

Grandstream Networks, Inc.

SoftwareUCM Installation Guide – KVM



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.

KVM (Kernel-based Virtual Machine) is a full virtualization solution for Linux that allows a host machine to run multiple virtual machines as guest operating systems. By using KVM, 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 KVM, 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

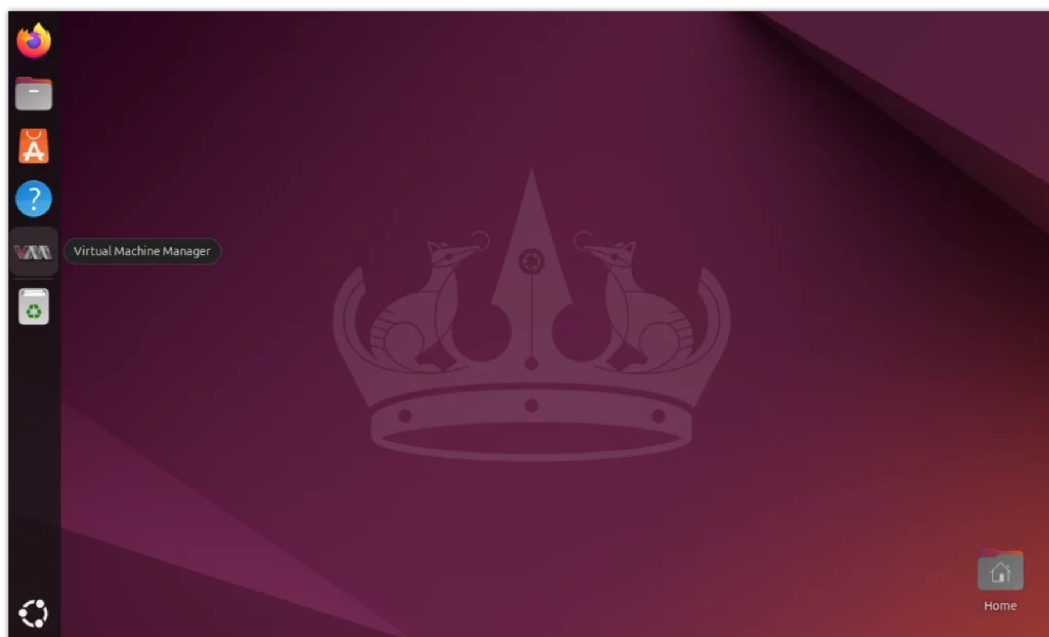
Before proceeding with the instructions in this guide, users should ensure the following criteria are met:

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

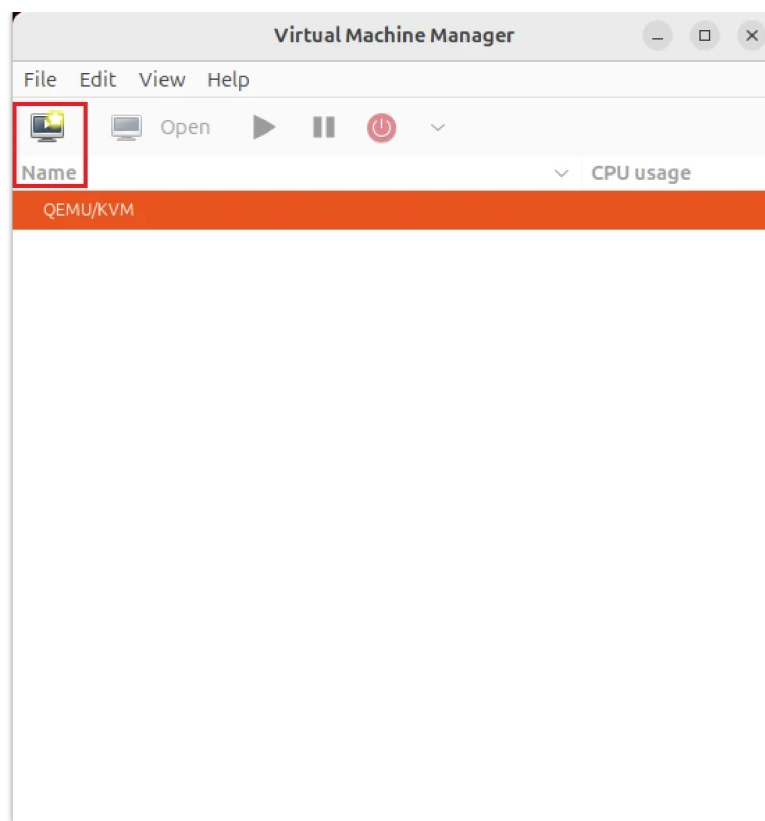
Creating the Virtual Machine on KVM

To create a virtual machine on KVM, please follow the steps below:

1. Launch **Virtual Machine Manager** on your Linux machine and click the **Create a new Virtual Machine** icon at the top-left corner.

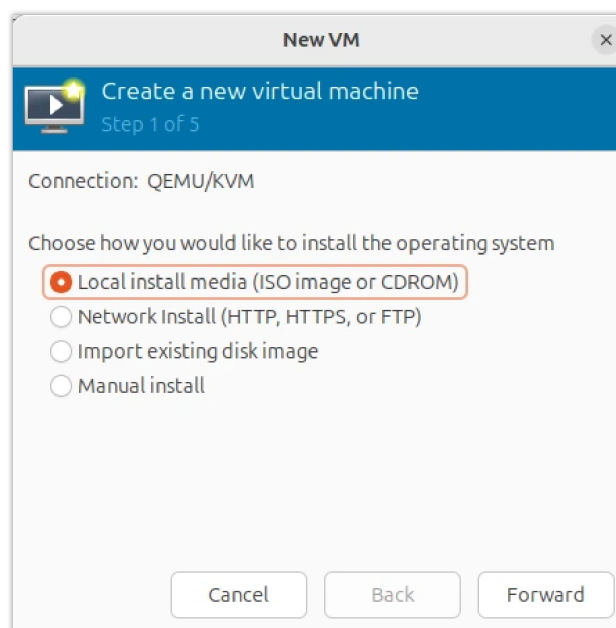


Open KVM



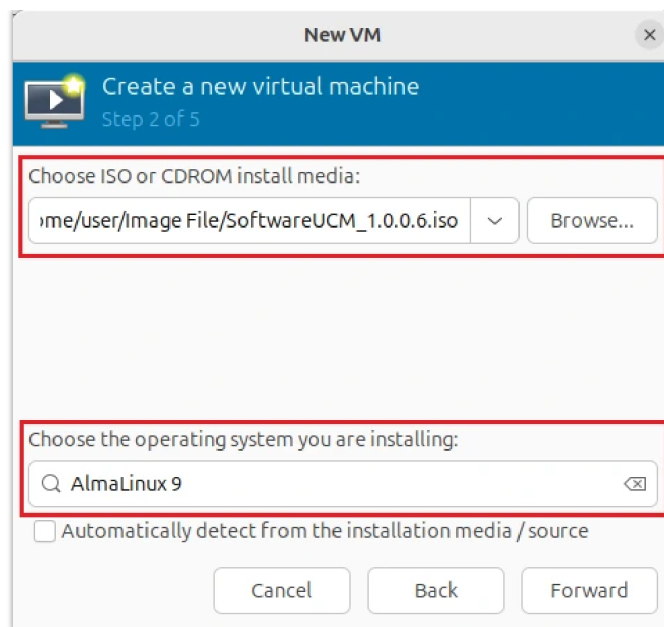
Create New VM

2. Select **Local install media (ISO image or CDROM)**, then click Forward.



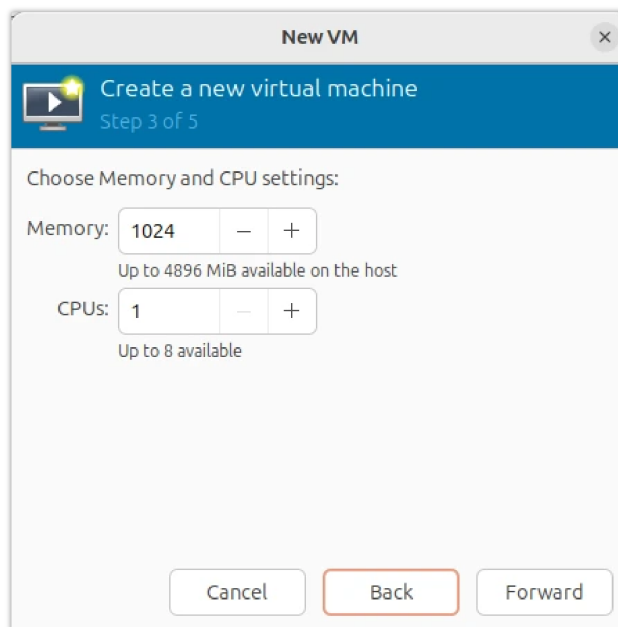
VM OS Installation Method

3. Browse to choose the image file of SoftwareUCM, select the **Operating System** (AlmaLinux 9) then click Forward.



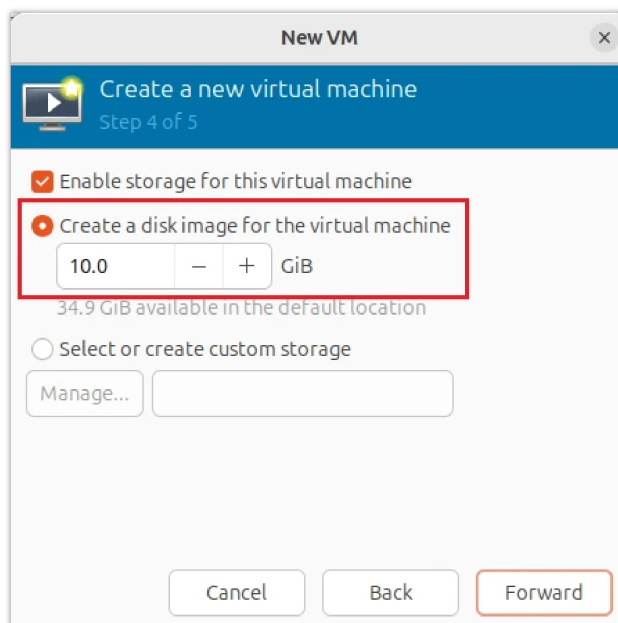
VM Image File and Operating System

4. Set the **memory** and the number of **CPU** cores for your virtual machine and continue by selecting **Forward**.

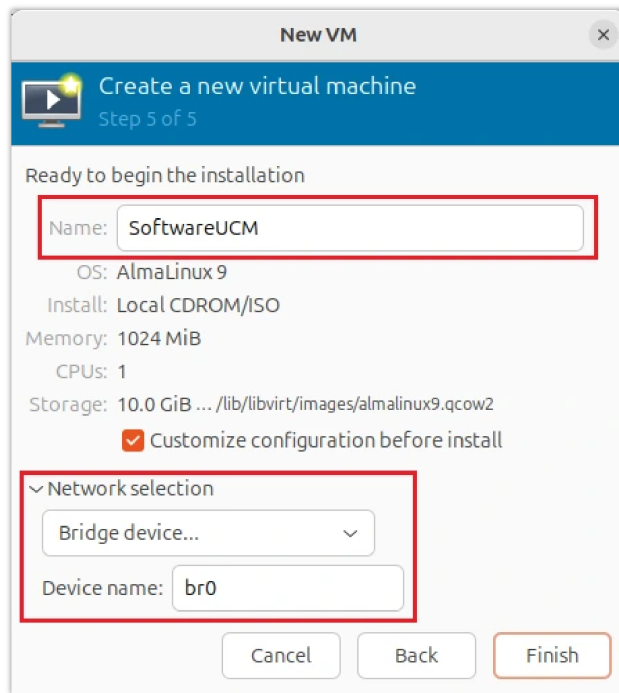


VM Memory and CPU Configuration

5. Specify **disk space** for the virtual machine, then click Forward.

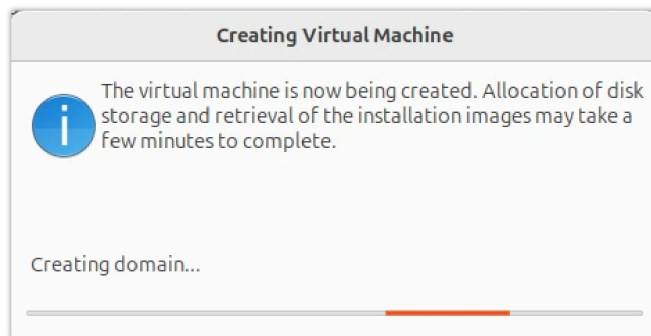


6. In the Name field, enter a **name** for your virtual machine and extend **Network** selection menu. Select the network card to be associated with the virtual machine, and set the Source mode as **Bridge**.



VM Network Configuration

7. Review your configurations then click on Finish. The system will start creating the virtual machine and install SoftwareUCM.

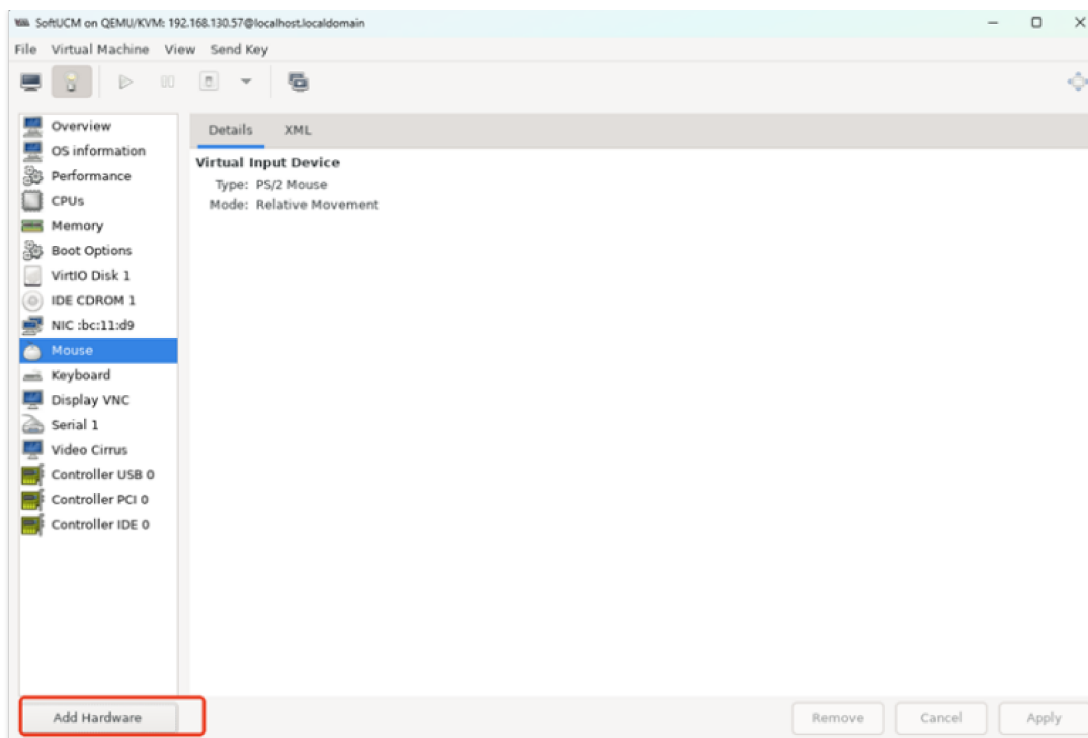


Creating VM

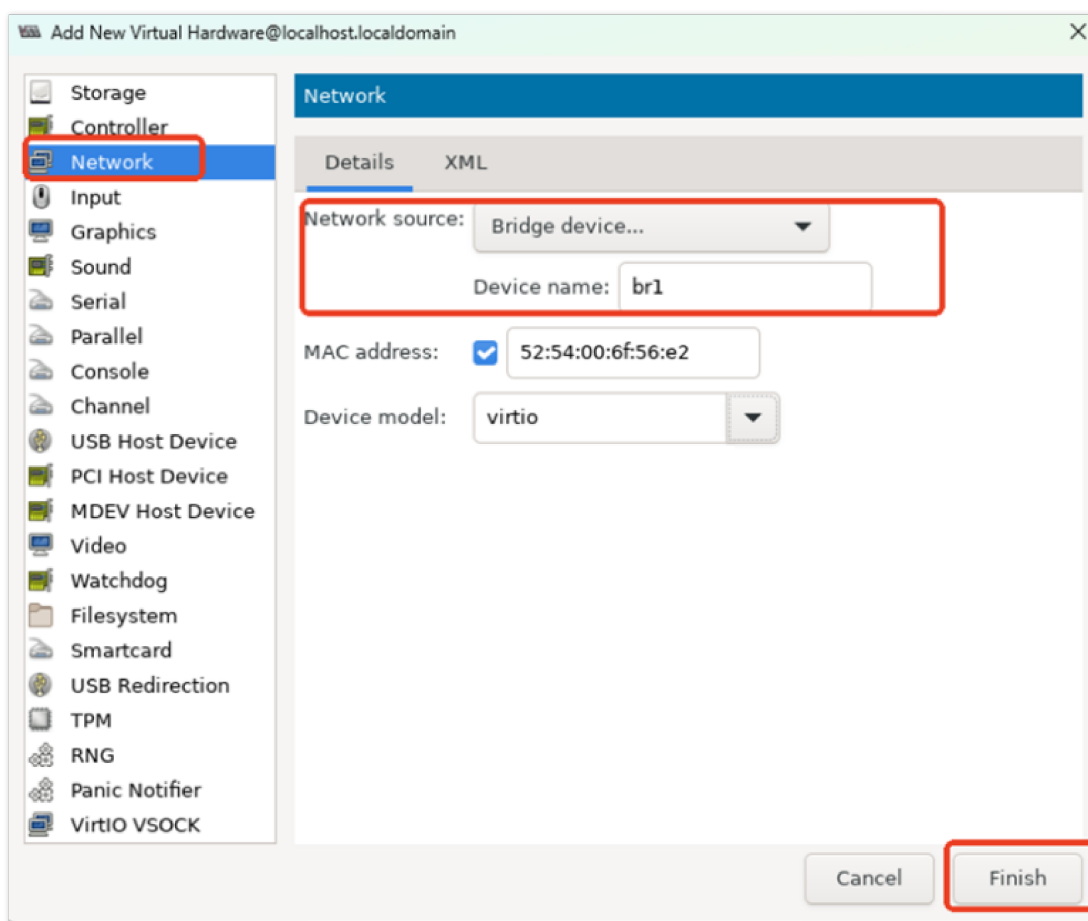
Dual NICs Setup

To set up dual network interfaces for the SoftwareUCM please follow the steps mentioned below.

1. On the virtual machine configuration hardware, click on "Add Hardware" button on the bottom-right corner of the page.



2. Select "Network" from the select "Bridge device" and enter the device name "Br1". Avoid using "Br0" since it's already been used.

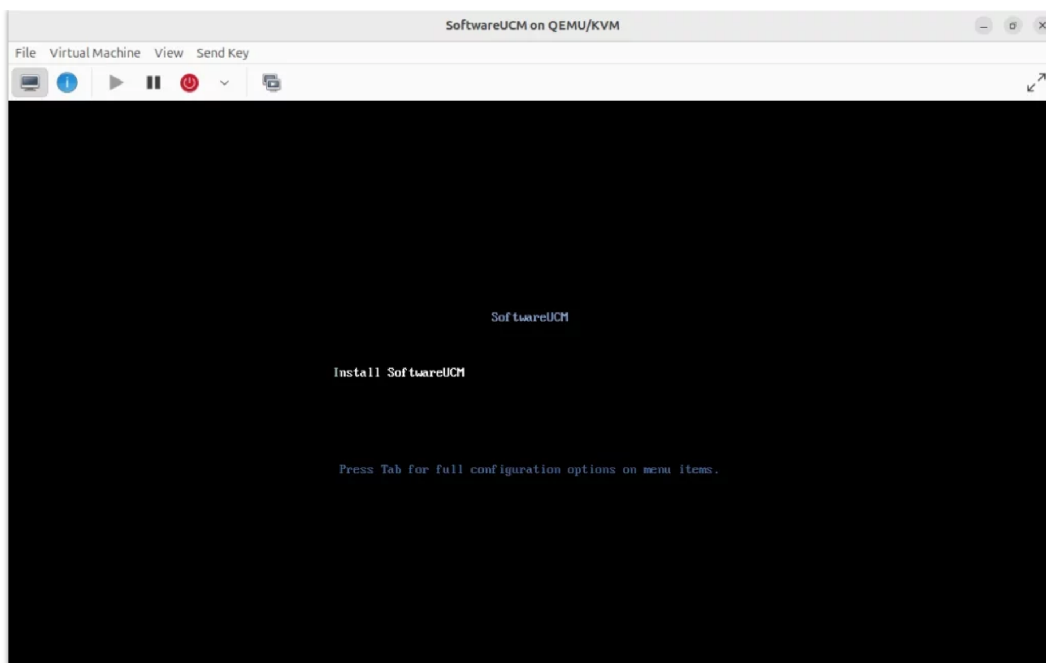


3. Click "Finish" to save the configuration.

Installing and Configuring SoftwareUCM

To install and configure SoftwareUCM, please refer to the steps below:

1. Press Enter and wait until the installation process is not running.



SoftwareUCM Installation Menu

2. Read and accept the license agreement to proceed. Press **Enter** or **PageDown** to scroll down.

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"Licensed Product" means the Software and Documentation.

"License Term" means the term of the license for a specific Licensed Product, as set forth on an Order Form and as further described in Section 6.

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"Production License" means the right to use the Licensed Products in accordance with Section 3.2.

"Software" means the object code version of the Grandstream Software made available to You, as specified in an Order Form, and any Updates and Upgrades that may be made available to You by Grandstream in its discretion, under this Agreement.

"Support and Maintenance Services" refer to the technical support and maintenance services provided by Grandstream, which may include Updates and Upgrades are as follows:
--Pure--(14%)
--Secondary/Full--2:shell 3:log 4:storage-log 5:program-log
Switch task: 0:0-task 1:help: F1
  
```

3. Enter "y" and press **Enter** to accept the license agreement.

15.3. Export. You will comply fully with all relevant export laws and regulations of the United States of America and any other country ("Export Laws") and will not use any of the Licensed Products. You certify that You are not on any of the relevant U.S. Government Lists of prohibited persons, including but not limited to the Treasury Department's List of Specially Designated Nationals, and the Commerce Department's List of Denied Persons or Entity List. You further certify that You shall not export, re-export, ship, transfer or otherwise use the Licensed Products in any country subject to an embargo or other sanction by the United States of America and that You shall not use the Licensed Products for any purpose prohibited by the Export Laws, including, but not limited to, nuclear, chemical, missile or biological weapons related end uses.

15.4. Publicity. You agree that Grandstream may publish a brief description highlighting your deployment of the Licensed Products and identify You as a Licensee Products evaluator (if applicable) on any of Grandstream's websites, press releases, and/or other marketing materials.

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15.6. Choice Of Law and Disputes; Injunctive Relief. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Massachusetts, as if performed wholly within the state and without giving effect to the principles of conflict of law rules of any jurisdiction or the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded. Any legal action or proceeding arising under this Agreement will be brought exclusively in the federal or state courts located in Massachusetts and the parties hereby consent to personal jurisdiction and venue therein. If a dispute arises between You and Grandstream, and either You or Grandstream files suit in any court of competent jurisdiction to enforce rights under this Agreement, then the prevailing party shall be entitled to recover from the other party all costs of such action or suit, including, but not limited to, investigative costs, court costs and reasonable attorneys' fees (including expenses incurred to collect those expenses). You acknowledge and agree that any use of the Licensed Products in breach of this Agreement is likely to cause Grandstream irreparable harm for which damages will not be an adequate remedy, and that Grandstream will, therefore, be entitled to temporary, preliminary, and permanent injunctive relief in any court of competent jurisdiction to restrain such breach, without prejudice to any other right or remedy.

15.7. General. All notices required or permitted under this Agreement will be in writing and delivered by email, and in each instance will be deemed given upon receipt. Please note that at all times You are responsible for providing Grandstream with Your most current e-mail address. In the event that the last e-mail address that You have provided Grandstream is not valid, or for any reason Grandstream is not capable of delivering notice to You, Grandstream's dispatch of an e-mail containing such notice will nonetheless constitute effective notice. You may not assign, delegate or transfer this Agreement, in whole or in part, by agreement, operation of law or otherwise. Any attempt to assign this Agreement other than as permitted herein will be null and void. Grandstream may assign this Agreement freely. Subject to the foregoing, this Agreement will bind and inure to the benefit of the parties' permitted successors and assigns. This Agreement constitutes the complete and exclusive understanding and agreement between the parties and supersedes any and all prior or contemporaneous agreements, communications and understandings, written or oral, relating to the subject matter hereof. Any waiver, modification or amendment of any provision of this Agreement will be effective only if in writing and signed by duly authorized representatives of both parties.

16. QUESTIONS OR ADDITIONAL INFORMATION. If you have questions regarding this Agreement, or wish to obtain additional information, please contact us at: Grandstream Networks Inc., 126 Brookline Ave, 3rd Floor, Boston, MA 02215 USA and/or <https://helpdesk.grandstream.com/>.

Do you accept the license agreement?(y/n) **y**

16:28:38 Not asking for UNC because of an automated install
 16:28:38 Not asking for UNC because text mode was explicitly asked for in kickstart
 Starting automated install.Saving storage configuration...

4. If you have multiple disks, you can choose to install the system on one of them. However, you must set that disk as the first boot device. Tip: In the virtual machine, the displayed disk order represents the current disk boot order.

15.5. Feedback. If You send or transmit any communications, comments, questions, suggestions, or related materials to Grandstream, whether by letter, e-mail, telephone, or otherwise ("Feedback"), suggesting or recommending changes to the Licensed Products, including, without limitation, new features or functionality relating thereto, all such Feedback is, and will be exclusively owned by Grandstream. You hereby assign all right, title, and interest in, and Grandstream is free to use, without any attribution or compensation to You, any ideas, know-how, concepts, techniques, and all applicable intellectual property rights relating to the Feedback, whether or not patentable or copyrightable, for any purpose whatsoever, including but not limited to, developing, manufacturing, having manufactured, licensing, marketing, and selling, directly or indirectly, products and services using such Feedback. You agree and understand that Grandstream is not obligated to use, display, reproduce, or distribute any such ideas, know-how, concepts, or techniques contained in the Feedback, and You have no right to compel such use, display, reproduction, or distribution.

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15.7. General. All notices required or permitted under this Agreement will be in writing and delivered by email, and in each instance will be deemed given upon receipt. Please note that at all times You are responsible for providing Grandstream with Your most current e-mail address. In the event that the last e-mail address that You have provided Grandstream is not valid, or for any reason Grandstream is not capable of delivering notice to You, Grandstream's dispatch of an e-mail containing such notice will nonetheless constitute effective notice. You may not assign, delegate or transfer this Agreement, in whole or in part, by agreement, operation of law or otherwise. Any attempt to assign this Agreement other than as permitted herein will be null and void. Grandstream may assign this Agreement freely. Subject to the foregoing, this Agreement will bind and inure to the benefit of the parties' permitted successors and assigns. This Agreement constitutes the complete and exclusive understanding and agreement between the parties and supersedes any and all prior or contemporaneous agreements, communications and understandings, written or oral, relating to the subject matter hereof. Any waiver, modification or amendment of any provision of this Agreement will be effective only if in writing and signed by duly authorized representatives of both parties.

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Do you accept the license agreement?(y/n) **y**

Installation Destination:
 1. vda (25.8GB)
 2. vdb (28.8GB)

anaconda-l1:main= Z:shell 3:log 4:storage-log 5:program-log **Switch tab: Alt+Tab | Help: F1**

5. Press Enter then wait for the installation process to finish.

```

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 iputils.x86_64 (200/351)
installing libkcapi.x86_64 (201/351)
installing libkcapi-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 libxerto.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

Configure a Static IP

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").

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

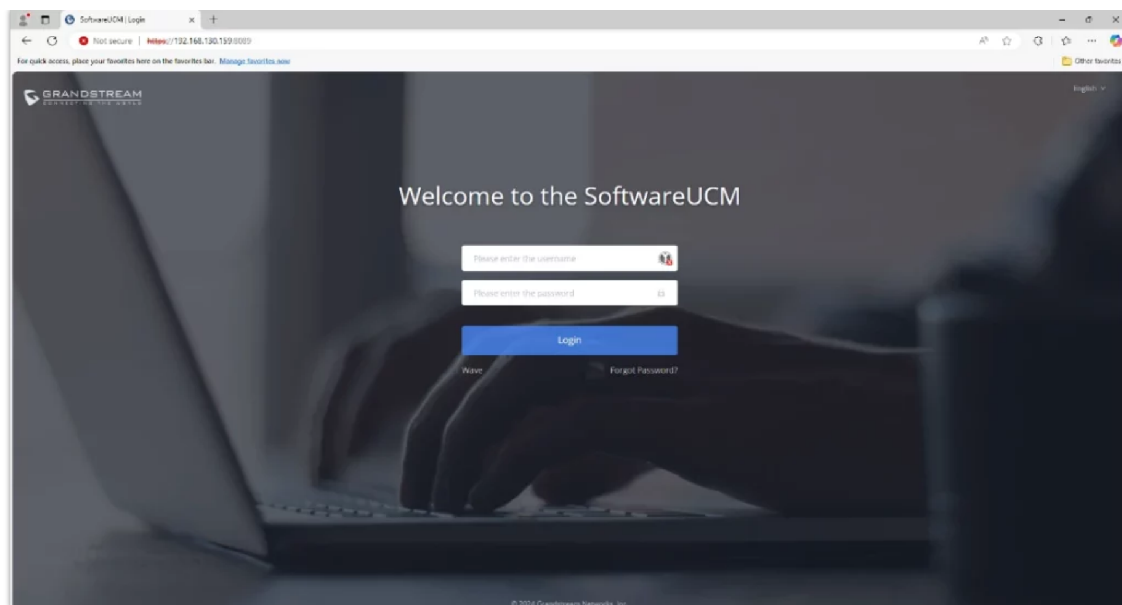
SoftwareUCM Information:
  Instance Name: ucm1
  Status: running
  Version: 1.0.27.15
  Admin Portal: https://192.168.130.159:8089
  Initial Username: admin
  Initial Password: SoftUCM@admin

```

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
