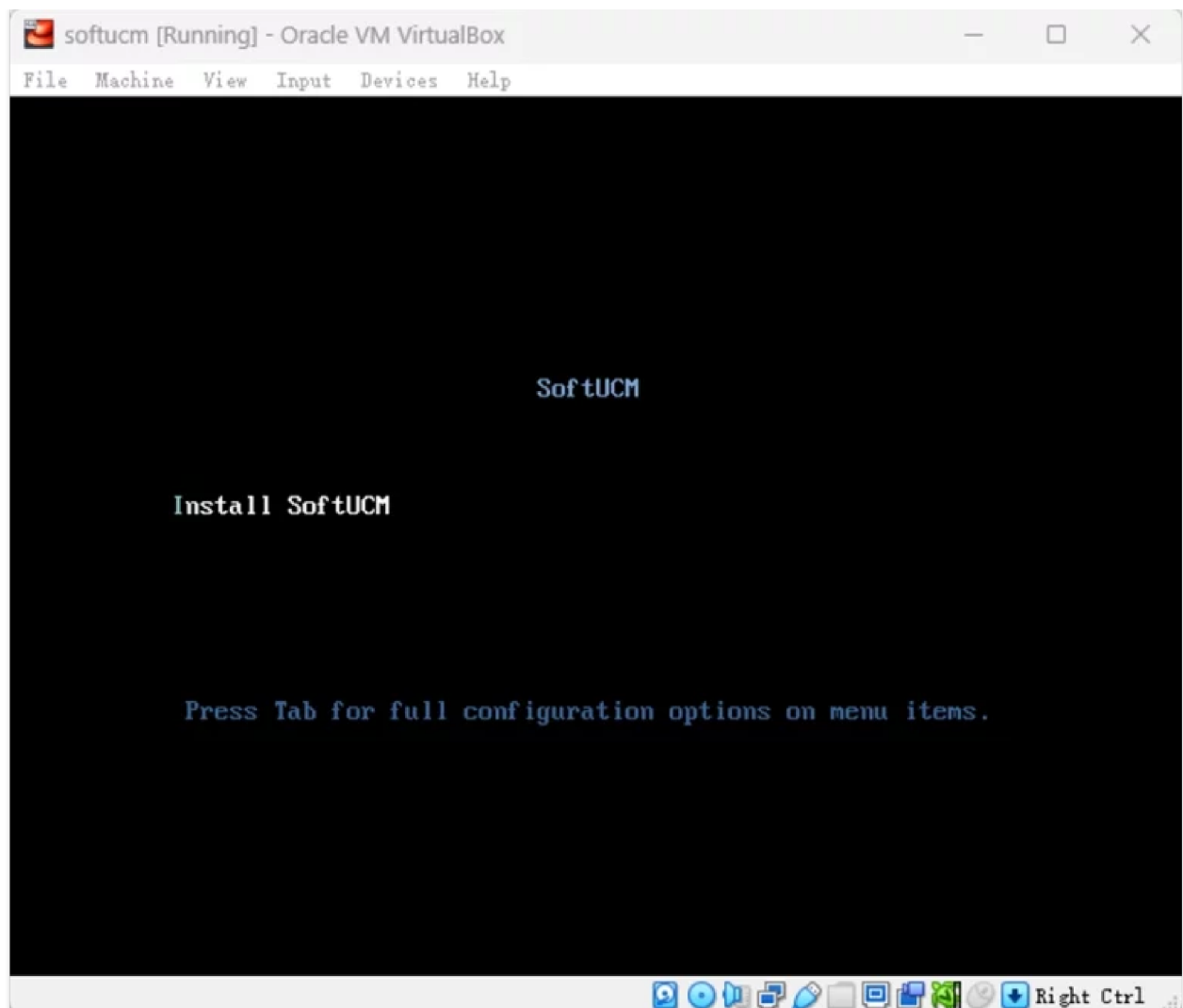
Installation Process

- After the installation is complete, click **Devices**→**Optical Driver**→**Remove disk from virtual driver** to move iso.



Remove Disk from Virtual Drive

- Press enter to install the SoftwareUCM.



SoftwareUCM is now installed with a DHCP-assigned IP address and an instance set up. If you prefer a static IP address or if your network does not support DHCP, you can easily change SoftwareUCM's IP address by following these instructions:

1. Login with user "**support**", and set the password.

```
AlmaLinux 9.4 (Seafoam Ocelot)
Kernel 5.14.0-427.13.1.el9_4.x86_64 on an x86_64

SoftwareUCM login: support
Please set password for user "support" (8-32 characters).
New Password:
Retype new password:
Password configured successfully.

Please enter select:
[1] SoftwareUCM Management.
[2] System Information.
[3] System Settings.
[4] Maintenance.
[5] API Configuration.
[0] Exit.
```

SoftwareUCM Support User

2. Press "1" followed by `Enter` , to access SoftwareUCM Management.
3. Select **Network Settings** → **Update network configuration** to set up an IP address, netmask, gateway IP address, and a preferred DNS server.

```

Please enter select:
[1] List SoftwareUCMs.
[2] Create SoftwareUCM.
[3] Delete SoftwareUCM.
[4] Restart SoftwareUCM.
[5] Network Settings.
[6] Show Resource Usage.
[7] Change Resource Limit.
[8] Reset Factory Password.
[9] Factory Reset.
[0] Exit.
5

When using Single Tenant mode, modifying the SoftwareUCM instance's network will also affect the host's. Do you want to continue? (y/n) y

Please enter SoftwareUCM instance name:
ucm1

Please enter the IP assignment method:
[1] DHCP.
[2] Static.
[0] Exit.
2

Please enter IP address:
192.168.130.159
Please enter netmask:
255.255.255.0
Please enter gateway:
192.168.130.1
Please enter DNS server:
8.8.8.8

Configuring the network.
Configured the network successfully.

Waiting for SoftwareUCM instance initialization to complete.
The SoftwareUCM instance ucm1 is already accessible.

```

SoftwareUCM Network Configuration

4. Choose the Exit option "0" to return to the initial selection page, then go to **SoftwareUCM Manage** → **List SoftwareUCM** to view the access information of the instance. (Make sure the status is "Running").

Info:

If the instance did not get assigned an IP address, "Admin Portal" will appear blank.

```

Please enter select:
[1] List SoftwareUCMs
[2] Create SoftwareUCM.
[3] Delete SoftwareUCM.
[4] Restart SoftwareUCM.
[5] Network Settings.
[6] Show Resource Usage.
[7] Change Resource Limit.
[8] Reset Factory Password.
[9] Factory Reset.
[0] Exit.
1

Current Mode: Single Tenant

SoftwareUCM Information:
  Instance Name: ucm1
  Status: running
  Version: 1.0.27.15
  Admin Portal: https://192.168.130.159:8089
  Initial Username: admin
  Initial Password: SoftUCM@admin

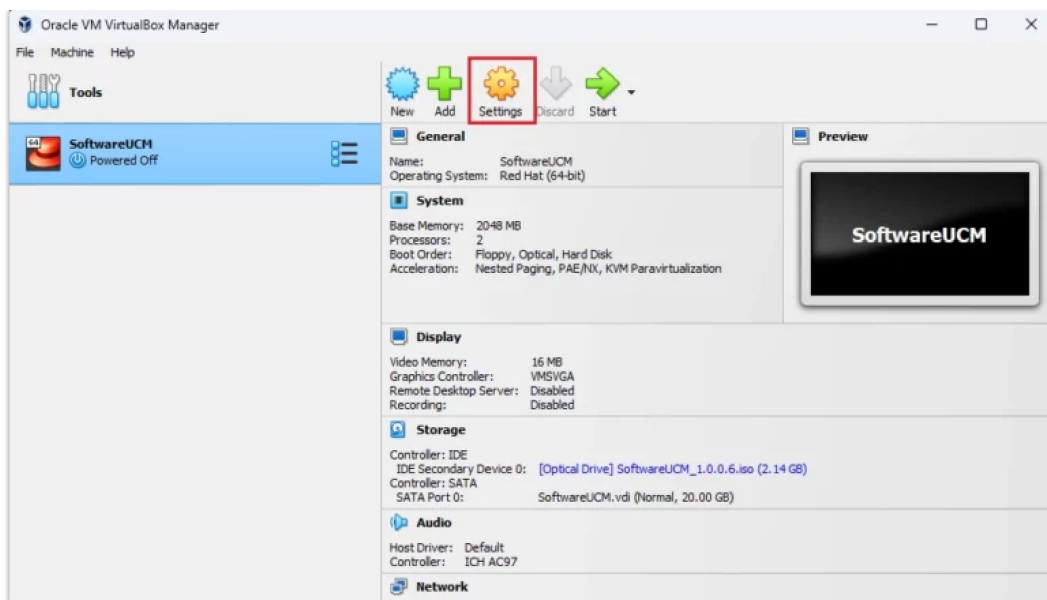
```

List SoftwareUCM Information

Set up the Created Virtual Machine With Single NIC

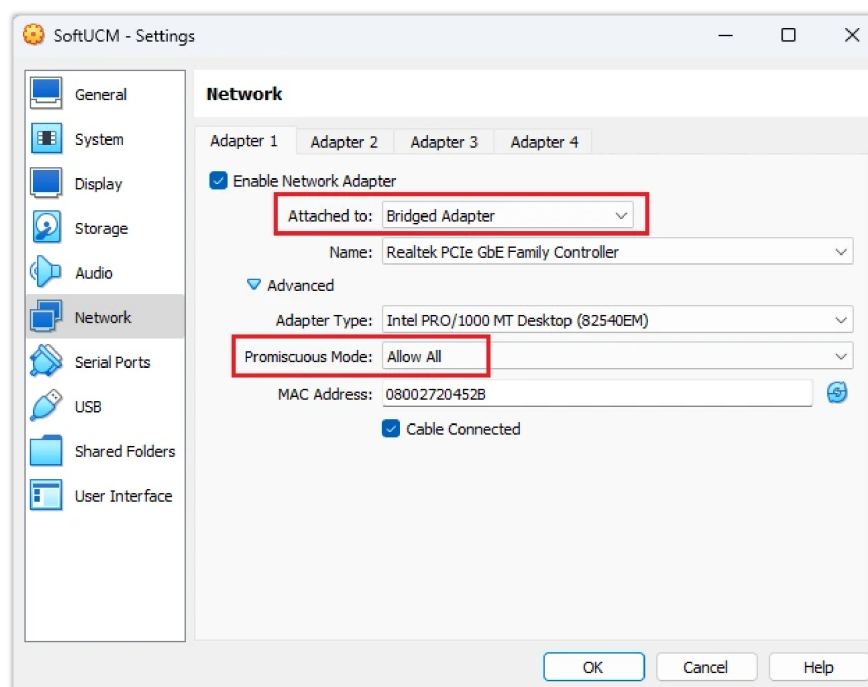
Once the virtual machine is created, please follow these steps to configure the network settings:

1. Select the created virtual machine, click **Settings**.



Virtual Machine Settings

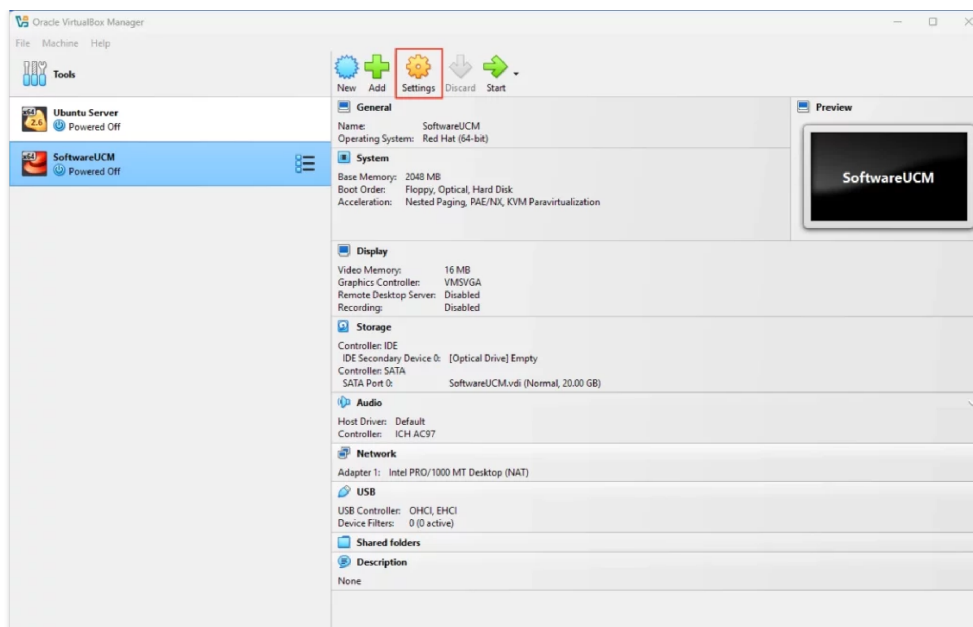
2. Configure the network of the virtual machine as a **Bridged Adapter**, select the promiscuous mode to **Allow All**, and then click **OK**.



Network Configuration

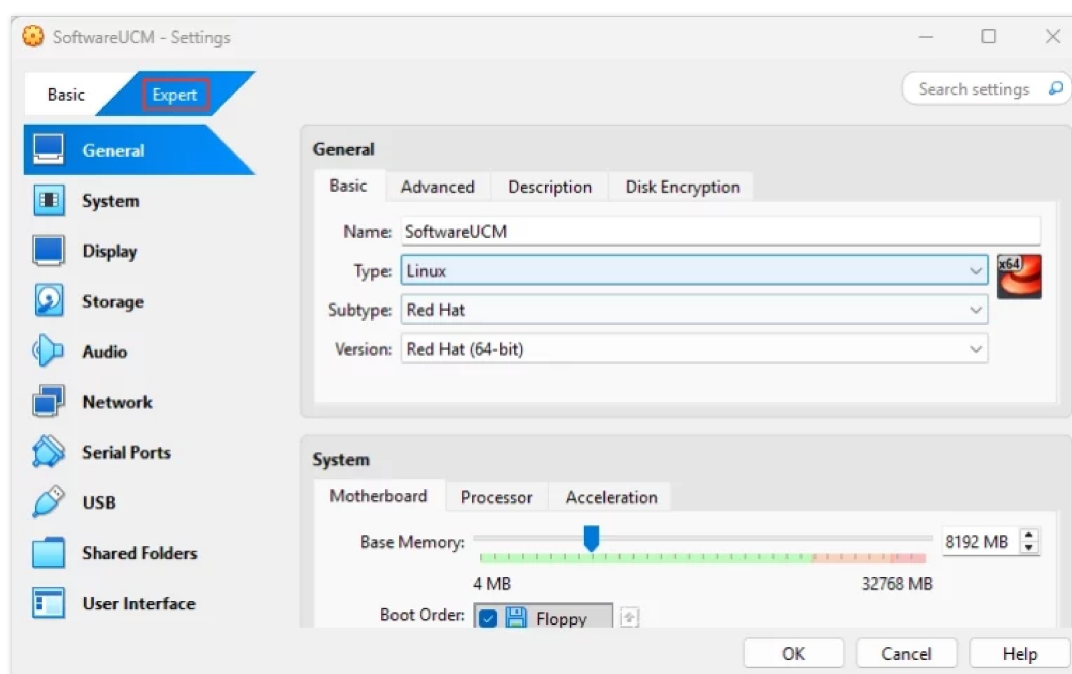
Set up the Created Virtual Machine With Dual NIC

1. To configure dual network interface on the SoftwareUCM, click on the SoftwareUCM virtual machine on the list, then click on **Settings**.

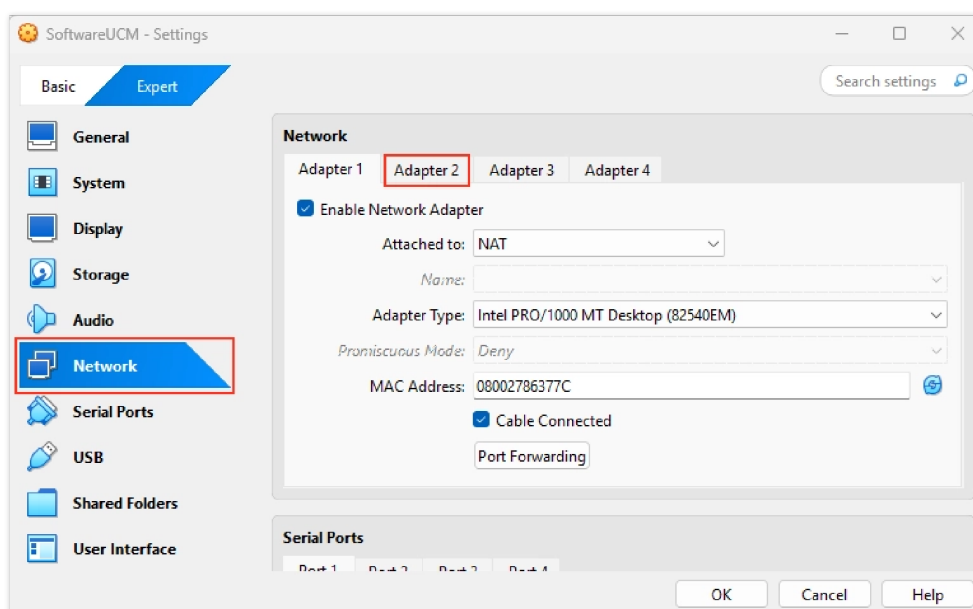


VirtualBox Virtual Machines

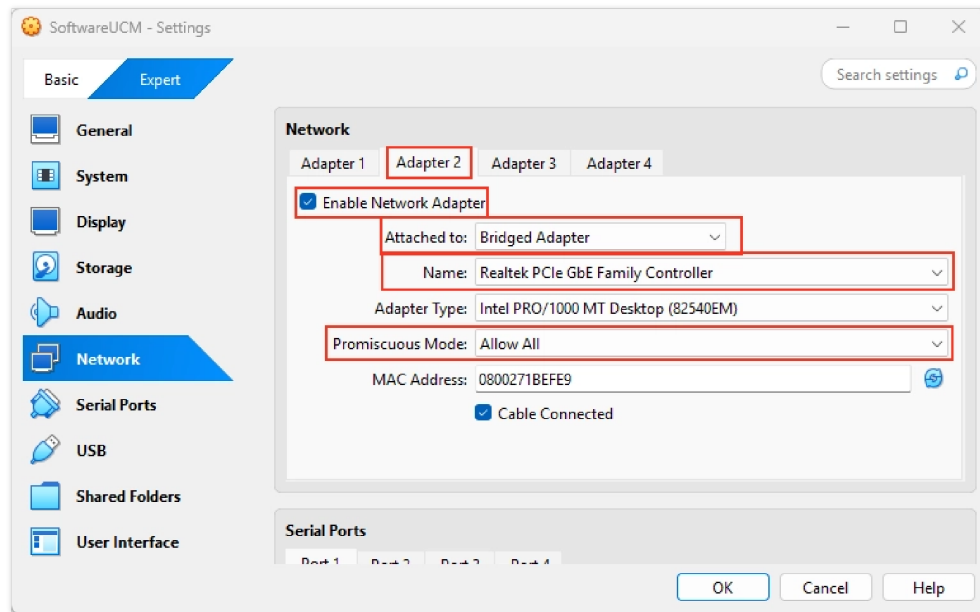
2. Switch the view of the setting configuration to Expert.



3. Click on "Adapter 2" tab to configure the 2nd NIC.



4. Enable the adapter by ticking the box next to "Enable Network Adapter". Select the network mode from "Attached to", in this case we have to choose to bridge the virtual NIC directly to the physical NIC. Select the corresponding physical NIC from "Name" list. Then set "Promiscuous Mode" to "Allow All". This can be done for NIC 1 to bridge directly to the corresponding physical NIC.



VirtualBox 2nd NIC Configuration

Enable Dual NIC Mode on SoftwareUCM

To enable dual NIC mode on SoftwareUCM, please follow the steps mentioned below.

1. In your SoftwareUCM console, login with the management user (by default: support).
2. From the list of parameters, enter 6 to enter the network configuration which need to be changed.

```
Please enter select:
[1] List SoftwareUCMs.
[2] Create SoftwareUCM.
[3] Delete SoftwareUCM.
[4] Restart SoftwareUCM.
[5] Network Details.
[6] Network Settings.
[7] Show Resource Usage.
[8] Change Resource Limit.
[9] Reset Factory Password.
[10] Factory Reset.
[11] Modify Remark.
[12] Disk Management.
[13] Migrate SoftwareUCM.
[0] Exit.
6
```

List of Parameters

3. Enter the name of the instance to configure.

```
Current Instances:
+-----+-----+-----+-----+-----+
| Instance Name | Remark | Status | Version | IP Address |
+-----+-----+-----+-----+-----+
| ucm1          |        | running | 1.0.32.7 | 10.0.2.15   |
+-----+-----+-----+-----+-----+

When using Single Tenant mode, modifying the SoftwareUCM instance's network will also affect the host's. Do you want to continue?[y/n] y
Please enter SoftwareUCM instance name:
ucm1
```

Enter the Name of the Instance to Configure

4. Enter "2" to configure the Dual NIC.

```
Configuring the network for instance.

Please select method:
[1] Single Network Interface Card.
[2] Dual Network Interface Card.
2
```

5. Assign LAN to each of the networking interfaces.

```
Please select network interface for LAN1:
[1] eth0(08:00:27:42:B7:5D).
[2] eth1(08:00:27:7C:CB:91).
1

Please select network interface for LAN2:
[1] eth1(08:00:27:7C:CB:91).
1
```

Select the LAN for Each Interface

6. Select the default interface

```
Please select default interface:
[1] LAN1.
[2] LAN2.
1
```

Select the Default Interface

7. Configure the address IP for each interface, either manually or by setting the interface as a DHCP client.

```
Configuring IPv4 address.

Please enter preferred DNS server (optional):
192.168.1.1

Configuring IPv4 Address for LAN 1 (eth0).

Please select the IP assignment method:
[1] DHCP.
[2] Static.
2

Please enter IP address:
192.168.1.155
Please enter netmask:
255.255.255.0
Please enter gateway:
192.168.1.1
Please enter DNS server:
192.168.1.1

Configuring IPv4 Address for LAN 2 (eth1).

Please select the IP assignment method:
[1] DHCP.
[2] Static.
2

Please enter IP address:
```

Change the IP Address of the SoftwareUCM

SoftwareUCM is now installed with a DHCP-assigned IP address and an instance set up. If you prefer a static IP address or if your network does not support DHCP, you can easily change SoftwareUCM's IP address by following these instructions:

1. Login with user "**support**", and enter the corresponding password.

```
Please enter select:
[1] SoftwareUCM Management.
[2] System Information.
[3] System Settings.
[4] Maintenance.
[5] API Configuration.
[0] Exit.
```

SoftwareUCM Support User

2. Press "1" followed by **Enter** , to access SoftwareUCM Management.
3. Select **Network Settings** → **Update network configuration** to set up an IP address, netmask, gateway IP address, and a preferred DNS server.

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Please enter select:
[1] List SoftwareUCMs.
[2] Create SoftwareUCM.
[3] Delete SoftwareUCM.
[4] Restart SoftwareUCM.
[5] Network Settings.
[6] Show Resource Usage.
[7] Change Resource Limit.
[8] Reset Factory Password.
[9] Factory Reset.
[0] Exit.
5

When using Single Tenant mode, modifying the SoftwareUCM instance's network will also affect the host's. Do you want to continue?
[y/n] y

Please enter SoftwareUCM instance name:
ucm1

Please enter the IP assignment method:
[1] DHCP.
[2] Static.
[0] Exit.
2

Please enter IP address:
192.168.130.159
Please enter netmask:
255.255.255.0
Please enter gateway:
192.168.130.1
Please enter DNS server:
8.8.8.8

Configuring the network.
Configured the network successfully.

Waiting for SoftwareUCM instance initialization to complete.
The SoftwareUCM instance ucm1 is already accessible.

```

SoftwareUCM Network Configuration

- Choose the Exit option "0" to return to the initial selection page, then go to **SoftwareUCM Manage** → **List SoftwareUCM** to view the access information of the instance. (Make sure the status is "Running").

Note

If the instance did not get assigned an IP address, "Admin Portal" will appear blank.

```

Please enter select:
[1] List SoftwareUCMs
[2] Create SoftwareUCM.
[3] Delete SoftwareUCM.
[4] Restart SoftwareUCM.
[5] Network Settings.
[6] Show Resource Usage.
[7] Change Resource Limit.
[8] Reset Factory Password.
[9] Factory Reset.
[0] Exit.
1

Current Mode: Single Tenant

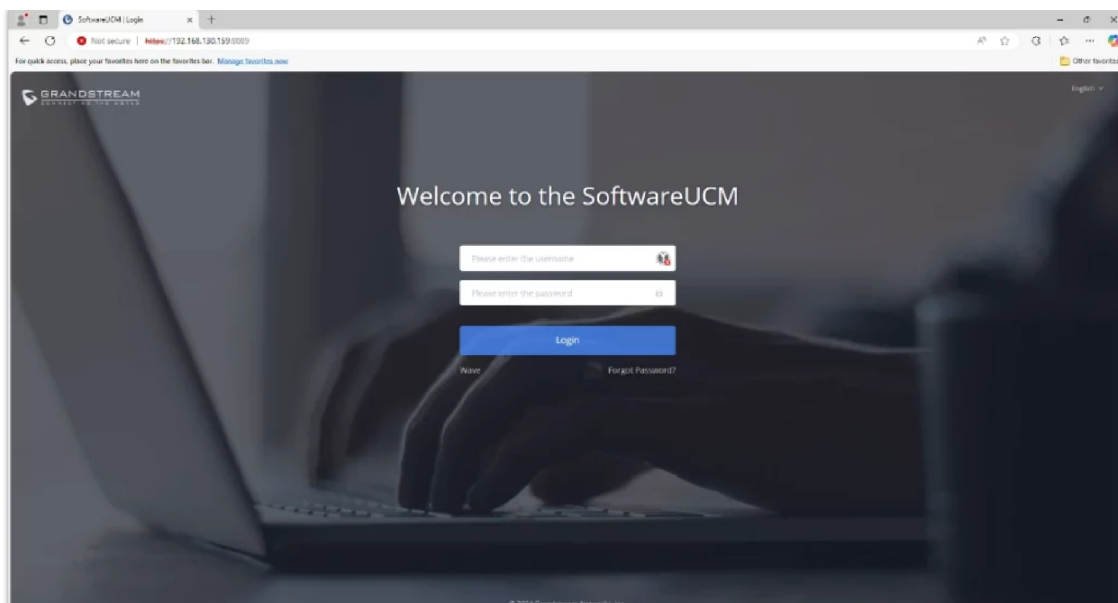
SoftwareUCM Information:
Instance Name: ucm1
Status: running
Version: 1.0.27.15
Admin Portal: https://192.168.130.159:8089
Initial Username: admin
Initial Password: SoftUCM@admin

```

List SoftwareUCM Information

Accessing SoftwareUCM

To access SoftwareUCM, users need to enter the IP-based URL listed under **Admin Portal** and log in using the **initial username** and **password**.



SoftwareUCM Login Page
