



Ivanti Connect Secure Deployment on Proxmox

Beta

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Revision History

The following table lists the revision history for this document:

Document Revision	Date	Description
1.0	July 2026	First version for 25.1.3.0 Beta

Introduction

This document provides a detailed guide for deploying Ivanti Connect Secure (ICS) on Proxmox, including prerequisites for secure boot with Ivanti OVMF firmware, steps to upload and prepare the ICS image, instructions to create and configure the ICS virtual machine with appropriate hardware and network settings, initialization using a configuration ISO, and reference configurations for firmware and image management.

Prerequisites

Ivanti Secure Boot

To boot Ivanti virtual ICS in secure boot mode, perform the following steps on compute nodes.

1. Extract Ivanti released OVMF firmware and VARS file from KVM ZIP artifact.

```
1 $ ls -l
2 ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm.img.gz
3 ISA-V-KVM-ICS-25.1.3.0-15737.1.zip
4 kvm_template.xml
5 OVMF_CODE.secboot.ivanti.fd
6 OVMF_VARS.secboot.ivanti.fd
```

2. Ivanti released OVMF firmware and VARS file needs to be copied to /usr/share/pve-edk2-firmware directory of compute nodes.

```
1 root@proxmox:/usr/share/pve-edk2-firmware# ls *ivanti*
2 OVMF_CODE.secboot.ivanti.fd  OVMF_VARS_4M.ivanti.fd
```

3. Symlink default secboot OVMF files to point to Ivanti OVMF files. It should be as follows.

```
1 root@bngprox1:/usr/share/pve-edk2-firmware# ls -l | grep -i ivanti
2 lrwxrwxrwx 1 root root      27 May 27 15:00 OVMF_CODE_4M.secboot.fd ->
  OVMF_CODE.secboot.ivanti.fd
3 -rw-r--r-- 1 root root 3653632 May 27 14:58 OVMF_CODE.secboot.ivanti.fd
4 -rw-r--r-- 1 root root 540672 May 27 14:58 OVMF_VARS_4M.ivanti.fd
5 lrwxrwxrwx 1 root root      22 May 27 15:01 OVMF_VARS_4M.ms.fd ->
  OVMF_VARS_4M.ivanti.fd
```

4. Since OVMF contents is being modified, disable automatic update of OVMF.

```
1 apt-mark hold pve-edk2-firmware-ovmf
```

Upload ICS Image to Proxmox

To upload the ICS image on Proxmox, perform the following steps:

1. Extract ICS image from KVM ZIP artifact.

```
1 $ ls -l
2 ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm.img.gz
3 ISA-V-KVM-ICS-25.1.3.0-15737.1.zip
4 kvm_template.xml
5 OVMF_CODE.secboot.ignt.fd
6 OVMF_VARS.secboot.ignt.fd
```

2. Unzip KVM image file.

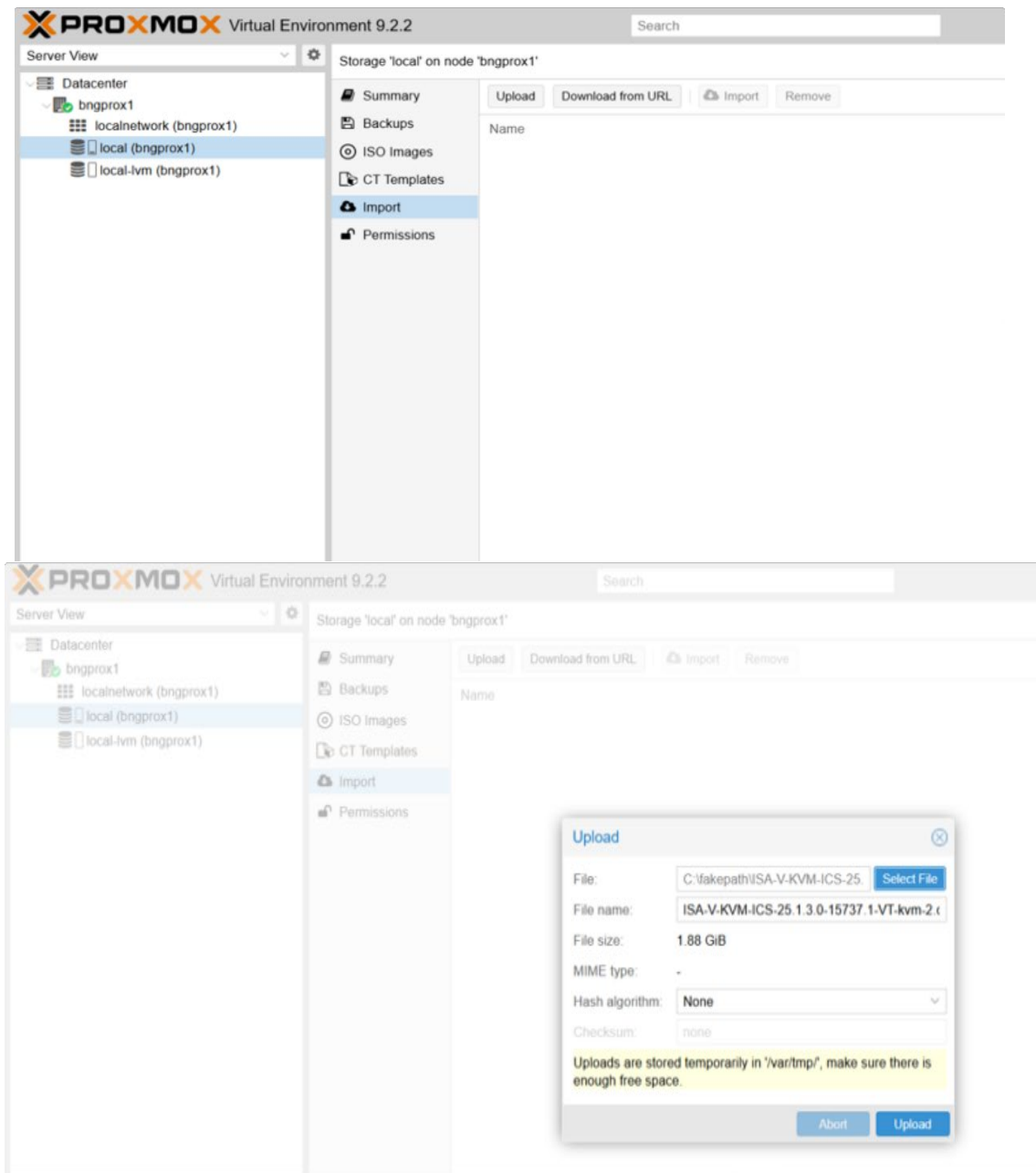
```
1 $ ls -l
2 ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm.img
```

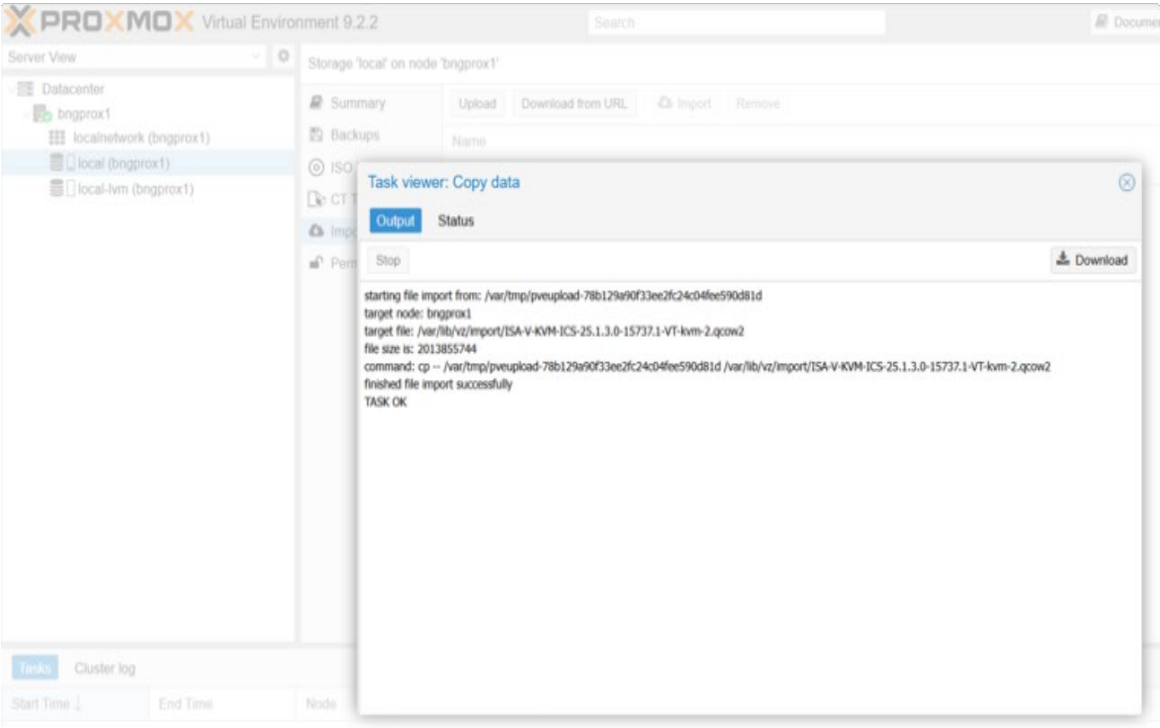
3. Rename .img file to .qcow2. Proxmox identifies file type based on extension.

Note: It is important to rename .img to .qcow2. Without this step, proxmox identifies image as raw and VM will not boot.

```
1 $ mv ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm.img ISA-V-KVM-ICS-25.1.3.0-
15737.1-VT-kvm.qcow2
2 $ ls -l
3 ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm.qcow2
```

4. Upload ICS qcow2 image to Proxmox.

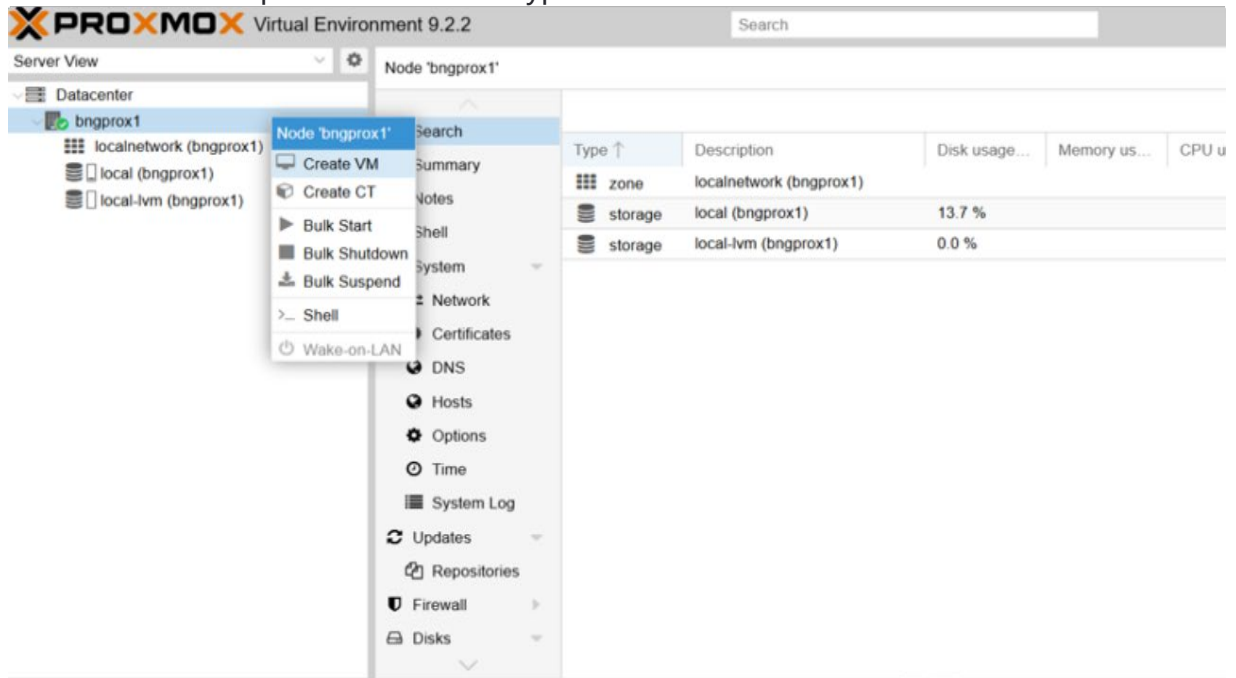




Create ICS VM on Proxmox

To create ICS VM image on Proxmox, perform the following steps:

1. Select **Create VM** option on Proxmox hypervisor.



2. Enter the virtual machine name.

The screenshot shows the 'Create: Virtual Machine' dialog box in Proxmox. The 'General' tab is selected, and the following fields are visible:

- Node: bngprox1
- VM ID: 100
- Name: ICS
- Add to HA: ☐

The 'Resource Pool' field is empty. At the bottom, there are buttons for 'Help', 'Advanced', 'Back', and 'Next'.

3. Select **“Do not use any media”** option.

The screenshot shows the 'Create: Virtual Machine' dialog box in Proxmox VE, with the 'OS' tab selected. The dialog has tabs for General, OS, System, Disks, CPU, Memory, Network, and Confirm. Under the 'OS' tab, there are three radio button options for the media source: 'Use CD/DVD disc image file (iso)', 'Use physical CD/DVD Drive', and 'Do not use any media'. The 'Do not use any media' option is selected. To the right, the 'Guest OS' section has two dropdown menus: 'Type' set to 'Linux' and 'Version' set to '7.x - 2.6 Kernel'. At the bottom right, there is an 'Advanced' checkbox (unchecked) and 'Back' and 'Next' buttons.

4. Select information as follows:

- a. Machine type: q35.
- b. BIOS: OVMF (UEFI).
- c. Add EFI Disk.
- d. Pre-enroll Keys.
- e. Add TPM.
- f. Version: 2.0.

Create: Virtual Machine

General OS **System** Disks CPU Memory Network Confirm

Graphic card: Default SCSI Controller: VirtIO SCSI

Machine: q35 Qemu Agent: ☐

Firmware

BIOS: OVMF (UEFI) Add TPM: ☒

Add EFI Disk: ☒ TPM Storage: local-lvm

EFI Storage: local-lvm Format: Raw disk image (raw)

Format: Raw disk image (raw) Version: v2.0

Pre-Enroll keys: ☒

Help Advanced ☐ Back Next

5. Delete default disk by clicking trash button on top left.

Create: Virtual Machine

General OS System **Disks** CPU Memory Network Confirm

scsi0 

Disk Bandwidth

Bus/Device: SCSI 0 Cache: Default (No cache)

SCSI Controller: VirtIO SCSI Discard: ☐

Storage: local-lvm IO thread: ☐

Disk size (GiB): 32

Format: Raw disk image (raw)

+ Add

Import

Help Advanced ☐ Back Next

6. Click “Import” on bottom left corner for option to import ICS image.
7. Import uploaded qcow2 ICS image. Use Virtio Block as Bus/Device.

The screenshot shows the 'Create: Virtual Machine' wizard in Proxmox VE, specifically the 'Disks' tab. The wizard has tabs for General, OS, System, Disks (selected), CPU, Memory, Network, and Confirm. On the left, a list of disks for 'virtio0' is shown with an 'Add' button. Below that is an 'Import' button. The main area contains configuration options for the disk: 'Bus/Device' is set to 'VirtIO Block' with a dropdown and a value of '0'; 'Cache' is set to 'Default (No cache)'; 'Import Storage' is set to 'local'; 'Select Image' is set to 'ISA-V-KVM-ICS-25.1.3.0'; 'Target Storage' is set to 'local-lvm'; and 'Format' is set to 'Raw disk image (raw)'. There are also checkboxes for 'Discard' (unchecked) and 'IO thread' (checked). At the bottom, there is a 'Help' button, an 'Advanced' checkbox (unchecked), and 'Back' and 'Next' buttons.

8. Enter CPU and memory information to suit your ICS instance size.
 - a. ISA4500V: 4 vCPUs and 8 GB RAM.
 - b. ISA6500V: 8 vCPUs and 16 GB RAM.
 - c. ISA8500V: 12 vCPUs and 32 GB RAM.

The screenshot shows the 'Create: Virtual Machine' window in Proxmox VE, with the 'CPU' tab selected. The window has a title bar with a close button. Below the title bar is a tabbed interface with tabs for 'General', 'OS', 'System', 'Disks', 'CPU' (active), 'Memory', 'Network', and 'Confirm'. The 'CPU' tab contains the following fields:

Sockets:	1	Type:	host
Cores:	1	Total cores:	1

At the bottom of the window, there is a 'Help' button, an 'Advanced' checkbox, and 'Back' and 'Next' buttons.

9. Select "Virtio (Paravirtualized)" for network model. Following interfaces need to be configured. Create appropriate bridge interfaces for virtual NICs.
- Management.
 - Internal.
 - External

Create: Virtual Machine ✕

General OS System Disks CPU Memory **Network** Confirm

☐ No network device

Bridge: Model:

VLAN Tag: MAC address:

Firewall: ☒

Help Advanced ☐ Back Next

10. Click Confirm. Click Finish.

Create: Virtual Machine ✕

General OS System Disks CPU Memory Network **Confirm**

Key ↑	Value
cores	1
cpu	host
efidisk0	local-lvm:1,efitype=4m,pre-enrolled-keys=1
ide2	none,media=cdrom
machine	q35
memory	2048
name	ICS
net0	virtio,bridge=vmb0,firewall=1
nodename	bngprox1
numa	0
ostype	l26
scsihw	virtio-scsi-pci
sockets	1
tpmstate0	local-lvm:1,version=v2.0
virtio0	local-lvm:0,import-from=local:import/ISA-V-KVM-ICS-25.1.3.0-15737.1-VT-kvm-2.qcow2,iothre...
vmid	100

☐ Start after created

Advanced ☐ Back Finish

11. Start virtual machine.

Configuration Initialization

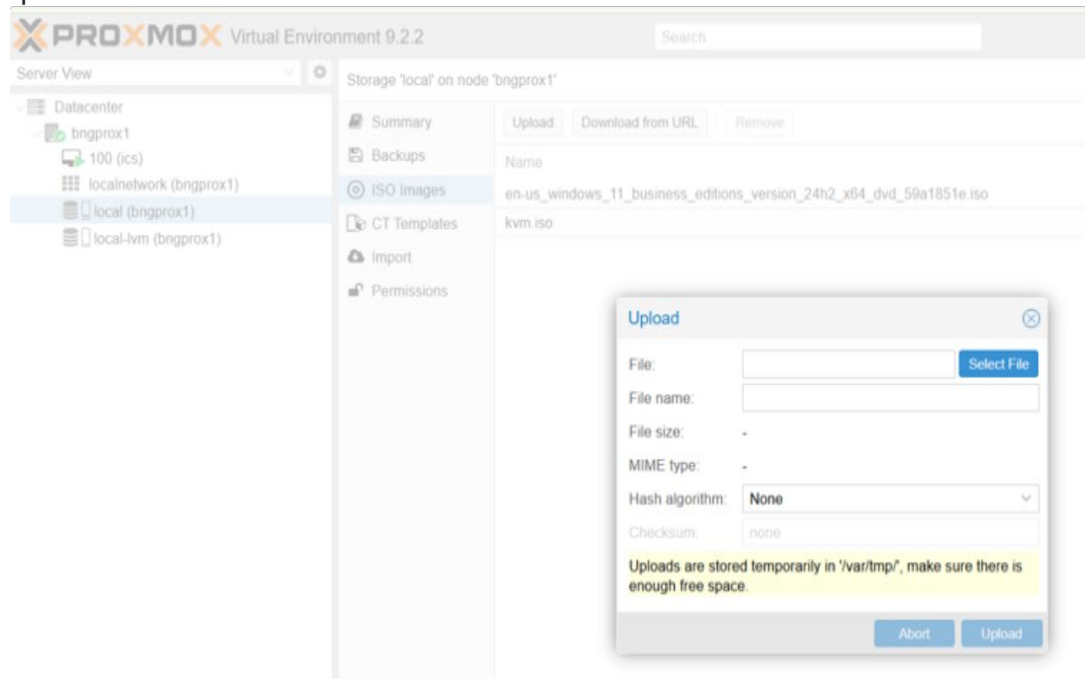
ICS on Proxmox supports configuration initialization through init ISO image.

1. Extract `kvm_template.xml` file from KVM image tar.gz file. Example:- ISA-V-KVM-ICS-25.1.4.0-18668.1.tar.gz.
2. Fill in required details.
3. Create ISO image from `kvm_template.xml`.

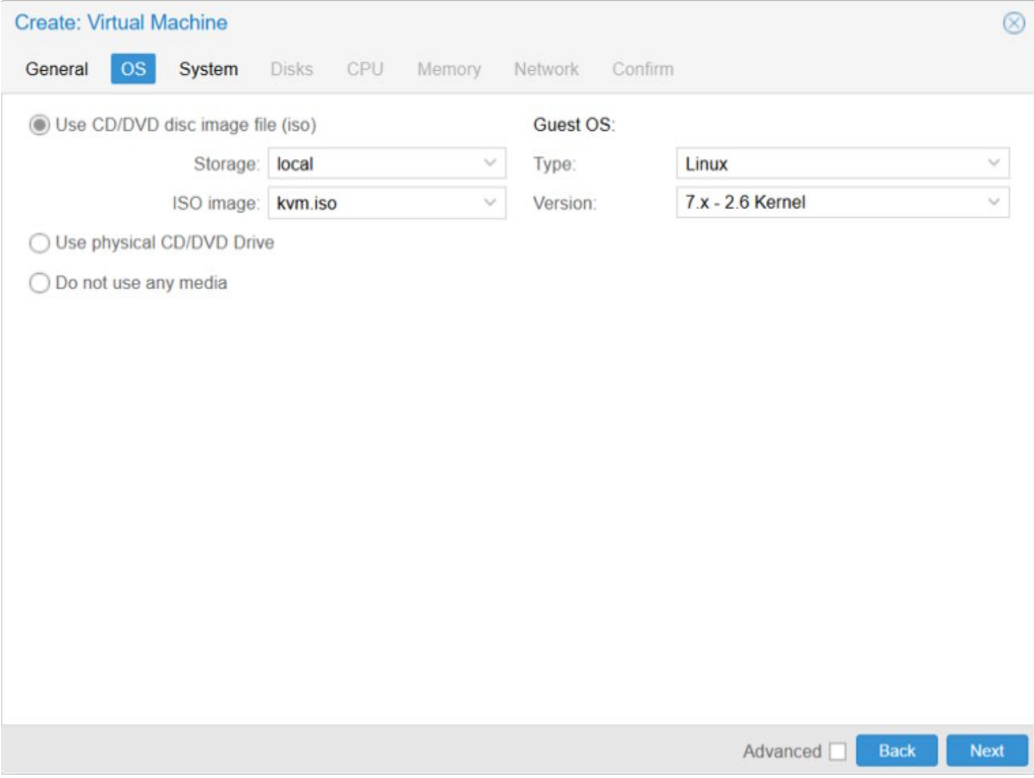
```
mkisofs -l -o kvm.iso kvm_template.xml
```

Note: File name must be **kvm_template.xml**

4. Upload `kvm.iso` to Proxmox ISO datastore.



5. When creating virtual machine, select ISO image.



The screenshot shows the 'Create: Virtual Machine' window with the 'OS' tab selected. The 'Use CD/DVD disc image file (iso)' option is chosen. The 'Storage' is set to 'local' and the 'ISO image' is 'kvm.iso'. Under 'Guest OS', the 'Type' is 'Linux' and the 'Version' is '7.x - 2.6 Kernel'. The 'Do not use any media' option is also visible. At the bottom right, there is an 'Advanced' checkbox and 'Back' and 'Next' buttons.

Create: Virtual Machine

General **OS** System Disks CPU Memory Network Confirm

☒ Use CD/DVD disc image file (iso)

Storage: local

ISO image: kvm.iso

Guest OS:

Type: Linux

Version: 7.x - 2.6 Kernel

☐ Use physical CD/DVD Drive

☐ Do not use any media

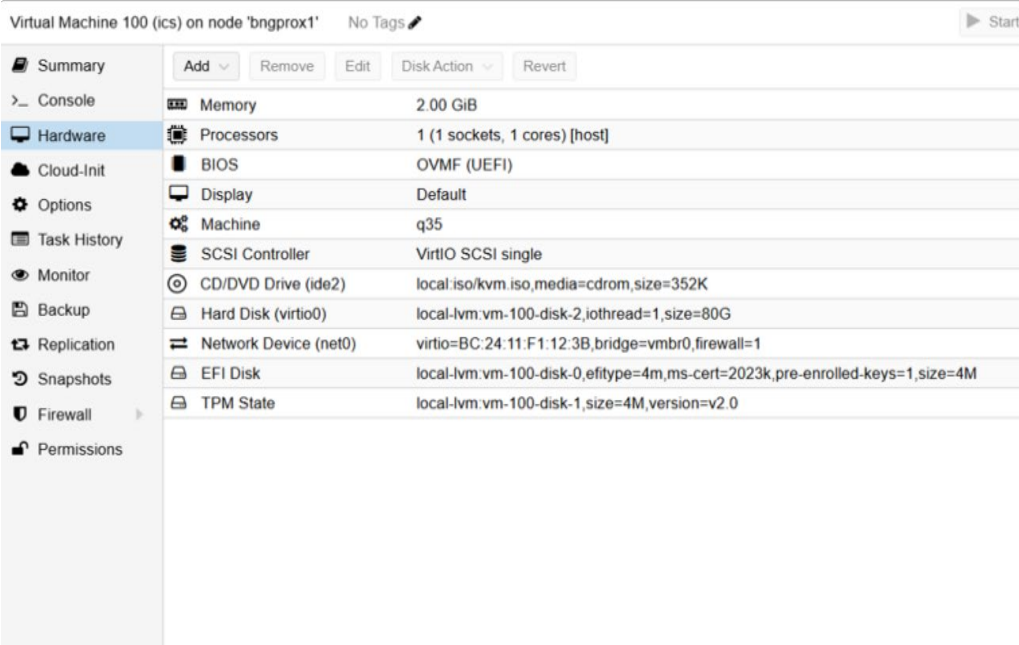
Advanced ☐ Back Next

6. Import qcow2 image in subsequent steps.

7. If initialization is successful, then following output will be seen.

```
Mounting CD-ROM for Initial Config template
Checking whether Custom data file is available
This is KVM environment and configuration drive is present
Loaded Initial Configuration
```

Reference working configuration



Virtual Machine 100 (ics) on node 'bngprox1' No Tags Start

Summary	Add	Remove	Edit	Disk Action	Revert
Console	Memory	2.00 GiB			
Hardware	Processors	1 (1 sockets, 1 cores) [host]			
Cloud-Init	BIOS	OVMF (UEFI)			
Options	Display	Default			
Task History	Machine	q35			
Monitor	SCSI Controller	VirtIO SCSI single			
Backup	CD/DVD Drive (ide2)	local-iso/kvm-iso,media=cdrom,size=352K			
Replication	Hard Disk (virtio0)	local-lvm:vm-100-disk-2,iothread=1,size=80G			
Snapshots	Network Device (net0)	virtio=BC:24:11:F1:12:3B,bridge=vbr0,firewall=1			
Firewall	EFI Disk	local-lvm:vm-100-disk-0,efitype=4m,ms-cert=2023k,pre-enrolled-keys=1,size=4M			
Permissions	TPM State	local-lvm:vm-100-disk-1,size=4M,version=v2.0			

Documentation

Ivanti documentation is available at <https://www.ivanti.com/support/product-documentation>.

Technical Support

When you need additional information or assistance, you can contact "Support Center:

- <https://forums.ivanti.com/s/contactsupport>
- support@ivanti.com

For more technical support resources, browse the support website

<https://forums.ivanti.com/s/contactsupport>