Secure Mobile Access 100 10.2

Getting Started Guide

for KVM

SONICWALL®

Contents

Introduction

This Getting Started Guide describes how to install SonicWall SMA 100 for KVM on Linux with KVM and QMU environments and provides basic configuration information.

SonicWall takes the challenge of the rapid pace of cloud transformation and extends the security of the private cloud to public clouds with the SonicWall Secure Mobile Access 100 series. The SMA 100 for KVM provides you with economy-of-scale benefits of virtualization. This provides all the security advantages of a physical Secure Mobile Access 100 appliance with the operational and economic benefits of virtualization, including system scalability and agility, speed of system provisioning, simple management, and cost reduction.

The SMA 100 for KVM provides the following benefits:

- **Scalability and Redundancy**

    - Multiple virtual machines can be deployed as a single system, enabling specialization, scalability, and redundancy.

- **Operational Ease**

    - You can virtualize your entire environment and deploy multiple machines within a single server or across multiple servers.

- **Product Versatility**

    - SMA 100 for KVM is compatible with other SonicWall platforms either as a stand-alone (All-in-One) unit, control center, or as a remote analyzer.

- **Security**

    - SMA 100 for KVM provides an optimized, non-tamperable software and hardware architecture.

Before You Begin

Topics:

- Supported Platforms
- KVM/QEMU
- Hardware-Assisted Full Virtualization
- Paravirtualization
- Creating a MySonicWall Account

Supported Platforms

Release Version	Supported Linux / Kernel / KVM / VMM Versions
SMA 100 for KVM	Red Hat 7.9 (Primary)
	• Kernel: 3.10.0-1160.2.1.el7.x86_64
	• KVM version: 2.11.1
	• Virtual machine manager: 1.5.1
	Ubuntu 20.04
	• Kernel: 5.15.0-100-generic
	• KVM version: 4.2.1
	• Virtual machine manager: 2.2.1
	Proxmox VE 6.4

KVM/QEMU

KVM, or Kernel-based Virtual Machine, is a software module that allows Linux to operate as a hypervisor. QEMU, or Quick Emulator, allows guest operating systems to run on the KVM hypervisor and supports virtualization

where applications that execute in the user space can achieve near-native speeds through full virtualization or paravirtualization.

Hardware-Assisted Full Virtualization

KVM features hardware-assisted full virtualization when the underlying x86 processor hardware supports Intel VT-x or AMD-V virtualization extensions. This allows the SMA appliance to setup a virtual context and execute instructions directly on the processor's hardware.

For an overview of virtualization techniques, see:

https://www.unixarena.com/2017/12/para-virtualization-full-virtualization-hardware-assisted-virtualization.html/

Paravirtualization

In hardware-assisted full virtualization, guest operating systems issue calls directly to the hardware. In paravirtualization, guest operating systems communicate with the hypervisor (KVM/QEMU) with an API (Virtio).

This API defines paravirtual devices including Ethernet cards, disk I/O subsytems, and VGA interfaces with SPICE

drivers.

For an overview of VirtIO, see: https://www.cs.cmu.edu/~412/lectures/Virtio_2015-10-14.pdf

Creating a MySonicWall Account

A MySonicWall account is required for product registration. If you already have an account, log in and continue to the Registration section.

To create a MySonicWall account:

1. In your browser, navigate to www.MySonicWall.com.

2. In the login screen, click the **Sign Up** link.

3. Complete the account information, including email and password.

   ⓘ | **NOTE:** Your password should be at least eight characters, but no more than 30 characters.

4. Enable two-factor authentication if desired.

5. If you enabled two-factor authentication, select one of the following authentication methods:

   • **Email (one-time passcode)** where an email with a one-time passcode is sent each time you log into your MySonicWall account.

   • **Microsoft/Google Authentication App** where you use a Microsoft or Google authenticator application to scan the code provided. If you are unable to scan the code, you can click on a link for a secret code.

6. Click **CONTINUE** to go to the **Company** page.

7. Complete the company information and click **CONTINUE**.

8. On the **Your Info** page, select whether you want to receive security renewal emails.

9. Identify whether you are interested in beta testing new products.

10. Click **CONTINUE** to go to the **Extras** page.

11. Select whether you want to add additional contacts to be notified for contract renewals.

12. If you opted for additional contacts, input the information and click **ADD CONTACT**.

13. Click **DONE**.

14. Check your email for a verification code and enter it in the **Verification Code*** field. If you did not receive a code, contact Customer Support by clicking the link.

15. Click **DONE**. You are returned to the login window so you can login into MySonicWall with your new account.

ⓘ | **NOTE:** MySonicWall registration information is not sold or shared with any other company.

Installing the SMA 100 for KVM Virtual Appliance

Topics:

- Preparing the Linux Server System
- Obtaining the SMA 100 for KVM Image
- Installing SMA 100 for KVM on Proxmox (PVE)
- Installing SMA 100 for KVM on a Linux System using the Virtual Machine Manager

Preparing the Linux Server System

Before installing SonicWall SMA on a Linux server, prepare the server:

- Install Red Hat or Ubuntu on the server.
- Install KVM and QEMU on server.
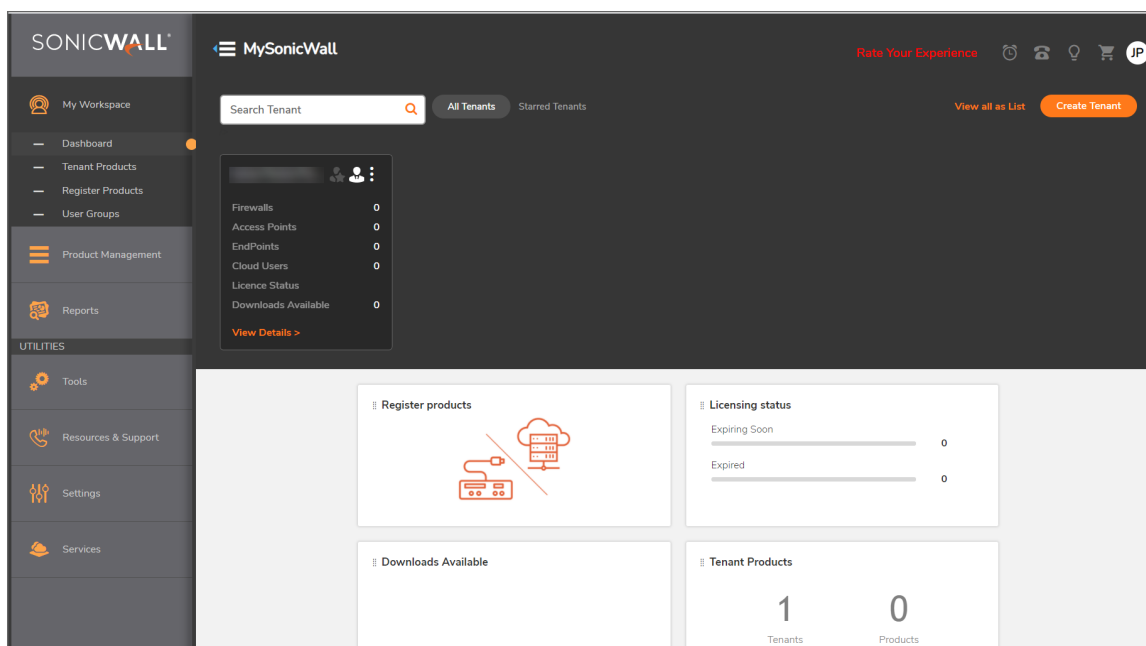- Connect the Linux Server system to an external switch.

Obtaining the SMA 100 for KVM Image

After purchasing SMA 100 for KVM, you will receive an email with a **Serial Number** and **Authentication Code**. Log into MySonicWall.com (refer to Creating a MySonicWall Account) and go to the **Download Center.**

To download the image:

1. Login to MySonicWall.com and then navigate to **My WorkSpace > Downloads Available**.

2. Click **View All** and the list of available downloads comes up.

3. Identify the SMA 100 for KVM product and click the title; when the details appear, click on the download symbol to download the image file.

4. Keep the **Serial Number** and **Authentication Code** from the purchase confirmation email to complete product registration after the virtual appliance is installed.

Downloading the SMA 100 for KVM Virtual Appliance Software

This section details the process for downloading the SMA 100 for KVM software from MySonicWall. After purchasing SMA 100 for KVM, you will receive an email with a serial number and Authentication Code. Log in to MySonicWall, go to **My Downloads**, and complete the steps that follow. If you do not have a MySonicWall account, you can easily create one. Refer to Creating a MySonicWall Account for more information.

To complete the download process:

1. Navigate to www.MySonicWall.com.
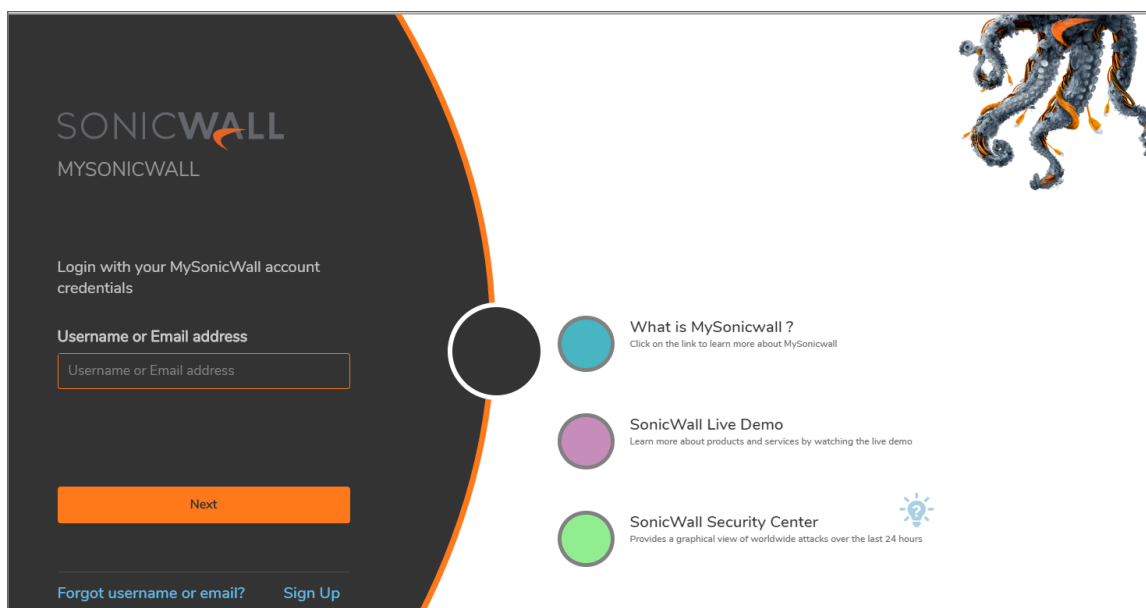
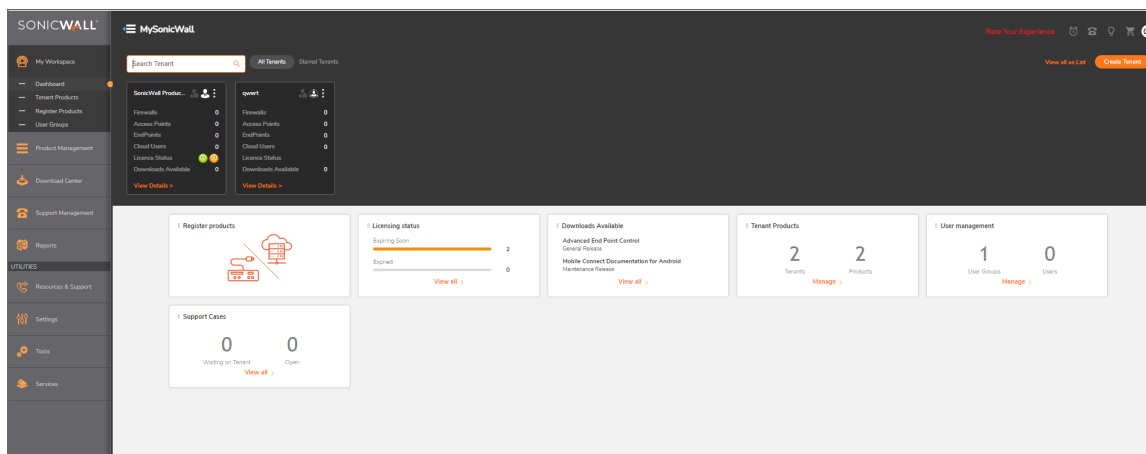2. Enter your **Username or Email** and **Password** in the required fields, then click **Login**. The MySonicWall page displays the following screen:

3. Under **Resources & Support** click **Download Center** in the left-pane menu.
   The **Download Center** page is displayed.

4. From the button bar, narrow selections by choosing from **Recent Releases**, **Select a Product**, **Language**, **Firmware or Documentation**, and the **Version** you would like to download.

5. Click the **Select a Product** drop-down list, go to **SMA**, and select **SMA 100 for KVM Virtual Appliance Base Firmware**.

6. In the **Available Software** list, click **SMA 100 for KVM Virtual Appliance Base Firmware**.

7. Save the SMA 100 for KVM Virtual Appliance software image to your computer.

Installing SMA 100 for KVM on Proxmox (PVE)

To install SMA 100 for KVM on Proxmox:

1. Download the SMA 100 for KVM image file to any local folder.

```
root@proxmox:~# ls
sw_sma_kvm_eng_10.2          .qcow2
root@proxmox:~# []
```

2. Using the Proxmox **Create: Virtual Machine** page, click the **OS** tab for an empty virtual machine. Select the **Do not use any media** option.

3. After the virtual machine is created, check and remember the virtual machine ID. For example, this newly created vmID is 101.

4. Go to the host console and run the `qm importdisk <vmid> yourimage.qcow2 namestoragepool` command. Change the `vmid,yourimage.qcow2,namesstoragepool` portion based on your environment.

```
root@proxmox:~# ls
sw_sma_kvm_eng_10.2                    .qcow2
root@proxmox:~# qm importdisk 101 sw_sma_kvm_eng_10.2                  .qcow2 local-lvm
```
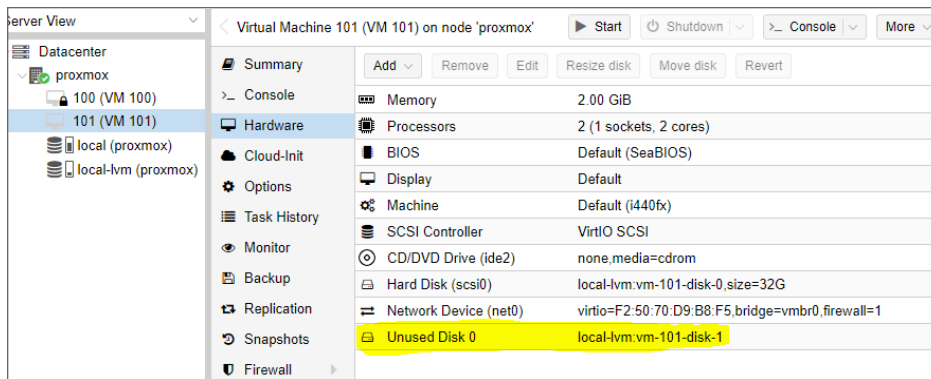
5. Verify the success message and locate the disk in the hardware dashboard.

```
transferred: 19958713024 bytes remaining: 1516123456 bytes total: 21474836480 bytes progression: 92.94 %
transferred: 20173461389 bytes remaining: 1301375091 bytes total: 21474836480 bytes progression: 93.94 %
transferred: 20390357237 bytes remaining: 1084479243 bytes total: 21474836480 bytes progression: 94.95 %
transferred: 20605105602 bytes remaining: 869730878 bytes total: 21474836480 bytes progression: 95.95 %
transferred: 20828443901 bytes remaining: 646392579 bytes total: 21474836480 bytes progression: 96.99 %
transferred: 21060372135 bytes remaining: 414464345 bytes total: 21474836480 bytes progression: 98.07 %
transferred: 21281562951 bytes remaining: 193273529 bytes total: 21474836480 bytes progression: 99.10 %
transferred: 21474836480 bytes remaining: 0 bytes total: 21474836480 bytes progression: 100.00 %
transferred: 21474836480 bytes remaining: 0 bytes total: 21474836480 bytes progression: 100.00 %
Successfully imported disk as 'unused0:local-lvm:vm-101-disk-1'
root@proxmox:~#
```

Server View	Virtual Machine 101 (VM 101) on node 'proxmox'	▶ Start	⏻ Shutdown ∨	>_ Console ∨	More ∨
🗎 Datacenter	📋 Summary	Add ∨	Remove	Edit	Resize disk	Move disk	Revert
✓ 📦 proxmox	>_ Console				
🔒 100 (VM 100)	🖥 Hardware	🖴 Memory	2.00 GiB		
101 (VM 101)	☁ Cloud-Init	🖥 Processors	2 (1 sockets, 2 cores)		
📦 local (proxmox)	⚙ Options	▮ BIOS	Default (SeaBIOS)		
📦 local-lvm (proxmox)	☰ Task History	🖥 Display	Default		
	👁 Monitor	⚙ Machine	Default (i440fx)		
	🖫 Backup	🖴 SCSI Controller	VirtIO SCSI		
	⇄ Replication	◉ CD/DVD Drive (ide2)	none,media=cdrom		
	🕐 Snapshots	🖴 Hard Disk (scsi0)	local-lvm:vm-101-disk-0,size=32G		
	🛡 Firewall	⇄ Network Device (net0)	virtio=F2:50:70:D9:B8:F5,bridge=vmbr0,firewall=1		
		🖴 Unused Disk 0	local-lvm:vm-101-disk-1		

The **Unused Disk 0** is the imported SMA 100 for KVM image.

6. Double-click the **Unused Disk 0** image. The **Add: Unused Disk** window displays.
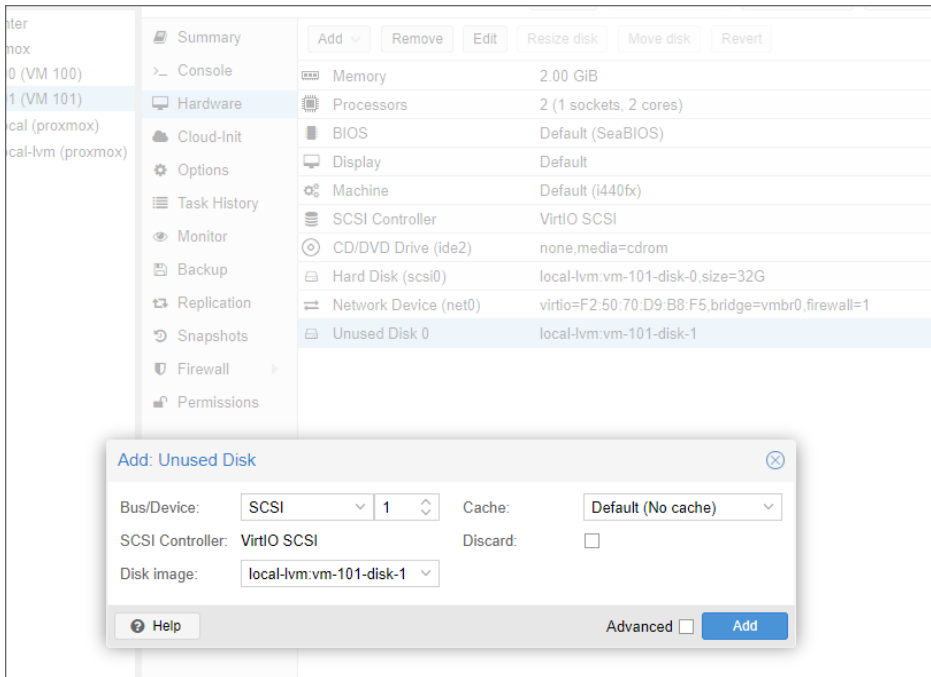
7. Click **Add**. The new **Hard Disk (scsi1)** appears. You can remove the original **Hard Disk (scsi 0)**.
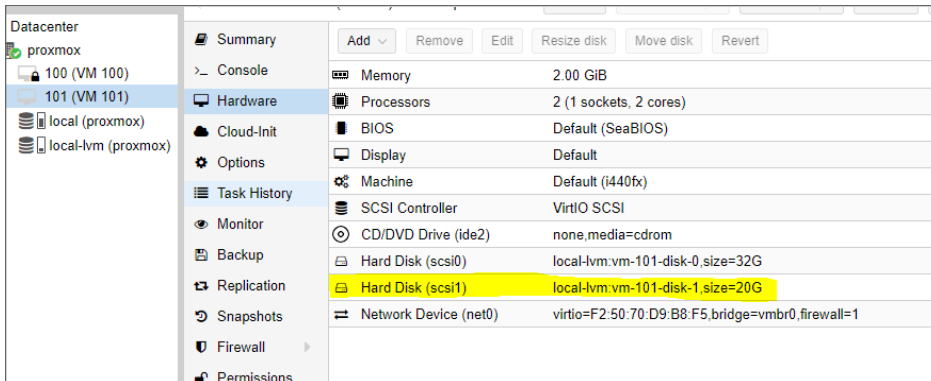
8. Start the Virtual Machine and set up the IP data to get in to SMA.

```
System Information
Model:              SMA 500v for KVM
Serial Number:      Unknown
Version:            10.2.
CPU (Utilization):  Common KVM processor x 4 cores (7%)
Total Memory:       1.8 GB RAM (31%), 32GB Disk
System Time:
Up Time:            0 Days 00:00:29
X0 IP Address:      192.168.200.1
X0 Subnet mask:     255.255.255.0
Default Gateway:    192.168.200.2 (X0)
Primary DNS:        n/a
Secondary DNS:      n/a
Hostname:           sslvpn

Main Menu
1. Setup Wizard
2. Reboot
3. Restart SSL VPN Services
4. Logout
5. Save TSR to Flash
6. Display EULA

Press <Ctrl-c> at any time to cancel changes and logout.
Select a number (1-6):
```


Warning

Specify an outbound SMTP server so log messages and one-time passwords can be sent.
Enable Web Application Firewall Protection.
Register your SonicWall appliance.

SYSTEM INFORMATION

Model	SMA 500v for KVM
Serial Number	Unknown
Authentication Code	Unknown
Firmware Version	10.2.
CPU (Utilization)	Westmere E56xx/L56xx/X56xx (IBRS update) x 2 cores (40%)
Total Memory	3.7 GB RAM (22%), 20GB Disk
System Time	
Up Time	0 Days 00:06:30
Active Users	1 User(s)
Anonymous Sessions	0

LICENSES & REGISTRATION

User License	Not Licensed
Analyzer	Not Licensed
Web Application Firewall	Not Licensed
End Point Control	Licensed
Geo IP & Botnet Filter	Not Licensed
Capture Advanced Threat Protection	Not Licensed
CSC Management and Reporting	Not Licensed

Your SonicWall appliance is not registered.
Register from System / Licenses by signing in with your mysonicwall account.

LATEST ALERTS   Show Log Messages

DATE/TIME	USER	MESSAGE
No Data		
Total: 0 item(s)		

NETWORK INTERFACES   Configure Network Settings

	NAME	IP ADDRESS	IPV6 ADDRESS	LINK STATUS
✓	X0	10.5.106.113	fe80::5054:ff:fe2c:9cf4	Connected
✓	X1	10.5.111.111	fe80::5054:ff:fec3:fe4c	Connected

Installing SMA 100 for KVM on a Linux System using the Virtual Machine Manager

The following are the steps required to create a Linux From Scratch (LFS)-based virtual machine for SMA 100 for KVM using the Virtual Machine Manager (VMM).

To setup the QEMU/KVM environment:

1. Install or setup a KVM/QEMU environment on Ubuntu, see https://vitux.com/how-to-install-kvm-to-create-and-manage-virtual-machines-in-ubuntu/).

2. After the KVM/QEMU environment is installed, a **network bridge** is necessary for the virtual machine network to access.

3. Run the Virtual Machine Manager (`virt-manager`) from your terminal and select **Create a new virtual machine**.

4. On the **New VM** dialog, select "**Import existing disk image**."
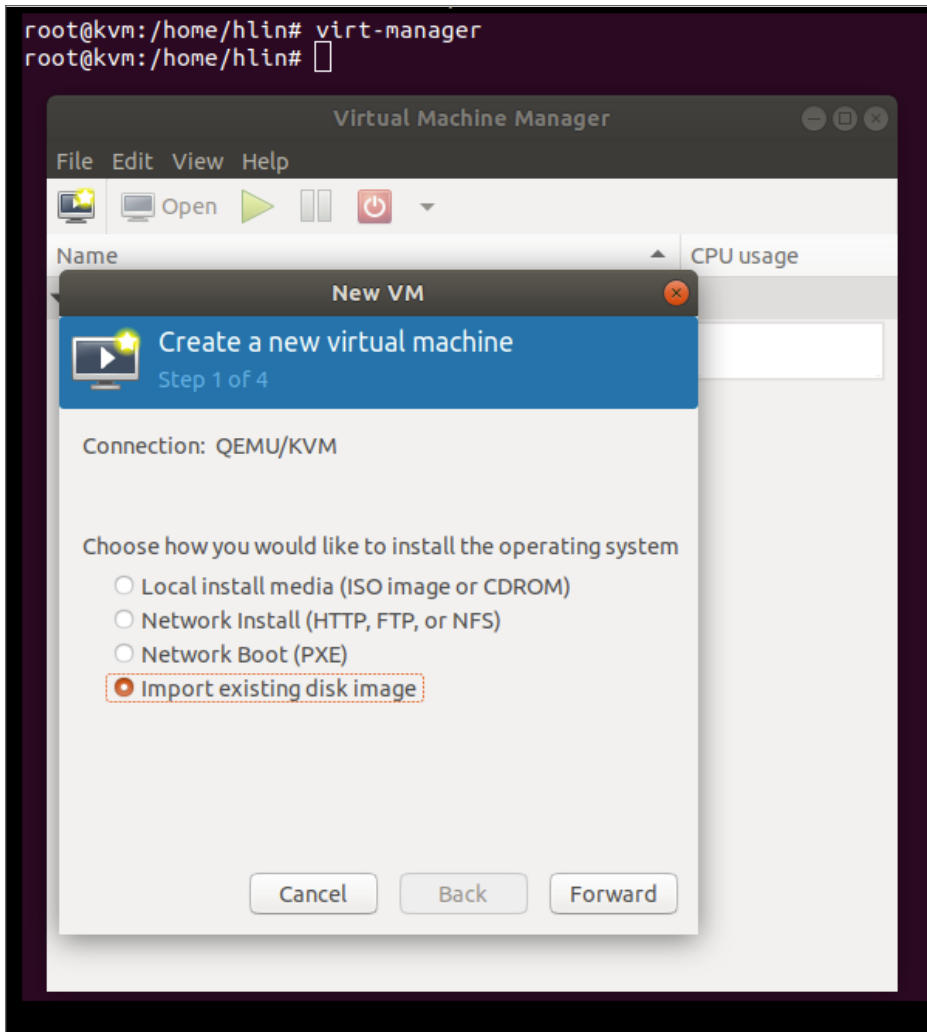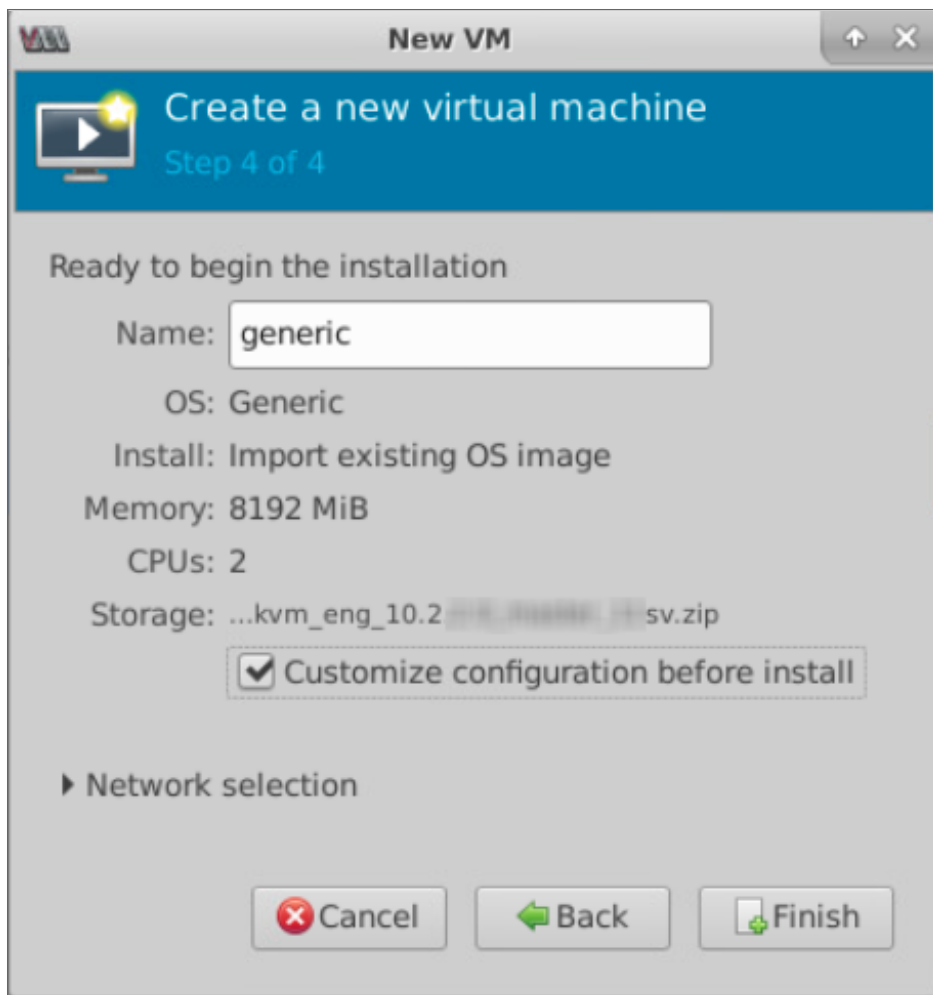
5. Click **Forward**.
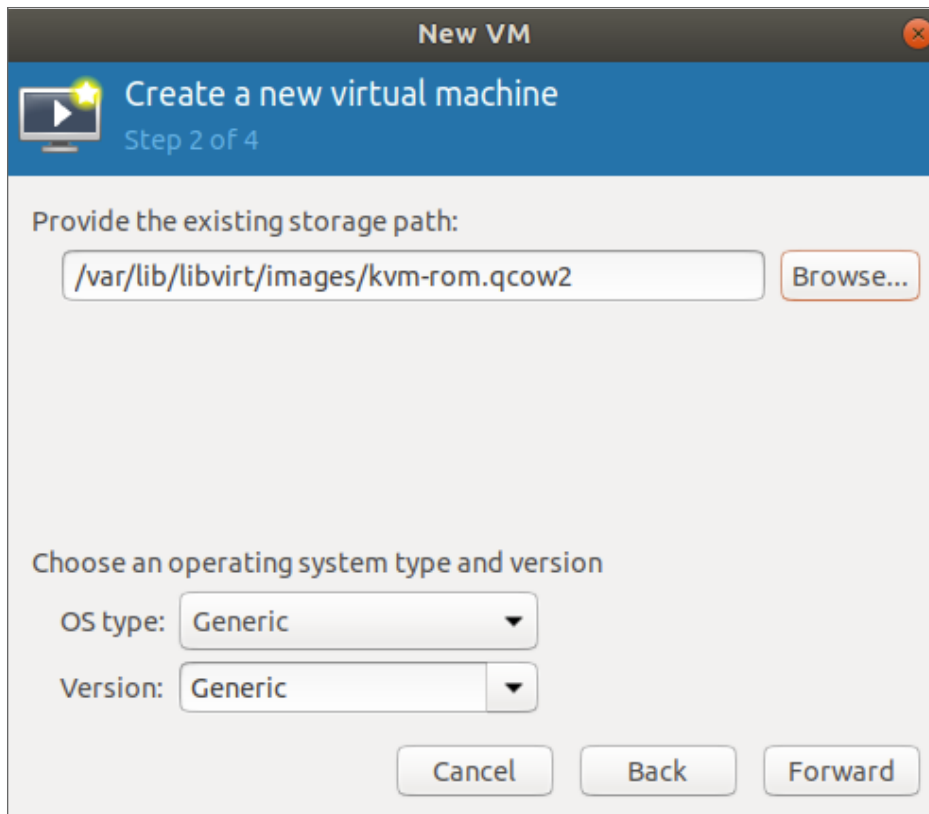
6. In the **Provide the existing storage path** text window, browse to and select the image file path where your *qcow2* file is located.

7. Upload the *qcow2* file by clicking **Forward**.

8. In the fourth step, select **Customize configuration before install** for additional configuration settings such as CPU, memory, network, and so on.

New VM

Create a new virtual machine
Step 4 of 4

Ready to begin the installation

Name: generic

OS: Generic

Install: Import existing OS image

Memory: 8192 MiB

CPUs: 2

Storage: ...kvm_eng_10.2 [blurred] sv.zip

☑ Customize configuration before install

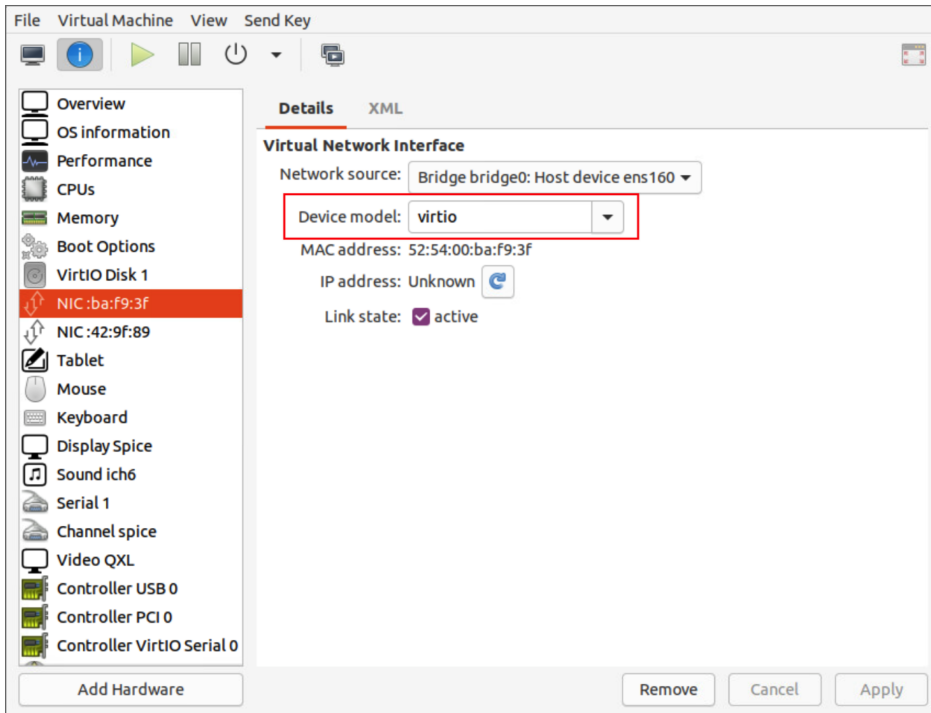▶ Network selection

[✗ Cancel] [⬅ Back] [Finish]

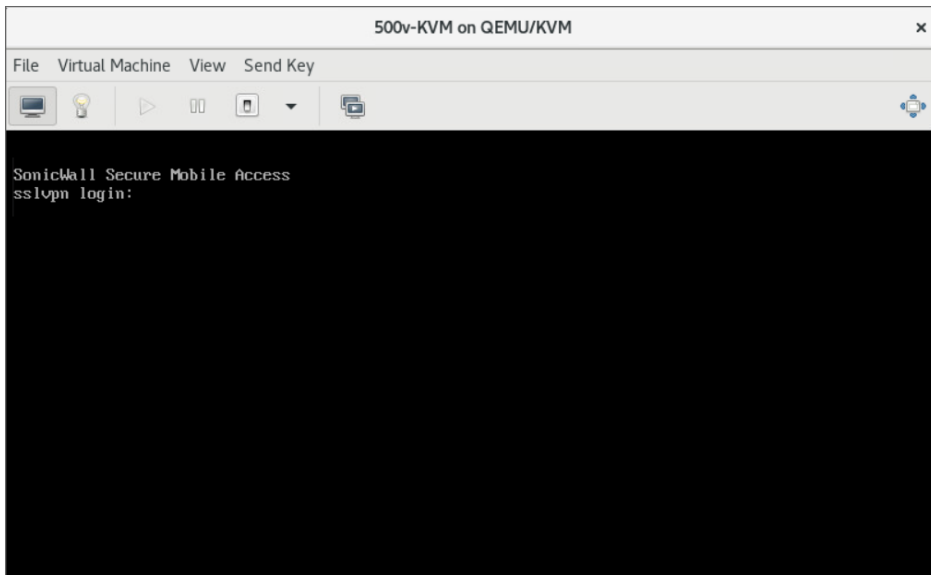9. From **Customize configuration before install**, click to the **Overview** details. You can customize as necessary.
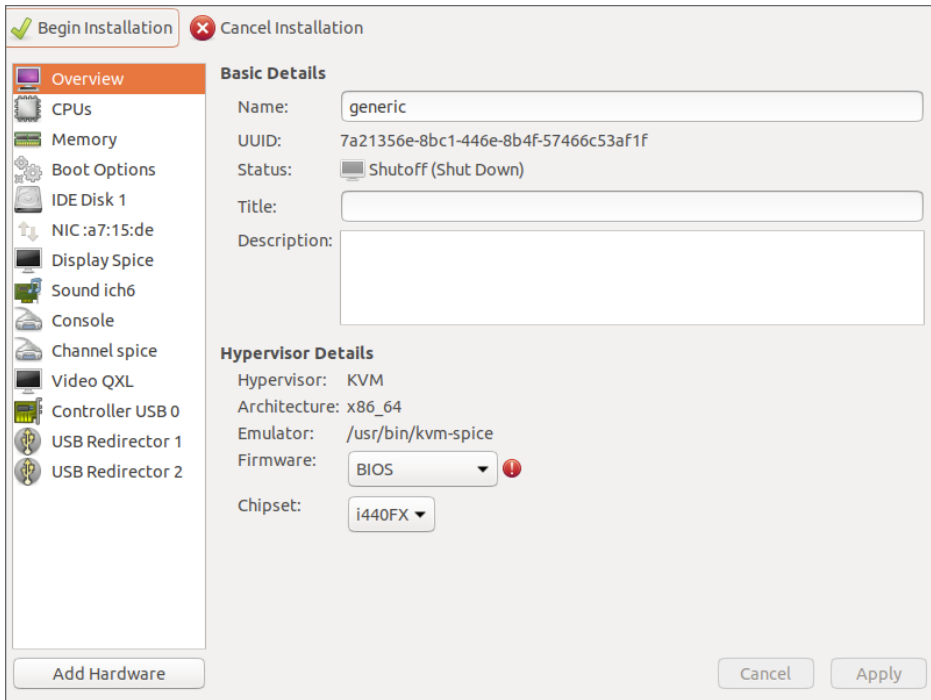
10. Click **Apply** on each view when you are satisfied with your configuration.
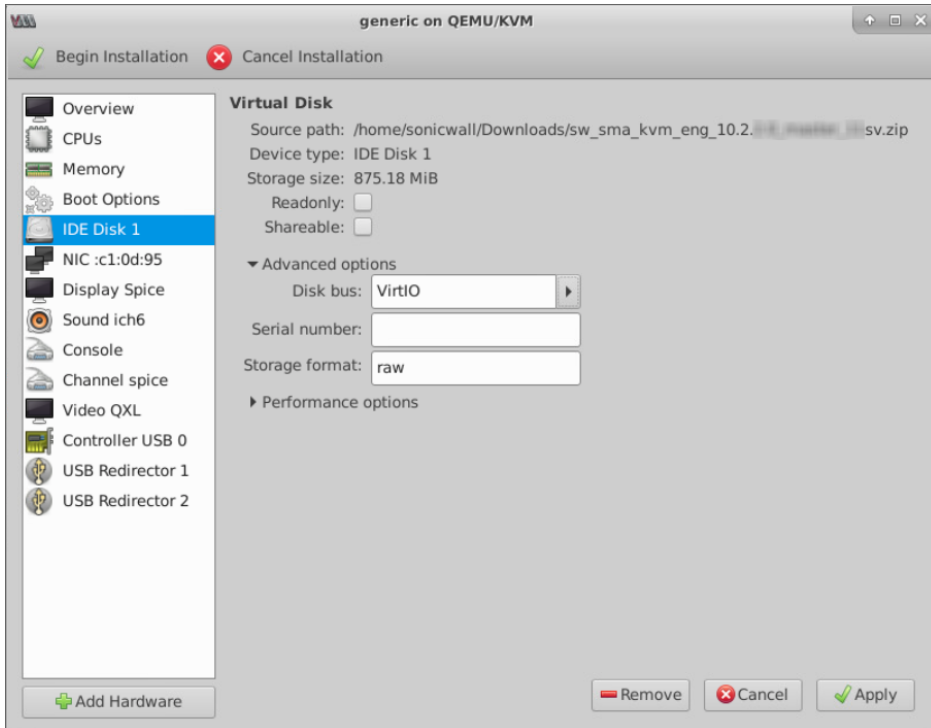
11. After you have selected all the necessary options, click **Apply**.

12. Click **Begin Installation** to deploy the virtual machine.

13. After finishing the installation, you can login as admin and setup the IP address to access the appliance management page.

Configuring the SMA 100 for KVM Virtual Appliance

This section describes how to power on and configure basic settings on the SMA 100 for KVM Virtual Appliance, including virtual hardware settings and networking settings.

Topics:

- Connecting to the Command Line Interface
- Using the Command Line Interface

Connecting to the Command Line Interface

The Command Line Interface (CLI) is a text-only mechanism for interacting with the SMA 100 for KVM virtual appliance by typing commands to perform specific tasks. The CLI can be launched over SSH.

To connect to the SMA 100 for KVM over SSH:

1. Display the **Overview** page as described in Viewing the SMA 100 for KVM Settings.

2. Locate the **Public IP address**.

3. In an SSH application, type in the command using your SMA 100 for KVM private key to authenticate:

   - `ssh -i SMAPrivateKey.key admin@<SMA 100 for KVM Public IP>`

   For example, `ssh -i SMAPrivateKey.key admin@13.64.78.65`

   ⓘ | **NOTE:** For management, log in using the ***admin*** account.

4. If you see a warning, type yes to proceed with the login.

   ```
   The authenticity of host '40.78.97.223 (40.78.97.223)' can't be established.
   ECDSA key fingerprint is                                                    .
   Are you sure you want to continue connecting (yes/no)? yes
   ```

   Continue to Using the Command Line Interface.

Using the Command Line Interface

The Command Line Interface (CLI) is a text-only mechanism for interacting with a computer operating system or software by typing commands to perform specific tasks. It is a critical part of the deployment of the SMA 100 for KVM Virtual Appliance, where basic networking needs to be configured from the console.

While the physical SMA 100 for KVM Virtual Appliance has a default IP address and network configuration that requires a client's network settings to be reconfigured to connect, as the network settings in the VMware virtual environment might conflict with the SonicWall defaults. The CLI utility remedies this by allowing basic configuration of the network settings when deploying the SMA 100 for KVM Virtual Appliance.

After the SMA 100 for KVM Virtual Appliance firmware has fully booted, a login prompt is displayed.

To access the CLI, login as admin. The password is the same as the password for the "admin" account configured on the appliance. The default is password.

```
sslvpn login: admin
Password: <password>
```

If an incorrect password is entered, the login prompt is displayed again. If the correct password is entered, the CLI is launched.

ⓘ | **NOTE:** The User input used in the examples highlighted in red indicates text entered by the user, there is no coloring of text done on the actual CLI.

Basic system information and network settings are displayed along with the main menu.

The main menu has six selections:

- Setup Wizard
- Reboot
- Restart SSL VPN Services
- Logout
- Save TSR to Flash
- Display EULA

Setup Wizard

This option launches a simple wizard to change the basic network settings, starting with the X0 IP Address, X0 subnet mask, default gateway, primary and secondary DNS, and the hostname. The following CLI output illustrates an example where each field is changed:

```
X0 IP Address (default 192.168.200.1): 192.168.200.201
X0 Subnet Mask (default 255.255.255.0): 255.255.0.0
Default Gateway (default 192.168.200.2): 192.168.200.1
Primary DNS: 10.50.128.52
Secondary DNS (optional, enter "none" to disable): 4.2.2.2
Hostname (default sslvpn): sra4200

New Network Settings:
X0 IP Address:          192.168.200.201
X0 Subnet mask:         255.255.0.0
Default Gateway:        192.168.200.1
Primary DNS:            10.50.128.52
Secondary DNS:          4.2.2.2
Hostname:               sra

Would you like to save these changes (y/n)?
```

If a field is not filled out, the prior value is retained, allowing you to change only a single field. After each field has been prompted, the new network settings are shown and a confirmation message is given for the user to review and verify the changes before applying them. The following shows the result when you save the changes:

```
Would you like to save these changes (y/n)? y
Saving changes...please wait....
Changes saved!
Press <Enter> to continue...
```

After saving the changes, press **Enter** to return to the original display of the **System Information and Network Settings**. Verify that the changes have taken effect.

If no changes are saved, a message displays. Pressing **Enter** returns to the initial display of the **System Information and Network settings**.

ⓘ | **NOTE:** When applying settings that change the IP address, there could be a delay of up to five seconds as the interface settings are updated.

Reboot

Selecting this option displays a confirmation prompt and then reboots:

```
Reboot
Are you sure you want to reboot (y/n)?
```

Restart SSL VPN Services

This option displays a confirmation prompt, and then restarts the Web server and the related SSL-VPN daemon services. This command is equivalent to issuing the Easy Access Ctrl restart command.

```
Restart SSL VPN Services
Are you sure you want to restart the SSL VPN services (y/n)? y
Restarting SSL VPN services...please wait.
Stopping API Server:                                  [  OK  ]
Stopping System Manager:                              [  OK  ]
Stopping Network Daemon:                              [  OK  ]
Stopping WireGuard Daemon:                            [  OK  ]
Stopping Web Server:                                  [  OK  ]
Stopping FTP Daemon:                                  [  OK  ]
Stopping Statistics Daemon:                           [  OK  ]
Stopping Root Helper:                                 [  OK  ]
Stopping DHCP Client Daemon:                          [  OK  ]
Stopping NX logging Daemon:                           [  OK  ]
Cleaning Temporary Files...........
Starting API Server:                                  [  OK  ]
Starting System Manager:                              [  OK  ]
Starting Network Daemon:     * sm_setLANSubnet(x86)
--> succeeded.
```

Logout

The logout option ends the CLI session and returns to the login prompt.

Save TSR to Flash

Saves the Technical Support Report (TSR) to flash memory on the SMA 100 for KVM Virtual Appliance.

Display EULA

Displays the End User License Agreement (EULA) associated with the SMA 100 for KVM Virtual Appliance.

Licensing and Registering Your Appliance

This section contains information about licensing and registering yourSMA 100 for KVM Virtual Appliance.

You must purchase a license and register your SMA 100 for KVM before first use. Registration is performed using the management interface. After the registration is completed, the SMA 100 for KVM is licensed and ready to use. For the 30-Day Trial Virtual Appliance registration process, refer to Registering the 30-day Trial Virtual Appliance.

ⓘ **NOTE:** The SMA 100 for KVM shares the same SKU and license structure as the SMA 100 for KVM. After you have purchased an SMA 100 for KVM Virtual Appliance from MySonicWall, you can use the serial number and authorization code you get to register the SMA 100 for KVM or for SMA 100 for KVM. However, you cannot use the same serial number and authorization code to register both.

SMA 100 for KVM provides user-based licensing. By default, the virtual appliance comes with a 5-user license. Extra licenses can be added in 5, 10, and 25 user denominations, up to a maximum that allows for 50 concurrent user sessions.

Licensing is controlled by SonicWall's license manager service, and customers can add licenses through their MySonicWall accounts. Unregistered units support the default license allotment for their model, but the unit must be registered in order to activate additional licensing from MySonicWall.

License status is displayed in the SMA 100 for KVM Virtual Appliance management interface, on the Licenses & Registration section of the **System > Status** page.

Communication with the SonicWall Licensing Manager is necessary while using the SMA 100 for KVM Virtual Appliance, and requires Internet access.

If a user attempts to log in to the Virtual Office portal and there are no more available user licenses, the login page displays the error, "No more User Licenses available. Please contact your administrator." The same error is displayed when a user launches the NetExtender client when all user licenses are in use. These login attempts are logged with a similar message in the log entries, and displayed in the **Log > View** page. You can add user licenses if this occurs regularly. For occasional spikes in remote access needs, you can purchase a Spike License to temporarily increase the number of remote users your virtual appliance can support. See the *SMA Administration Guide* for more information.

Topics:

- Registering the SMA 100 for KVM
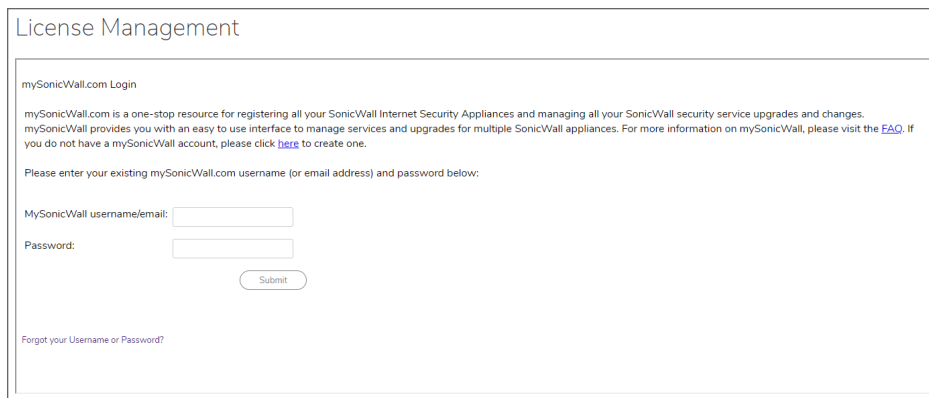
Registering the SMA 100 for KVM

After you have installed and configured the network settings for your SMA 100 for KVM Virtual Appliance, you can log into the management console and register it to your MySonicWall account. Registration of your SonicWall SMA 100 for KVM Virtual Appliance follows the same process as for other SonicWall hardware-based appliances.

ⓘ | **NOTE:** System functionality is extremely limited when registration is not completed.

To register your SMA 100 for KVM Virtual Appliance:

1. Log in to the **System > Licenses** page. Click **Activate**, **Upgrade**, or **Renew** services under **Manage Security Services Online**.

2. Enter your MySonicWall username and password into the fields and then click **Submit**.

3. The **License Management** page is displayed.

4. The license is successfully activated or upgraded or renewed. Click **Continue** to view the **Manage Licenses** window or continue configuring other settings within the appliance.

Using the 30-day Trial Version

The SMA 100 for KVM Virtual Appliance is offered in a 30-day Trial version. The installation, registration, and functionality of the 30-Day Trial appliance is the same as the full SMA 100 for KVM, except for differences noted below in Deployment Considerations. An email is sent from the SonicWall License Manager to warn you when your trial is near its expiration date.

To upgrade to the full version:

- Purchase the full SMA 100 for KVM.
- Export your settings from the 30-day Trial version.
- Install and register the full SMA 100 for KVM.
- Import your settings.

You must install the SMA 100 for KVM software before registering your 30-Day Trial. For more information on obtaining the software, see Downloading the SMA 100 for KVM Virtual Appliance Software .

Topics:

- Deployment Considerations
- Registering the 30-day Trial Virtual Appliance
- Converting a Free Trial License to Full License

Deployment Considerations

The following is a list of deployment considerations for the 30-day Trial version:

- The SMA 100 for KVM is disabled after 30 days.
- A maximum of two concurrent users are allowed to login to the appliance.
- Trial versions of Web Application Firewall are activated during registration.
- No paid add-on licenses or services can be added.
- Communication with the SonicWall Licensing Manager is required during the entire trial period.

- It is recommended to save a copy of your appliance's configuration settings before upgrading to the actual version of the SMA 100 for KVM.

Registering the 30-day Trial Virtual

This section details registration of the SonicWall 30-day Trial Virtual Appliance.

ⓘ **NOTE:** Before starting the registration process, contact SonicWall Sales to obtain a serial number and authorization code.

To register the 30-day Trial:

1. Log in to your SMA 100 for KVM Virtual Appliance.

2. Navigate to the **System > Licenses** page.

3. Under **Manage Security Services Online**, hover over the required services and click the **Activate, Upgrade, Renew** icon.

4. Enter your MySonicWall username and password into the fields for Virtual appliance.

5. Click **Submit**.

6. When the registration confirmation page displays, click **Continue**.

Converting a Free Trial License to Full

An SMA 100 for KVM instance installed as a 30-day free trial can easily be converted to a full production licensed SMA 100 for KVM instance.

To convert your free trial to a production version:

1. Purchase an SMA 100 for KVM license from a distributor. You should receive a fulfillment email with the new serial number and authentication code.

2. Log in to Secure Mobile Access on your free trial instance.

3. Navigate to the **System > Licenses** page.

4. Under **Manage Security Services Online**, hover over the service and click **Activate, Upgrade, or Renew** icon and log in to your MySonicWall account.

5. Navigate to your **My Products** page, and select the free instance of the SMA 100 for KVM you would like to unregister. Click **Deregister**.

6. Click **OK** in the confirmation dialog. The SMA 100 for KVM returns to the unregistered state.

7. In MySonicWall , click to **Register** a new instance.

8. Enter the **Serial Number** and **Authentication Code** you received after purchasing your SMA 100 for KVM instance. Your SMA 100 for KVM is now registered.

Upgrading Your Appliance

Topics:

- Obtaining the Latest Image Version
- Exporting a Copy of Your Configuration Settings
- Uploading a New Image

Obtaining the Latest Image Version

To obtain a new SMA 100 for KVM image file for your security appliance:

1. Go to www.MySonicWall.com and connect to your MySonicWall account.

   ⓘ **NOTE:** If you have already registered your SMA 100 for KVM and you chose to be notified when new firmware updates are available on the **System > Settings** page, you are automatically notified of any updates available for your model.

2. Copy the new SMA 100 for KVM image file to a directory on your management station. For the Virtual Appliance, this is a file such as:

   `sw_CLOUDKVM_eng_10.2.1.x_tip_xsv.sig`

Exporting a Copy of Your Configuration

Before beginning the update process, export a copy of your SMA 100 for KVM Virtual Appliance configuration settings to your local machine. The **Export Settings** feature saves a copy of your current configuration settings on your SMA 100 for KVM, protecting all your existing settings in the even that it becomes necessary to return to a previous configuration state.

To save a copy of your configuration settings and export them to a file on your local management station, click **Export Settings** on the **System > Settings** page and save the settings file to your local machine. The default settings file is named with build number `sslvpnSettings-xxxxxxxxxxxx.zip`.

ⓘ **NOTE:** To more easily restore settings in the future, rename the .zip file to include the version of the SMA 100 for KVM image from which you are exporting the settings.

Uploading a New Image

SMA 100 for KVM Virtual Appliances do not support downgrading an image and using the configuration settings file from a higher version. To downgrade to a previous version of a SMA 100 for KVM image, you must create a new Virtual Machine or load a snapshot taken earlier.

To upload a new SMA 100 for KVM Virtual Appliance image:

1. Download the SMA 100 for KVM image file and save it to a location on your local computer.

2. Select **Upload New Firmware** from the **System > Settings** page. Browse to the location where you saved the SMA 100 for KVM Virtual Appliance image file, select the file, and click **Upload**. The upload process can take up to one minute.

3. When the upload is complete, you are ready to reboot your SMA 100 for KVM with the new SMA 100 for KVM Virtual Appliance image. Do one of the following:

   - To reboot the image with current preferences, click the boot icon for **New Firmware**.

   - To reboot the image with factory default settings, click the boot icon for **New Firmware** and select the check box to **Boot with factory default settings**.

ⓘ | **NOTE:** Be sure to save a backup of your current configuration settings to your local computer before rebooting the SonicWall SMA 100 for KVM Virtual Appliance with factory default settings, as described in Exporting a Copy of Your Configuration Settings.

4. A warning message dialog displays that reads, "Are you sure you wish to boot this firmware?" Click **OK** to proceed. After clicking **OK**, do not power off the device while the image is being uploaded to the hard disk.

5. After successfully uploading the image to your SMA 100 for KVM, the login screen displays. The updated image information displays on the **System > Settings** page.

SonicWall Support

Technical support is available to customers who have purchased SonicWall products with a valid maintenance contract.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year.

The Support Portal enables you to:

- View Knowledge Base articles and Technical Documentation
- View and participate in the Community Forum discussions
- View Video Tutorials
- Access MySonicWall
- Learn about SonicWall Professional Services
- Review SonicWall Support services and warranty information
- Register at SonicWall University for training and certification

About This Document

End User Product Agreement

To view the SonicWall End User Product Agreement, go to: https://www.sonicwall.com/legal/end-user-product-agreements/.

Open Source Code

SonicWall Inc. is able to provide a machine-readable copy of open source code with restrictive licenses such as GPL, LGPL, AGPL when applicable per license requirements. To obtain a complete machine-readable copy, send your written requests, along with certified check or money order in the amount of USD 25.00 payable to "SonicWall Inc.", to:

General Public License Source Code Request
Attn: Jennifer Anderson
1033 McCarthy Blvd
Milpitas, CA 95035