ONEP documentation

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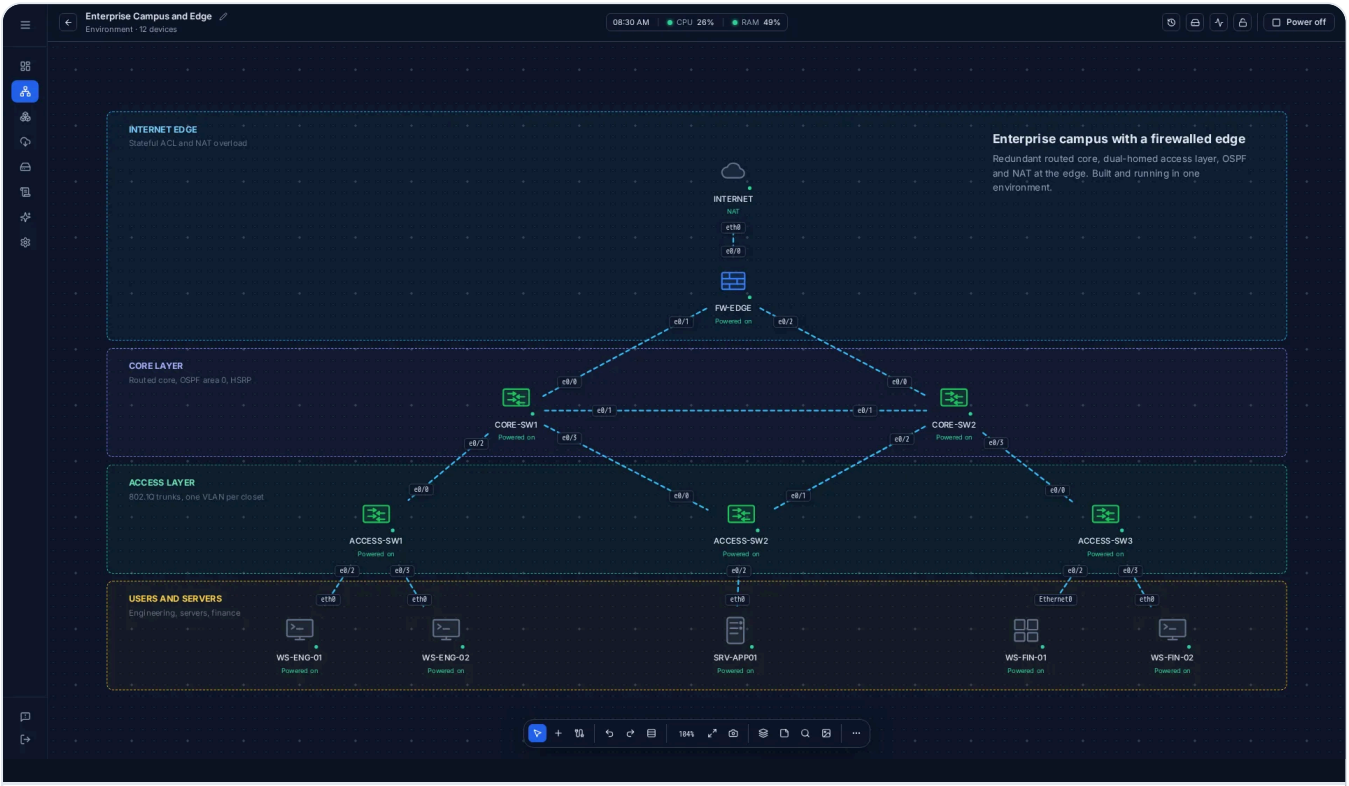
GETTING STARTED

What ONEP is

A network and security platform that runs on your own hardware, as one appliance.

ONEP is a network and security platform. It builds, wires, isolates, runs and removes whole multi-vendor environments: routers, switches, firewalls, servers, endpoints and security tools, cabled together on virtual networks the platform manages for you. It is built for network engineering, security training and cyber ranges: Active Directory attack ranges, blue-team monitoring, OT/ICS segmentation and general-purpose network topologies.

A router is one kind of device among many. Around the devices is the platform: the canvas you draw on, the ready environments you deploy, the image library, the consoles and packet capture.



An environment on the canvas: a routed campus core with a firewalled edge, every device powered on.

What it ships as

ONEP is one appliance that you run on your own hardware. You import it into a hypervisor, and you are the only tenant on the appliance. The same appliance serves every edition; the license you install decides the edition, and an appliance with no license runs as Community.

The appliance contains the platform. You bring your own images, or fetch them through Discover.

- **Images.** A Content Hub card downloads and builds its parts from the vendor's own source, on your appliance, the first time you deploy it. Later deploys reuse what was built.
- **Licenses.** Cisco images are yours to bring and need your own Cisco license. ONEP does not supply, sell or verify Cisco licenses.
- **Identity.** ONEP does not supply vendor credentials or an AI provider key. The appliance creates its own TLS certificate and its own install ID, so no two appliances share an identity.

What runs where

The appliance runs two layers:

1. **The platform**: the web interface, the API, the database and the background services. This is what you sign in to.
2. **The environment layer**: the devices that make up your environments. Router images, virtual machines and containers can all sit in the same environment.

After the appliance restarts, environments stay off until you start them.

Sealed by default

Every environment starts with no path to the ONEP host, to your network, or to another environment. That holds whichever switch it uses. An environment reaches the outside only through a door you add on purpose:

- **Cloud node**: outbound internet through NAT from shared address space (100.64.0.0/10, RFC 6598), or a bridge that joins your real network. Tailscale uses the same range, so avoid overlap.
- **Container expose**: open an app from the environment in your browser. Which devices can be exposed depends on your edition.

See Network and ports for how each door behaves.

The areas you work in

Area	What it is for
Environments and the canvas	Build topologies by hand, then power them on and off, open consoles and capture traffic.
Content Hub	Deploy a ready environment or range from a card and a short wizard.
Centrum and Discover	The images on your appliance, and downloads straight from the vendor.
AI Generator	Describe a network in English and review the topology it builds.
Migration Hub	Import environments from EVE-NG, GNS3 and Packet Tracer files.
Settings	Status, network, AI source, remote access, license, users, diagnostics and your account.

Words ONEP uses

An **environment** is a topology and the devices in it, whatever built it. **Reset** returns a device to its first boot; **Restart** is a power cycle. The Glossary has the rest.

GETTING STARTED

Editions at a glance

One appliance for every edition. Your license sets the edition; there is nothing to reinstall.

ONEP has one appliance and one version number for every edition. The license file you install sets the edition and its limits. Moving from one edition to another is a license upload: no reinstall, and your environments stay where they are.

The editions compared

For prices and the buying options, see the Editions page. How each limit works is explained in Limits per edition.

Community

Price and seats	
Price	Free
Users	1
Limits	
Devices running at once, whole appliance	10
Largest single device	2 CPU · 8 GB
Saved environments	3
Devices you can draw	No limit
Discover downloads, images and container pulls	5 a month
Content Hub deploys	2 in any 30 days
AI topologies	7 in any 30 days

Migration Hub imports	No limit, one at a time
Build and deploy	
Canvas: routers, virtual machines, containers	Yes
Cloud node (the internet door for an environment)	Yes
Content Hub	Starter blueprints
Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes
Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Content Hub apps
Packet capture and pcap download	Yes
Configuration save	Cisco IOL, without history
Snapshots and checkpoints	Not included
Session recording	Not included
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes
Report a Problem (support request)	Not included

Support	Email
Audit log with export	Not included
If your license ends	You stay on Community
Moving to a new machine	Install again

Lite

Price and seats

Price	USD 129 / year
Users	1

Limits

Devices running at once, whole appliance	30
Largest single device	8 CPU · 24 GB
Saved environments	5
Devices you can draw	No limit
Discover downloads, images and container pulls	10 a month
Content Hub deploys	No limit
AI topologies	No limit
Migration Hub imports	No limit, one at a time

Build and deploy

Canvas: routers, virtual machines, containers	Yes

Cloud node (the internet door for an environment)	Yes
Content Hub	All single-device blueprints
Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes
Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Content Hub apps
Packet capture and pcap download	Yes
Configuration save	Cisco IOL, without history
Snapshots and checkpoints	Not included
Session recording	Not included
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes, plus tunnels and dynamic DNS
Report a Problem (support request)	Yes
Support	Response in 3–5 working days
Audit log with export	Export only
If your license ends	Back to Community, every environment and all data kept

Moving to a new machine	We move your license

Pro

Price and seats

Price	USD 249 / year per appliance
Users	3, extra seats USD 49 / year

Limits

Devices running at once, whole appliance	128
Largest single device	No limit
Saved environments	No limit
Devices you can draw	No limit
Discover downloads, images and container pulls	No limit
Content Hub deploys	No limit
AI topologies	No limit
Migration Hub imports	No limit, one at a time

Build and deploy

Canvas: routers, virtual machines, containers	Yes
Cloud node (the internet door for an environment)	Yes
Content Hub	All, including multi-device ranges

Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes
Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Any device
Packet capture and pcap download	Yes, plus capture report
Configuration save	With version history
Snapshots and checkpoints	Yes
Session recording	Yes
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes, plus tunnels and dynamic DNS
Report a Problem (support request)	Yes
Support	Response in 1–3 working days
Audit log with export	Yes
If your license ends	Back to Community, every environment and all data kept
Moving to a new machine	We move your license

Enterprise and Education are available by conversation rather than at a published price; see the Editions page.

What is included

ONEP includes Community and Lite together, in one build. The appliance starts as Community; uploading a Lite license makes it Lite. See Community or Lite: one download and Release notes.

Changing edition

1. **Get the license file**
   A license is a small signed file named `onep.lic`.

2. **Install it**
   In **Settings › Licensing**, choose **Install license file…** or **Replace license file…**.
   During the first-time setup, the License step does the same.

3. **Done**
   The interface reloads with the new edition and limits. No restart is needed.

When a paid license ends there is a 14-day grace period. After that the appliance runs as Community: nothing is deleted or stopped, your environments stay open and editable, and devices that are running keep running. A new environment, or a start that would take the appliance past the Community limits, is refused until you renew or delete some. The details are in Licensing. Which features are hidden or locked on Community and Lite is listed in Community or Lite.

GETTING STARTED

Community or Lite

Every appliance starts as Community. Upload a Lite license and it becomes Lite.

There is one ONEP download. You do not choose an edition when you download or install: every appliance starts as **Community**, and becomes **Lite** when you upload a Lite license. Nothing is reinstalled, and your environments stay where they are.

Start as Community

Install the appliance and sign in. With no license file installed it runs as Community: free, with Community's limits. You can use it that way for as long as you like. The sidebar shows a small *Community* tag beside the product name, and Settings › Licensing shows *ONEP Community* with the line *free, single-seat edition*.

Become Lite

After you buy, your license file is emailed to you, normally within one business day.

1. **Open Settings › Licensing**
   as `admin`.

2. **Choose Install license file...**
   and select your Lite license, `onep.lic`.

3. **Done**
   ONEP verifies the file, confirms the edition, seats and expiry, and the interface reloads as Lite. No restart, no reinstall.

You can also install the license during the first-time setup. See Licensing for everything the Licensing tab shows.

What changes when you add a Lite license

Lite raises the limits: more devices running at once, a larger largest device, more saved environments and more Discover downloads. It removes the monthly allowance on

Content Hub deploys and AI topologies, and it opens every single-device Content Hub card. Lite adds remote access through Cloudflare Tunnel, Tailscale and Dynamic DNS, in addition to WireGuard, and it adds Report a Problem. Every number is in Limits per edition.

Everything else is the same on both: one user account, the canvas, the Migration Hub, the AI topology builder, browser consoles, packet capture and the cloud node. The full comparison, including Pro, is in Limits per edition and on the Editions page.

What is hidden or locked on Community and Lite

Features that an edition does not include are hidden from the menus, or shown as a quiet line of text in place of the control. They are never shown as a dimmed button or an empty table. A page you reach by typing its address says in one sentence that it is part of ONEP Pro.

Feature	What you see	Community	Lite
Audit log	No **Audit** item in the sidebar. The address `/audit` shows a locked page: *Audit log is part of ONEP Pro*, with the line *It records who changed what on this appliance.*	Locked	Locked
More user accounts	No **Users** item in the sidebar and no **Users & access** tab in Settings. The address `/users` shows *ONEP Community includes one user account* or *ONEP Lite includes one user account*, with *More user accounts are part of ONEP Pro.* Adding a second account is refused with the same sentence.	Locked	Locked
Configuration versions	No **Config history** tab in Settings. On a device, the configuration editor shows *Configuration versions are part of ONEP Pro.* Saving and exporting a Cisco device configuration stays available, without history.	Locked	Locked
Snapshots and checkpoints	No Snapshots group in the device menu, and no snapshot or checkpoint button on the canvas	Hidden	Hidden
Session recording	No record control on the Environments page	Hidden	Hidden
Capture report	In the capture list, *Report: ONEP Pro* replaces the Report button. Capturing and downloading the `.pcap` file stay available.	Locked	Locked

Feature	What you see	Community	Lite
Content Hub cards that need more	The card stays visible, and *Runs on ONEP Lite* or *Runs on ONEP Pro* replaces the Deploy button. A card is locked when its largest device is bigger than the edition's largest device size, or when it has more than one device.	Locked	Locked for multi-device ranges
Expose a container port	Available for Content Hub applications only	Limited	Limited
Remote access methods	The method picker in Settings › Remote access offers WireGuard only	WireGuard only	All four methods
Report a Problem	The sidebar and the Dashboard show **Community**, which opens the ONEP community in a new tab, in place of **Report a problem**	Community link	Report a problem
API tokens	No **API tokens** card in Settings › Account. Scripts cannot call the API: use the web interface.	Not available	Not available

If a license expires

When a paid license ends there is a grace period, 14 days for a paid license. After that the appliance runs as Community: nothing is deleted or stopped, your environments stay open and editable, and devices that are running keep running. A new environment, or a start that would take the appliance past the Community limits, is refused until you renew or delete some. Install a renewed license and the appliance is Lite again at once. See Licensing.

Pro

Pro runs on the same appliance: a license upload, not a new install. Multi-device ranges, snapshots, checkpoints, session recording and the audit log are Pro.

GETTING STARTED

Quickstart

Import the appliance, sign in, and run your first environment.

This page takes you from the appliance file to a running device with an open console. The same download serves Community and Lite; see Community or Lite: one download.

Before you start

- A hypervisor: Proxmox VE, VMware Workstation or VirtualBox.
- Enough CPU, memory and disk for the appliance, which ships with a thin-provisioned system disk. See Requirements and sizing.
- A CPU with Intel VT-x or AMD-V, and nested virtualization available on the host.
- One network interface on your LAN. DHCP is fine.
- Internet access from the appliance, for the first build of a Content Hub card and for Discover downloads.

1. Import the appliance

1. **Import the .ova**
   Follow Install from the OVA, for Proxmox VE, VMware Workstation or VirtualBox. Choose your format explains the download format.

2. **Turn on nested virtualization before the first boot**
   On Proxmox VE, set the CPU type to `host`. On VMware Workstation, expose hardware-assisted virtualization to the guest. On VirtualBox, tick **Enable Nested VT-x/AMD-V**. ONEP runs its own virtual machines inside the appliance, and without this no virtual machine device will start. Without it, virtual machine devices do not start (routers and containers still do). The console banner and Settings › Status both say when it is missing.

3. **Start the virtual machine**
   Wait until the web interface answers. When the platform is up, the console shows the ONEP banner with the address to open in a browser.

2. First sign-in

1. **Open the address**
   Go to `https://<address shown on the console>/`. Your browser warns about the certificate: the appliance creates its own certificate on first boot, so this is expected. Continue to the site.

2. **Create the administrator password**
   The first time you open the address, ONEP shows *Create the administrator password* before anything else. Enter a password of at least 12 characters, confirm it and choose **Create and sign in**. ONEP does not generate one, and nothing is shown on the console. You are signed in as `admin`.

3. **Work through the first-time setup**
   Accept the agreement. Then the setup offers License, Network and ONEP Assistant, and each of these can be skipped. The appliance starts as Community. For Lite, choose your `onep.lic` file in the License step, or later in **Settings › Licensing** with **Install license file...**. Community needs no license file. Choose **Open ONEP** on the last step. See The first-time setup.

4. **Turn on two-factor authentication, if you want it**
   In **Settings › Account**, choose **Set up two-factor**.

3. Check the appliance is healthy

Open **Settings › Status**. **Virtualization** should read *Ready*. Under **Service health**, Database, Cache and Background tasks should read *Online*. The ONEP Assistant reads *Not connected* until you set up an AI source, which is optional (see AI Generator). The **Network** card lists the network checks, such as the virtual switch service, the virtual machine service and the management network; all should read *Healthy*.

4. Run a first environment

From the Content Hub

1. **Pick a single-device card**

Open **Content Hub** and choose a card that shows one device. Before you start, the Content Hub tells you if the appliance has too little memory for it.

2. **Walk through the wizard**
   Choose a new environment, confirm the variant, review the plan with the real CPU, memory and disk per device, then choose **Deploy environment**.

3. **Watch the build log**
   A green line means the step reported success. The first build of a card downloads its parts from the vendor, so it takes a while and needs internet.

4. **Open the console**
   When the device reads Powered on, open it from the canvas. A text console can stay blank until you press Enter.

From the canvas

1. **Get an image**
   Open **Centrum › Discover** and add an image, for example a Linux server, to your library.

2. **Create an environment**
   Choose **New environment**, then choose **Add device** (shortcut: A) on the canvas to add two devices and a switch. The built-in native switch needs no image.

3. **Cable and start**
   Connect each device to the switch, then choose **Power on** for the environment.

4. **Open a console**
   Right-click a device and choose **Open console**.

5. Clean up

When you are done, power the environment off and delete it from the Environments list. Delete removes every device, disk, virtual switch and network rule the environment created, and it cannot be undone. Shut the virtual machine down from the hypervisor: the appliance powers off running devices and stops its services before the system halts.

Next steps

- Learn the canvas and the environment actions.
- Set the management address you want to keep: First boot and network.
- Read Troubleshooting before building something large. Several "is this broken?" moments have simple explanations.

INSTALLATION

Requirements and sizing

What the host needs, and how to size the appliance for the environments you plan to run.

Sizing an ONEP appliance means two numbers: what the appliance itself needs, and what each environment adds while it runs. The appliance's own share is modest and roughly fixed. An environment can need a few gigabytes for one small appliance, or much more for a multi-device range.

The host

Item	Minimum	Recommended	Notes
CPU	`4 vCPU`	`4 to 8 vCPU`	Intel VT-x or AMD-V, with nested virtualization turned on for the appliance
Memory	`8 GB`	`16 GB`	Small environment (2 to 3 devices, one virtual machine, or a dozen routers and switches): 8 GB. Medium (4 to 8 devices, 3 or 4 virtual machines): 16 GB. Large (10 to 20 devices, 6 to 8 virtual machines): 32 GB. Security appliances follow their vendor's own numbers
Disk	200 GB virtual disk, thin-provisioned	Room for your images and environments	The disk takes space on the host only as it fills. Large monitoring cards declare up to 200 GB
Network	One interface	One interface	DHCP is fine. Environments need no network of their own
Hypervisor	Proxmox VE, VMware Workstation, VirtualBox		Install steps are given for all three. See Choose your format
Browser	A current Chromium-based browser		Nothing to install on your laptop

The appliance reports a missing nested virtualization on its console banner and in **Settings › Status**. See Troubleshooting.

Nested virtualization

Virtual machine devices need hardware virtualization. When the appliance itself runs in a virtual machine, the hypervisor must pass hardware virtualization through to it. Turn it on before you start the appliance:

- **Proxmox VE**: set the virtual machine's CPU type to `host`.
- **VMware Workstation**: expose hardware-assisted virtualization (Intel VT-x/EPT or AMD-V/RVI) to the guest.
- **VirtualBox**: tick **Enable Nested VT-x/AMD-V** under System › Processor.

Without it, virtual machine devices do not start, and the appliance says so: the console banner reads *Virtual machines: not available until nested virtualization is enabled on your hypervisor*, and **Settings › Status** shows the same on its Virtualization line. Routers and containers work without it.

Sizing for environments

Every running device takes the CPU, memory and disk shown in its plan. Before you deploy, the Content Hub wizard shows a **Resolved plan** step with the vCPU, memory and disk of every device, and lets you override them. Size the appliance against that step.

The Content Hub check against your appliance

For the HELK, Malcolm, Security Onion, Vulhub and PatrOWL cards, the Content Hub compares the card with the appliance before a deploy:

- **Memory refuses.** If the appliance has too little memory, the card shows *Needs N GB RAM* in place of the Deploy button. N includes the memory the platform keeps for itself, rounded up to a common memory size.
- **Cores only warn.** If the appliance has fewer cores than the card recommends, the card shows *Runs slowly: N cores recommended*. The deploy is still allowed.

Multi-device ranges

Multi-device ranges are larger than a single appliance and need a bigger host. The Resolved plan step in the Content Hub wizard shows the CPU, memory and disk before

you deploy. Which ranges you can deploy depends on your edition.

Limits by edition

Editions limit how many devices run at once and how large a single device can be, among other things. Every number is in Limits per edition.

Other things that take memory

- **Builds.** The first deploy of a card builds it on your appliance, which uses CPU and memory while it runs. Run one heavy job at a time: a large range deploy and a card build at the same time compete for CPU.

Growing the disk

Images and environments live on the appliance's disk, which is a 200 GB thin-provisioned disk. To give it more room, enlarge the virtual disk in your hypervisor. On its next boot the appliance grows its file system to use the new space automatically.

INSTALLATION

Choose your format

ONEP installs from the OVA. An ISO installer is not part of this release.

ONEP is one appliance for every edition, and the license you install sets the edition.
ONEP installs from the OVA. An ISO installer is not part of this release.

The OVA

Format	What it is for	Install steps for	Where to read more
`.ova`	The complete appliance: import it and the virtual machine is created for you	VMware Workstation, VirtualBox, Proxmox VE	Install from the OVA

One appliance file serves Community and Lite.

Which hypervisor to use

- **VMware Workstation**: import the `.ova` with **File › Open**.
- **VirtualBox**: import the `.ova` with **File › Import Appliance**, then turn on **Nested VT-x/AMD-V** before the first start.
- **Proxmox VE**: unpack the `.ova` and import it with `qm importovf`. Newer versions can also import it from the web interface.
- **A dedicated server**: install Proxmox VE on it, then import the `.ova`. ONEP then has the whole server to itself.

Before you import

- **Your own images.** You bring your own images, or fetch them through Discover. The appliance creates its own identity on first boot.

- **Nested virtualization.** Virtual machine devices need hardware virtualization, so the hypervisor must pass it through to the appliance. Turn it on before you start the appliance. Routers and containers start without it. See Requirements and sizing.
- **Check the file.** The download page links the SHA-256 checksums. Compare the checksum listed for the OVA with the checksum of the file you downloaded, for example with `sha256sum` on Linux or `Get-FileHash` in PowerShell.

INSTALLATION

Install from the OVA

Import the ONEP appliance into Proxmox VE or VMware Workstation, step by step.

The `.ova` is the complete ONEP appliance. You import it, turn on nested virtualization, and start it. The steps are the same idea on every hypervisor: import, set CPU, memory and network, start, then sign in from your browser.

Pre-flight checks

Check these before you import.

- **Hardware virtualization**: the host CPU supports Intel VT-x or AMD-V, and it is enabled in the firmware.
- **Nested virtualization**: your hypervisor can pass hardware virtualization through to a guest. Without it, virtual machine devices do not start. Routers and containers do. The console banner and **Settings › Status** tell you when it is missing.
- **Memory**: 8 GB for the appliance at minimum (small environments), 16 GB recommended (3 or 4 virtual machines), 32 GB for large environments.
- **CPU**: at least 4 vCPU.
- **Disk**: the appliance has a 200 GB virtual disk, thin-provisioned, so it takes space on the host only as it fills. Images and environments live on it.
- **Network**: one interface on a LAN your browser can reach, with DHCP for the first boot.

Proxmox VE

1. **Copy and unpack the appliance**
   Copy the `.ova` to the Proxmox VE host and unpack it; an `.ova` is a tar archive holding an `.ovf` description and the disk.

   ```
   mkdir -p /root/onep-import && cd /root/onep-import
   tar -xvf /path/to/onep-appliance.ova
   ```

2 **Import it as a virtual machine**

Pick a free virtual machine ID (`300` here) and the storage for the disk (`local-lvm` here).

```
qm importovf 300 /root/onep-import/*.ovf local-lvm
```

Newer Proxmox VE versions can also import an `.ova` from the web interface, on a storage that allows import content.

3 **Set CPU type `host`, memory and network**

The CPU type must be `host` so the appliance gets nested virtualization. Give it a network card on a bridge that reaches your LAN. Do this **before you start it**.

```
qm set 300 --cpu host --cores 4 --memory 16384
qm set 300 --net0 virtio,bridge=vmbr0
qm set 300 --name onep
```

4 **Optional: give the disk more room**

In the Proxmox VE interface, **Hardware › Hard Disk › Disk Action › Resize**. See Growing the disk.

5 **Start it**

and open the virtual machine's console. Continue with First start.

The commands are Proxmox VE's own; the file names are examples.

VMware Workstation

1 **Import**

Choose **File › Open**, select the `.ova`, name the virtual machine, choose a folder and choose **Import**. Do not power it on yet.

2 **Enable hardware-assisted virtualization**

Open **VM › Settings › Processors**, give it at least 4 cores, and tick **Virtualize Intel VT-x/EPT or AMD-V/RVI**. Do this before you power it on.

3 **Memory**

At least 8 GB; 16 GB recommended.

4 **Network Adapter**
Bridged puts the appliance on your LAN; **NAT** keeps it reachable from this host only.

5 **Optional: Hard Disk › Expand**
to give the disk more room.

6 **Power on**
and watch the console. Continue with First start.

If Workstation will not power on with virtualization ticked, another hypervisor on the host may be holding VT-x or AMD-V. Your host's own virtualization settings decide this.

VirtualBox

1 **Import**
Choose **File › Import Appliance**, select the `.ova`, review the settings and choose **Finish**. Do not start it yet.

2 **Enable nested virtualization**
Open **Settings › System › Processor**, give it at least 4 processors, and tick **Enable Nested VT-x/AMD-V**. If the box is grayed out, close VirtualBox and run this once, then open it again:

```
VBoxManage modifyvm "ONEP" --nested-hw-virt on
```

Do this before you start it.

3 **Memory**
At least 8 GB; 16 GB recommended, under **Settings › System › Motherboard**.

4 **Network**
Under **Settings › Network**, set Adapter 1 to **Bridged Adapter** on the interface that reaches your LAN. **NAT** keeps the appliance reachable from this computer only.

5 **Optional: give the disk more room**
VirtualBox enlarges VDI disks in **File › Tools › Virtual Media Manager**. The imported disk is a VMDK, so convert it first:

```
VBoxManage clonemedium disk onep-disk1.vmdk onep-disk1.vdi --format VDI
VBoxManage modifymedium disk onep-disk1.vdi --resize 400000
```

then attach the new disk in place of the old one. See Growing the disk.

6 **Start**

and watch the console. Continue with First start.

On a Windows computer, Hyper-V, Windows Subsystem for Linux 2, or Virtualization-based security can hold the hardware virtualization that VirtualBox needs for the nested setting; VirtualBox then runs slowly and virtual machine devices do not start. Turn those Windows features off, or run the appliance on VMware Workstation or a Proxmox VE server instead.

First start

1 **Wait for the platform**

The console shows the ONEP banner above the operating system's login prompt. It shows the edition, version and build, a Status line, and the address to open. The Status line reads *Platform ready* when the platform is up. The address line refreshes every five minutes, so it follows a DHCP change. You do not need the console login.

2 **Open the address**

`https://<address>/` in a browser. The certificate warning is expected: the appliance created its own certificate on first boot.

3 **Create the administrator password**

The first time you open the address, ONEP shows **Create the administrator password** before anything else. Type a password of at least 12 characters, type it again, and choose **Create and sign in**. ONEP does not generate a password: nothing is shown on the console and nothing is written to a file. Until the password exists, whoever opens the address first can create it, so do this step yourself right after the appliance starts.

4 **Complete the first-time setup**

> ONEP then opens the first-time setup: Agreement, License, Network, ONEP Assistant and Ready. You must accept the agreement. You can skip License, Network and ONEP Assistant and set them later in Settings.

The account is `admin`; sign in with it, and the password you created, from then on. Continue with First boot and network and After install. Shut the virtual machine down with the hypervisor's shutdown, not a power-off. The appliance stops its running virtual machines and its services first.

Growing the disk

Images and environments live on the appliance's disk. If you need more room, enlarge the virtual disk in your hypervisor, before or after the first boot. On its next boot the appliance grows its file system to use the new space automatically; there is nothing to do inside the appliance.

Check it worked

After you have created the administrator password, from a machine that can reach the appliance:

```
curl -sk https://<address>/api/system/version
curl -sk https://<address>/api/system/edition
```

The first returns the product, the version, the build and the edition. The second shows the edition and `"runtime_enabled":true`. In the web interface, **Settings › Status** shows **Virtualization: Ready** when nested virtualization works.

If something goes wrong

Symptom	Likely cause	What to do
The banner says virtual machines are not available until nested virtualization is enabled	The hypervisor does not pass hardware virtualization through	Shut down; set CPU type `host` (Proxmox VE), turn on the virtualization setting (VMware Workstation) or **Enable Nested VT-x/AMD-V** (VirtualBox); start again
No address on the console banner	No network card, or no DHCP on its network	Check the network card and its bridge or network type
SSH refused	By design: the firewall allows only the web ports	Use the web interface and the hypervisor's console

More in Troubleshooting.

INSTALLATION

The ISO installer

ONEP installs from the OVA. An ISO installer is not part of this release.

ONEP installs from the OVA. An ISO installer is not part of this release. See Install from the OVA.

INSTALLATION

First boot and network

What happens on the first boot, how to sign in, and how to set the management address.

What happens on the first boot

On its first boot the appliance gives itself a fresh identity and starts the platform. It creates its own TLS certificate and key, a new machine ID and new SSH host keys, so no two appliances share an identity. It does not set a password for you: you create the administrator password yourself, in your browser, the first time you open the appliance. Nothing of this is baked into the image.

Wait until the web interface answers. When the platform is up, the virtual machine's console shows the ONEP banner above the login prompt. It shows:

- a **Status** line: *Starting — no start-up report yet*, *Platform ready* with the start-up time, or *Platform not ready* with the step that did not complete. If the installation did not finish, the line says *Installation incomplete*;
- a **Virtual machines** line, only when nested virtualization is not available, saying that virtual machines are not available until it is enabled on your hypervisor;
- the address to open in a browser, `https://<address>/`.

The address line refreshes every five minutes, so it follows a DHCP change. The console login prompt below the banner is for the operating system account created at install, not for ONEP; you do not need it.

On every start the appliance also checks the size of its virtual disk. If you enlarged the disk in your hypervisor, it grows its main partition and file system to use the space. It does this only when the system disk is a plain partition, and it never stops the start-up.

When you shut the virtual machine down from the hypervisor, the appliance powers off running devices and stops its services within a short time limit before the system halts. Shut down from the hypervisor rather than cutting power.

The first-time setup

The first time you open the address, ONEP shows its setup pages in place of the sign-in page. Nothing else in the product works until the agreement is accepted.

Create the administrator password

1. **Open the address in a browser**
   A current Chromium-based browser is the tested default.

2. **Accept the certificate warning**
   The appliance uses the certificate it created on first boot, which your browser does not know yet. This is expected on every install.

3. **Choose a password**
   The page is headed *Create the administrator password* and has two fields, **Password** and **Confirm password**. Use 12 to 72 characters. A line under each field tells you what is missing: *At least 12 characters.*, *Meets the requirements.* or *The passwords do not match.*

4. **Choose Create and sign in**
   The account is always named `admin`, and you are signed in at once. ONEP does not generate a password: nothing is shown on the console and nothing is written to a file.

Until the password is created, whoever opens the address first can create it, so do this step yourself right after the appliance starts. The page works once. Afterwards it says *The administrator password has already been set. Sign in instead.*

The setup steps

After you sign in, **First-time setup** lists six steps down the left side: Agreement, Administrator, License, Network, ONEP Assistant and Ready. The header shows *Step n of 6*. The Administrator step is already done, because you created the password. The page keeps your place on the appliance, so a reload, another browser or a restart resumes at the first step you have not finished. Signing in before the setup is finished sends you back to it.

Step	What you do	Skip for now
Agreement	Read the agreement. The checkbox *I have read and accept this agreement* turns on when you scroll to the end. Choose **Continue**. Until you accept, the platform answers *Finish the first-time setup to use ONEP.*	No
License	Choose **Choose license file** and select `onep.lic`. The **This appliance** card then lists the edition, seats, expiry and who the license was issued to. See Licensing.	Yes. The appliance runs as Community until you install a license.
Network	Choose **Automatic (DHCP)**, which is recommended, or **Static address** and fill in Address, Subnet (prefix), Gateway, Primary DNS and Secondary DNS. The **Detected address** card shows the address you are using now. If you change the address, a confirmation tells you that this session ends and you reconnect at the new address. If nothing changes, the wizard does not touch the network.	Yes
ONEP Assistant	Choose **Model on this appliance**, which is recommended, or **External AI service (your own account)**, which asks for Service address, Model name and Key. The key is stored on the appliance and never shown again. Prompts leave the appliance when an external service is used. See AI Generator.	Yes
Ready	Shows the address to bookmark and a short list of what to do first: register a device image, create an environment, power it on and open a console, and confirm a backup ran. It names any step you skipped, and warns if nested virtualization is not available. Choose **Open ONEP**.	Not applicable

Back returns to the previous step. A step you skip is recorded, and each one can be completed later in Settings.

Sign-in

After the first-time setup, you sign in on the sign-in page. It has **Username or email** and **Password** fields and a **Sign in** button, and under the form one line with the product, edition, version and build.

1. **Sign in as `admin`**
   with the password you created.

2. **Enter the two-factor code, if you turned it on**
   The page asks for **Two-factor code**, the six digits from your authenticator app. Choose **Verify & sign in**, or **Back** to start again.

3. **Set a new password, if asked**
   If a password change is required, the page shows *Set a new password*: at least 12 characters, different from the current one. This step cannot be skipped.

Turn on two-factor authentication under **Settings › Account** with **Set up two-factor**. On Community and Lite the administrator is the only account, so the page points you to hello@onep.io to reset two-factor.

After the first sign-in you set everything else in Settings: the license in **Licensing**, the management address in **Network**, and the AI source in **AI**.

The management address

The appliance has one management interface. It is the address you and your browser use, and the only address the appliance needs on your network. Environments do not use it: each one runs on its own isolated virtual network.

DHCP

On first boot the appliance takes an address by DHCP on its first network interface. **Settings › Network** shows it under **Management interface**, with the address, gateway and DNS servers it received. That is fine to keep. If you keep DHCP, reserve the address in your DHCP server so it does not move; if it does move, the console banner shows the new one within five minutes.

Static address

1. **Open Settings › Network**
   as an administrator. **Management interface** shows the live address, gateway and DNS servers.

2. **Set Address mode to Static address**
   and enter **IP address**, **Subnet (prefix)**, **Gateway** and **Primary DNS**. **Secondary DNS** is optional. The prefix is a number from 1 to 32.

3. **Choose Apply static IP**
   and confirm. Your browser session drops, because the address it was using changes. Open the new address to sign in again.

To go back to DHCP, set **Address mode** to **Automatic (DHCP)** and choose **Use DHCP**. The message on the page says to check your DHCP server for the new address.

ONEP puts the previous settings back if the appliance cannot reach its gateway about 25 seconds after the change. If the live network state cannot be read, the page says *The live network state could not be read just now; these are the last saved values.*

Network cards

The management interface is the only address ONEP asks you to set. On an appliance that is not on Community or Lite, **Settings › Advanced** has an **Environment uplink** card: the network card environments use to reach your network. On Community and Lite the cloud node on the canvas is the uplink, and the card is not shown.

> **REMOTE ACCESS IS SEPARATE**
> The Network tab only sets the address on your LAN. Publishing the appliance outside your network is a deliberate step in **Settings › Remote access**. See Remote access.

What is open on the network

- The host firewall opens `80/tcp` and `443/tcp`, and a WireGuard UDP port when remote access is enabled. Everything else inbound is closed.

- Device console ports are closed; consoles go through the web interface.
- The firewall does not open SSH. Use the web interface, and the hypervisor's own console for the virtual machine.

The full list is in Network and ports.

Check the install

From a machine that can reach the appliance, after you have created the administrator password:

```
curl -sk https://<address>/api/system/edition
```

The reply names the edition and the limits it sets. On Lite it includes `"edition":"lite"` and `"runtime_enabled":true`. On Community it includes `"edition":"community"`. If the edition is not the one you bought, the license did not install; see Licensing.

INSTALLATION

After install

Install your license, run a first environment, and know how updates work.

Once you can sign in, three things are left: install your license, run a first environment to prove the appliance works end to end, and know how the appliance is kept up to date.

1. Install your license

1. **Open Settings › Licensing**
   as `admin`.

2. **Choose Install license file...**
   and select your `onep.lic`. ONEP verifies it before saving anything and confirms the edition, seats and expiry.

3. **Check the edition**
   The interface reloads with the new edition; no restart is needed.

Without a license the appliance runs as Community, so Community needs no license file. If you use Cisco devices, upload your own license on the **Cisco IOL license** card on the same tab. You may have installed the license already in the License step of the first-time setup. See Licensing.

2. Check the appliance

Open **Settings › Status**.

- **Virtualization**, under System information, should read *Ready*. If it does not, nested virtualization is not enabled on your hypervisor; see Requirements and sizing.
- Under **Service health**, Database, Cache and Background tasks should read *Online*. The ONEP Assistant reads *Not connected* until you set up an AI source in **Settings › AI**, which is optional; see AI Generator. An assistant that is not connected does not make the appliance degraded.

- The **Network** card lists the network checks, such as the virtual switch service, the virtual machine service and the management network. Each should read *Healthy*.

3. Run a first environment

Deploy one small, single-device card from the **Content Hub**. Before you start, the Content Hub tells you if the appliance has too little memory for the card. Watch the build log, wait for the device to read Powered on, and open its console. The first build of a card downloads its parts from the vendor, so it needs internet and takes a while.

When you are satisfied, power the environment off and delete it. Delete removes everything it created. The Quickstart walks through this, and through building the same thing on the canvas.

4. Updates

- **Settings › Updates** shows the product, edition, version and build you run.
- The appliance is updated by installing a new ONEP release. Update checks and one-click upgrades from inside the product are not part of this release.
- Each release is described in the Release notes.

See Updates for how version numbers work.

Next

- Set the management address you want to keep: First boot and network.
- Protect the sign-in page before you publish the appliance: Users and roles and Remote access.
- Plan how you will back the appliance up: Backups and restore.

USER MANUAL

Dashboard

The first screen after sign-in: what is running, what the appliance has left, and where to start.

The Dashboard is the first screen after you sign in. It shows what the appliance is doing now and gives you one click to the common starts. Its figures refresh every few seconds by themselves.

Where you land

- After you sign in, you land on the Dashboard.
- On a new appliance, ONEP first asks you to create the administrator password, then walks you through the setup steps. **Open ONEP** on the last setup screen brings you to the Dashboard. See First boot and network.
- Administrators see figures for the whole appliance. Other users see figures for the environments they own.

The top bar

- The title names the edition: **ONEP**, **ONEP Lite** or **ONEP Community**.
- A line under the title appears only when a platform service needs attention, for example *1 service needs attention*. The number of services beside it opens Settings.
- **Notifications** (the bell) lists recent alerts with a count. **View all** opens the Audit log. With nothing to show it reads *No alerts — all clear*. The bell is for administrators and is not shown on Community and Lite.
- **Refresh** reloads every figure on the page.
- **New environment** opens the Environments list with the new environment form already open.

The counters

Four counters across the top show what the appliance is doing now:

- **Running devices**, out of all devices you have drawn.
- **Running environments**, out of all environments. An environment counts as running when at least one of its devices is running.
- **Total environments** in your library.
- **Total devices** across all environments.

A running count turns green when it is above zero. Your edition limits how many devices can run at once; drawn devices are not limited. See Limits per edition.

Start tiles

Four tiles sit under the counters. Each has a name and one line of text. The fourth depends on your edition.

Tile	Text	Where it goes
Build	Design on the canvas	The Environments list, where you create an environment and open its canvas
Deploy	From the Content Hub	The Content Hub
Import	Bring an environment from another platform	The Migration Hub
Report a Problem	Tell us what went wrong	The problem report form, the same one as **Report a problem** in the sidebar. On Lite and Pro the text also shows how quickly support responds. See Report a Problem.
Community	Ask the ONEP community	On Community this tile takes the place of Report a Problem. It opens the community in a new browser tab.

AI builder

The AI builder panel shows an example description. Select the panel, or **Generate**, to open the AI Generator, where you describe the network in plain English and review the topology it proposes. It builds a topology; it does not chat.

Capacity

The Capacity panel shows what the appliance is using:

- **CPU** as a percentage.
- **Memory** used out of the total, in GB.
- **Disk** used out of the total, in GB, for the storage volume that holds images and environments.

Each bar is green below 60 percent, amber from 60 to 85 percent and red above. Check it before you start something large.

Continue where you left off

Your four most recently created environments, each with its name, a padlock if it is locked, its device count and its power state. Select one to open its canvas, or choose **All environments** for the full list. With no environments the panel reads *No environments yet — build one, deploy, or import*.

The power state reads *Powered on* when every device in the environment is running. Any other state reads *Powered off* here, including an environment with only some devices running. The Environments list distinguishes Partial.

Recent alerts

Warnings and errors from devices and the platform, newest first, six at a time. Each shows what happened, its category and how long ago. A red dot marks an error or a failure; an amber dot marks a warning. Select an alert, or choose **View all**, to open the Audit log.

- Administrators see the panel on the full edition.

- On Community and Lite the panel is present and stays empty: *No alerts*.
- Other users do not see the panel; Continue where you left off then takes the full width.

The sidebar

The sidebar on the left reaches every area. Use the menu button at its top to collapse it to icons; ONEP remembers the choice.

- **Dashboard**, **Environments**, **Content Hub**, **Migration Hub**, **Centrum**, **AI Generator** and **Settings**.
- **Audit**, for administrators. It is not shown on Community and Lite.
- At the bottom: your user name and role, **Report a problem** (on Community, **Community** instead) and **Sign out**.

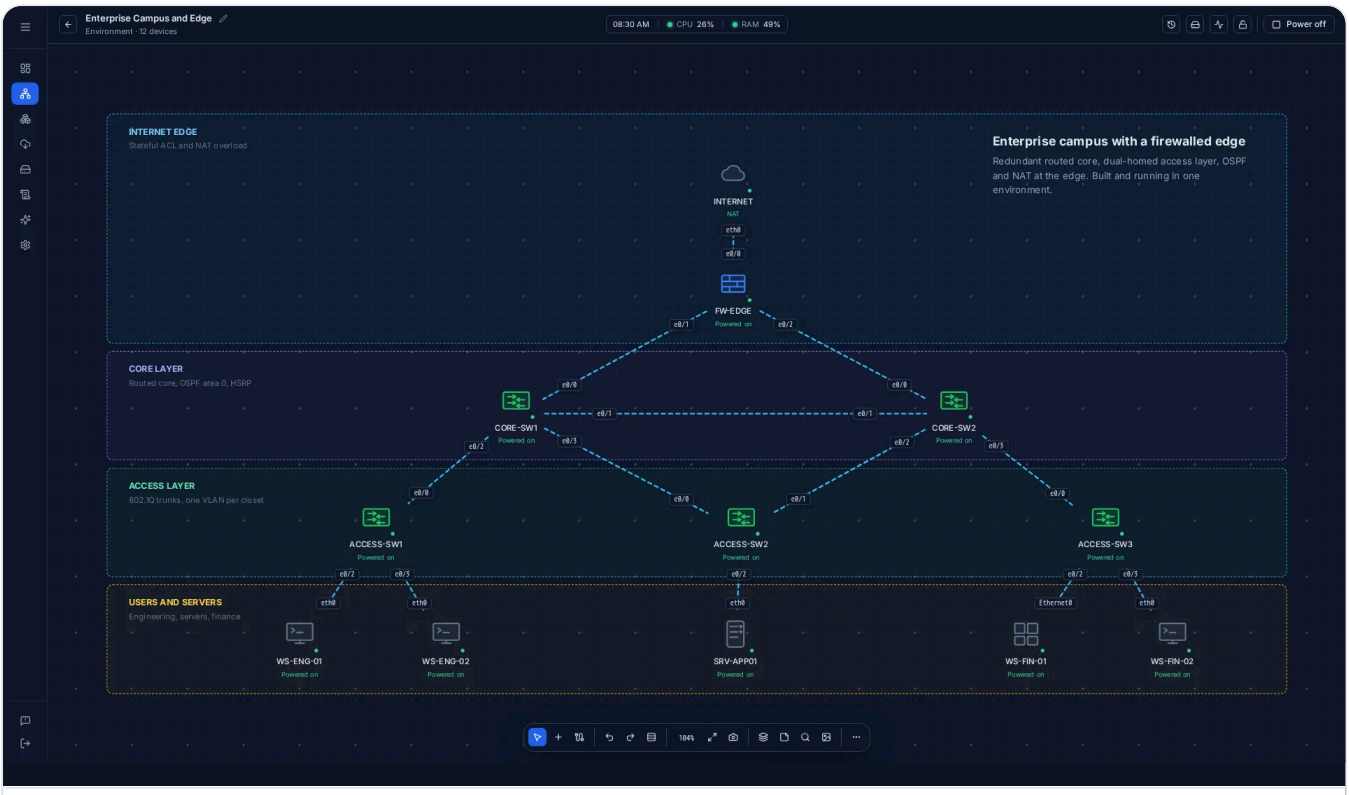
Screens your edition does not include are not shown.

USER MANUAL

Canvas

Draw devices, cable them, and run them.

Every environment lives on a canvas, whether you drew it yourself, deployed it from the Content Hub, generated it with the AI Generator or imported it. Cisco IOL and Dynamips router images, KVM virtual machines and containers share one canvas and can be cabled together in the same environment. Every control, menu row and shortcut is listed in the Canvas reference.



A running environment. Zones and notes label the layers; every link shows the interface name at both ends.

The screen

- **Top bar, left**: the back arrow (**Back to Environments**), the environment name with a pencil to rename it, and a caption such as **Environment · 12 devices**. While devices change state the caption reads **Powering on…**, **Powering off…** or, when only some run, **3 of 5 running**.

- **Top bar, centre**: the time and the CPU and memory use of the appliance, as percentages.
- **Top bar, right**: four icon buttons, **Checkpoints**, **Snapshot environment**, **Environment status** and the lock, then **Power on** or **Power off** for the whole environment. Checkpoints and Snapshot environment are hidden on some editions (see Limits per edition).
- **Toolbar**, a floating bar at the bottom: select, add a device, connect, undo and redo, align and arrange, zoom, fit view, screenshot, layers, notes, search, diagram, and the **More tools** menu (**...**). It fades while you pan, zoom or drag.
- **Minimap**: a small map of the whole drawing. It shows while the pointer is over the canvas, or always if you pin it.

The canvas receives device state from the appliance as it changes. **Refresh** (press `R`) reloads the environment on demand.

Select and move

- Click a device to select it. `Shift`+click adds to the selection. Hold `Shift` and drag on empty canvas to select everything the rectangle touches. `Ctrl+A` selects everything.
- Drag a device to move it. Positions snap to a 16 pixel grid, and a thin guide line appears when the device lines up with another one. The arrow keys nudge the selection by one pixel, or by 16 with `Shift`. Positions are saved as you go.
- Drag empty canvas to pan. Scroll to zoom.
- Click a stopped device to open a small menu with **Power on** and **Machine Settings**. Double-click a running device to open its console. Double-click a stopped one and ONEP tells you to start it first.
- With one device selected, a bar appears above it with start or stop, console, startup config, reset, delete and a **More** button for the full menu. With one link selected, the bar offers **Capture on this link** and **Delete link**. The bar hides while you drag or pan.
- Press `Esc` to close an open menu or dialog, or to clear the selection when nothing is open.

Add devices

1. **Open Add Device**
   Choose the **+** button on the toolbar, press `A`, or right-click empty canvas and choose **Add device**.

2. **Name it**
   Type a name. Names are unique within an environment.

3. **Pick a class and a role**
   The classes are Network, Network Security, Cybersecurity, Servers, Endpoints, OT/ICS, Telco, SD-WAN and Cloud. Choose a class, then a role such as Router, Switch or Firewall. **More** shows the less common roles of a class.

4. **Pick an image**
   The **Image** menu lists the images in your Centrum library that match the role. Choose **Add**.

5. **Place it**
   ONEP places the new device for you. Drag it where you want it.

A device's CPU, memory, disk and network cards come from its image and ONEP's sizing rules. Change CPU and memory, and for virtual machines more, in Device Settings while the device is powered off. When a device has no free interface left, the Connect Devices dialog offers **+ Add interface**.

Switches: native or vendor

For the Switch role, leave the image on **No image** to add the **native switch**, built into ONEP. It needs no image, adds no guest memory, needs no license and has no power state: its menu offers only **Change icon...** and **Remove...**. Choosing an image from your library adds a vendor switch instead. A vendor switch costs its own memory and gives you that switch's own behavior: real configuration storage, real `show` commands and real mirror sessions. Cisco images are bring-your-own-license.

Cable devices

1. **Start a link**
   Choose **Connect devices** on the toolbar or press `C`. Or drag from the small circle on one device's edge to another device.

2. **Pick the ends**
   In **Connect Devices**, choose a device and an interface for each end. The list offers only free interfaces. A device cannot be connected to itself.

3. **Add addresses (optional)**
   Type an IP address for either end, for example `10.0.0.1/24`. It is stored with the interface and shown on the link label.

4. **Connect**
   The link appears with the real interface name at both ends.

- Several links between the same two devices are drawn side by side.
- Hover a link to see its interface names and the MAC and IP addresses at each end.
- Links are colored by type; the legend is under **... > Appearance**. While the environment runs, traffic is animated along each link that is up.
- Interface labels hide when you zoom far out, unless you select or hover a device. **Show interface labels** in the same menu turns them off completely.

Links between devices are separate segments; shared segments are supported (see below). That keeps links apart, and it is what lets you capture the traffic on exactly one link.

On a device, **More > Configuration > Disconnect all links** unplugs every cable of that device at once, and **Reconnect** plugs them back. ONEP remembers the links while they are disconnected. The same rule as for deleting a link applies: the device and the devices at the other ends must be powered off, except links to a cloud node.

Shared segments

To put several devices on one Layer 2 segment, add a native switch and cable each device's interface to it. All devices cabled to the same native switch share one segment.

Devices of different kinds (router images, virtual machines and containers) can share the same segment.

Firewalls with more than one leg

A firewall is not limited to one interface. Give it one leg per segment and cable each leg to a different switch: one towards the protected segment, one towards the cloud node, and more for further segments. You configure the firewall's own rules from its console.

Delete a link

Select the link and press `Delete`, use **Delete link** on the bar above the selected link, or right-click the link and choose **Disconnect link**. ONEP asks you to confirm.

A link between two devices can only be deleted while **both** devices are powered off, just as you would not pull a live cable and expect the guest to cope. Power off both ends, then delete the link. The one exception is a link to a cloud node, which you can remove while the environment runs.

The cloud node: the door out

An environment is sealed by default: no path to the ONEP host, your network or other environments. The only way for devices to reach beyond it is a **cloud node**. Add one from the Cloud class in Add Device. The dialog asks **How should this Cloud connect?**:

- **NAT**: outbound internet access through shared address space (100.64.0.0/10, RFC 6598). Tailscale uses the same range, so avoid overlap. Nothing on your network can reach in.
- **Bridge**: the environment joins your real network, as if plugged into your switch. Use it only when the environment must reach, or be reached from, your LAN.

The node shows **NAT** or **Bridge** under its name. Change the mode later with right-click > **Switch to NAT** or **Switch to Bridge**. A cloud node's menu also offers **Change icon...** and **Remove...**. A cloud turns on automatically when a device is cabled to it.

> **SET THE MODE YOURSELF**
> The Add Device dialog starts on Bridge. After adding a cloud node, check its mode and set NAT or bridge explicitly rather than relying on the default. An environment you meant to keep behind NAT should never end up bridged onto your LAN.

Power on and off

- **Whole environment**: **Power on** at the top right starts every device. While devices come up the button is disabled and shows progress, for example **Starting... 2/5**. When devices run it becomes **Power off**, which stops every device. ONEP reports the result, for example "Environment started — 5 of 5 devices running". The command palette (`Ctrl+K`) has the same Power on and Power off command.
- **One device**: **Power on** and **Power off** in the device menu, the start or stop button on the bar above a selected device, the power button on its row in the Environment status panel, or **Power on** in the quick menu of a stopped device.
- **Several devices**: select them, right-click one, and choose **Start**, **Stop** or **Restart**.
- **Force power off** ends a device at once, after a confirmation. **Restart** (**More > Power**) power cycles it.
- **Reset...** returns a device to its first boot. See Reset a device.

See Environments for starting and stopping from the environment list.

The device menu

Right-click a device for its menu. What appears depends on the kind of device, the state it is in and your edition. The **More** row opens a submenu of grouped rows when the pointer rests on it; it is not reachable with the keyboard alone. Rows marked *Depends on edition* are hidden or locked on some editions; see Limits per edition.

Row	What it does	Applies to
Power on · Power off	Start or stop the device.	All
Suspend · Resume	Freeze the device in memory and continue later. The row reads Resume while the device is suspended.	Virtual machines
Force power off	End the device at once, without a clean shutdown. ONEP asks you to confirm.	All
Open console	Serial, desktop or container shell in the browser. See Consoles.	Running devices
Clear message	Remove a start or crash message from the device.	Devices that carry one
Focus	Dim everything except this device and the devices linked to it. The top bar reads "Focus: name · Esc to exit". Press `Esc` or click empty canvas to leave.	All
More > Console	**Copy SSH Command** copies an ssh command for the management address of a running device. **Copy Mgmt IP** copies the address itself, or the console port when there is no address.	All
More > Power	**Restart** and **Reset...**.	All

Row	What it does	Applies to
More > Configuration	**Machine Settings** (see Editing a device), **Disconnect all links**, **Reconnect**, **Expose Containers** and **Change icon...**.	All; Expose Containers only on devices that can host containers (depends on edition)
More > Snapshots	**Snapshots...** saves and restores a device's disk. See Save points. For devices that are not virtual machines the row is disabled and points to **Use Config versions**.	Depends on edition
More > Operations	**Startup Config**, **Clone...**, **Rename**, **Export Config** and **Import Config**.	All
More > Diagnostics	**Image Details**, **View Metrics**, **View Logs**, **Packet Capture** and **Runtime Details**.	Packet Capture needs the capture permission of your role; Runtime Details is for administrators
Remove...	Delete the device after a confirmation. This cannot be undone.	All

Several rows open a dialog:

- **Clone...** asks for a name (the default is the device name plus "-copy") and offers **Also copy this device's current links**. ONEP reports how many links were copied and how many were skipped.
- **Change icon...** offers router, switch, firewall, server, linux, windows, pc, container and cloud.
- **Image Details** shows the image name, vendor and version, its badges, and a link to the full details in Centrum.
- **View Metrics** shows live CPU and memory use of the device, refreshed every two seconds, and its status, vCPU, RAM, console port and management IP.
- **View Logs** shows the device's log lines. **Runtime Details** shows how the device runs on the appliance, in a form you can copy.

- **Rename** asks for a new name.

Editing a device

Choose **Machine Settings** to open **Device Settings**: name, icon, device type, CPU, memory, the image, and under **Advanced settings** the hardware options of the device. The fields are listed in the Canvas reference. A device that is running locks its settings; **Stop & edit** in the dialog stops it so they can be edited. The image can only be changed while the device is stopped.

Device type here sets the type of this one device and which images the Image menu offers. The class and type of an image itself are set in Centrum, from the image's Edit menu; see Centrum.

Startup configuration

Startup Config opens an editor for the configuration a device boots with. It is applied when the device boots and again after a reset. The buttons are **Copy**, **Download .cfg**, **Import .cfg** (loads a file into the editor; press **Save** to apply it), **Cancel** and **Save**. If a save would replace a saved configuration with an empty one, ONEP asks you to confirm. Where versions are kept, saving keeps the previous text as a version and the dialog lists them under **Version history**: save the current text as a version with a note, restore, download, protect from deletion or delete a version.

Export Config downloads the configuration as a `.cfg` file without opening the editor, and **Import Config** replaces it from a file. Select several devices to export all their configurations as one zip, or to import one file into all of them. Saving, exporting and version history depend on your edition; see Limits per edition.

A small colored dot at the top left of a device marks an event on it, for example a saved configuration that ONEP kept because the captured one came back empty, or an image that was substituted at import. Select the dot to read the reason, open the startup config where that helps, or **Dismiss** it.

Reset a device

Reset... returns a device to its first boot. The dialog lists what is kept (the device, its interfaces, links and MAC addresses, its saved configuration and versions, its position)

and what is removed (its disk state; for a container, the container is recreated from its image). For a container you can also tick **Also reset persistent data**, which is off by default. Type the device name to confirm. The device must be powered off first.

Several devices at once

Select two or more devices and right-click one of them. The menu offers **Start**, **Stop**, **Restart**, **Open consoles**, **Export configs**, **Import config to all**, **Align** (horizontal, vertical or grid), **Set icon**, **Lock positions** (the row reverses once positions are locked) and **Delete...**. Delete refuses to run while any selected device is running, and while the environment is locked. `Ctrl+C` and `Ctrl+V` copy and paste a selection; pasted devices are new devices of the same type and image, named with "-copy", without links or configuration. `Ctrl+D` duplicates the selection.

Save points

- **Config versions**: named copies of a device's startup configuration. See Startup configuration.
- **Checkpoints** (top right): a named set of saved configuration versions for every device that keeps a text startup configuration. Give it a name and an optional note, then **Save**. Restore needs every covered device to be stopped; when some run, a **partial** link restores only the stopped ones. Devices without a text configuration are skipped and named in a message. Deleting a checkpoint keeps the saved versions.
- **Snapshots** (device menu): a named copy of a virtual machine's disk. Take or revert one only while the device is stopped. **Snapshot environment** at the top right takes one for every virtual machine in the environment and skips the other kinds.

Checkpoints and snapshots depend on your edition; see Limits per edition.

Environment status

The **Environment status** button at the top right opens a small panel at the top right of the canvas. It stays open or closed per environment in your browser.

- A line with the number of devices running, failed and stopped.

- A line by device type, such as Router, Switch, Virtual machine or Container, with how many are on, off or failed.
- Appliance CPU, memory and disk use. The numbers dim while ONEP waits for a new sample.
- One row per device, running devices first: a power button, a status dot, the name (select it to find the device on the canvas), a **Console** button and, for virtual machines, a **Desktop** button. Powering off a running device asks you to confirm on the row. The Console and Desktop buttons stay grey until the device is on.

Labels, zones and layout

Annotations label parts of a topology, as in the zones above. Open **... > Annotate...** to add them. They are saved with the environment.

- **Add text** places a text label. Double-click it to edit and press `Enter` to finish.
- **Shapes** offers **Rectangle**, **Circle**, **Line**, **Arrow** and **Dotted line**. A rectangle with a label is a zone. Double-click a rectangle or circle to type a label in it. Drag the handles of a selected rectangle or circle to resize it (sizes snap to the grid), or the round handles at the ends of a line or arrow to move the ends.
- With a shape or text selected, the Annotate menu shows **Border style** (solid or dotted), a color picker with presets and, for text, **Font** and **Size**. Border style changes the selected shape. Color, font and size set what the next shape or text you add starts with.
- Right-click a shape or text to recolor it (**None**, **Neutral**, **Accent**, **Green**, **Amber**, **Red**, **Blue**, **Gray**, **Outline**), set its text size (S, M, L, XL), **Bring to front**, **Send to back**, step it **Forward** or **Backward** under **More**, or **Delete** it.
- An imported environment can carry pictures from its source file. They appear as resizable shapes.
- **Notes** on the toolbar opens free text that is saved with the environment. **Layers** lists every device and shape and lets you hide or show each one. **Search** finds a device by name and centers it. **... > Task** shows the task text and description an imported environment carries.

Layout:

- **Align & arrange** on the toolbar aligns and distributes the selected devices, snaps devices to the grid, arranges the whole drawing by connectivity, and changes the front-to-back order. **Arrange by connectivity** moves devices only; it never changes the wiring.
- When ONEP opens an environment whose devices have no positions, such as a newly imported one, it asks **Tidy this layout?** with **Arrange** and **Dismiss**.
- The zoom button shows the zoom as a percentage. Select it for a slider with plus and minus, or double-click it to fit the drawing. **Fit view** (`Ctrl+F`) fits everything in view, and does not zoom out below 60 percent so device names stay readable.
- Canvas themes are **Navy**, **Graphite** and **White**, with a grid you can show as **Dots**, **Lines** or **Plain**. Both choices are under **... > Appearance** and are remembered in your browser.
- **Screenshot** saves the whole drawing as a PNG file.
- **Undo** and **Redo** step through moves, alignment, shapes and text. They do not bring back a deleted device or link.

Containers inside a device

Some devices host containers. **Expose Containers** in the device menu turns container visibility on or off for such a device. The change applies when the device next starts, so power cycle it to apply. When a running host has containers to show, selecting it opens a panel listing them with their image, role and address. Select a running container to open a shell in it, or right-click it for **Open console**, **View logs**, **Start** or **Stop**, **Restart** and **Copy exec cmd**. The panel also has an **Expose** switch, **Show on canvas** (draws each container as a device linked to the host; **Hide on canvas** removes them) and **Open UI**. Expose depends on your edition; see Limits per edition.

Diagram pictures

An environment can carry a diagram picture, for example one that came with an imported environment. The image button on the toolbar reads **Add a diagram picture** until there is one; choose a PNG or JPEG file. After that it reads **View diagram** and opens the picture. Hotspots on the picture open a running device's console, or offer to start a stopped one. **Edit hotspots** lets you mark a device by clicking a spot on the picture and

choosing the device, move or resize a hotspot, and delete it. **Add page** adds another picture, the arrows step through pictures, and the bin deletes the current one.

Locking an environment

Lock an environment when it must not change, for example while a class is using it. The lock icon at the top right turns the lock on and off. While it is locked the topology is frozen: you cannot add, delete or move devices, add or delete links, edit configuration or change shapes and text. Starting, stopping and consoles still work. A banner at the top of the canvas says so. The owner of the environment and administrators can release it from the banner or the lock icon.

Packet capture

Select a link and choose **Capture on this link**, or open **More > Diagnostics > Packet Capture** on a device and pick one of its links. See Packet capture.

USER MANUAL

Canvas reference

Every canvas control in the words the canvas uses: toolbar, menus, shortcuts and device settings.

Every control on the canvas, in the words the canvas uses. For how to draw, cable and run an environment, read Canvas. Rows marked *Depends on edition* are hidden or locked on some editions; see Limits per edition.

Top bar

Control	What it does
Back to Environments	Returns to the environment list.
Environment name, pencil	The pencil (**Rename environment**) turns the name into a field. `Enter` saves it, `Esc` cancels.
Caption under the name	Reads "Environment · N devices". It changes to Powering on..., Powering off..., Cancelling... or "N of M running" while devices change state, and to "Focus: name · Esc to exit" in focus mode.
Time, CPU, RAM	The time and the CPU and memory use of the appliance, with a colored dot (green, amber from 50 percent, red from 85 percent). The numbers dim while ONEP waits for a new sample.
Checkpoints	Opens the checkpoint list: a name and an optional note, **Save**, then one row per checkpoint with restore and delete. Depends on edition.
Snapshot environment	Takes a named disk snapshot of every virtual machine in the environment. Other kinds of device are skipped. Depends on edition.
Environment status	Opens or closes the status panel.
Lock	Turns the lock on or off for the environment's topology. A locked environment shows an amber lock and a banner on the canvas.
Power on · Power off	Starts or stops every device. The label changes to Starting... with a count, Stopping... or Cancelling... while devices change state.

Toolbar

The toolbar floats at the bottom of the canvas. It fades while you pan, zoom or drag. Hold the pointer over a button to see its name and shortcut.

Button	What it does	Shortcut
Select	Returns to plain selection and closes Add Device or Connect Devices.	
Add device	Opens **Add Device**.	`A`
Connect devices	Opens **Connect Devices**.	`C`
Undo · Redo	Step back and forward through moves, alignment, shapes and text, up to 50 steps. They do not bring back a deleted device or link.	`Ctrl+Z` · `Ctrl+Y`
Align & arrange	Opens the align menu, described below.	
Zoom (shows a percentage)	Opens a vertical slider with plus and minus. Double-click the button to fit the drawing. The slider covers 25 to 200 percent in steps of 10; scrolling zooms between 20 and 200 percent.	
Fit view	Fits the whole drawing in view. It does not zoom out below 60 percent.	`Ctrl+F`
Screenshot	Saves the whole drawing as a PNG file named after the environment and the date.	
Layers	Lists every device and shape. Select a device name to find it on the canvas; **Hide** and **Show** toggle each item.	
Notes	Free text, saved with the environment.	
Search	Find a device by name. `Enter` or a click selects the device and centers it.	

Button	What it does	Shortcut
Add a diagram picture · View diagram	Adds a PNG or JPEG diagram, or opens the diagram when there is one.	
More tools (...)	Opens the menu described below.	

Align & arrange

- **Align selection**: Align left, Align right, Center horizontally, Align top, Align bottom, Center vertically. Needs two or more selected devices.
- **Distribute horizontally** and **Distribute vertically**. Need three or more.
- **Snap to grid (16px)**: snaps the selected devices, or all devices when none is selected.
- **Arrange by connectivity**: lays out the whole drawing by how devices are linked, then fits it in view. It moves devices only and never changes the wiring.
- **Bring selection to front** and **Send selection to back**.

More tools

Row	What it does
Appearance...	**Canvas theme** (Navy, Graphite, White), **Grid style** (Dots, Lines, Plain), **Show interface labels**, and the **Legend — link type**: Ethernet, Serial, Management, Uplink / Cloud and Other, each with its own line style.
Annotate...	**Add text** and **Shapes** (Rectangle, Circle, Line, Arrow, Dotted line). With an annotation selected: **Border style** (Solid line, Dotted line), a color picker with presets and, for text, **Font** (Sans, Serif, Mono, Verdana, Trebuchet, Times, Courier, Impact) and **Size** (12, 14, 18, 24, 32).
Edit...	**Copy**, **Paste**, **Delete** and **Select all**, each with its shortcut.
Customize...	A checklist of the toolbar buttons from Add device to Diagram. Untick a button to move it into this menu under **Hidden tools**. **Reset to default** ticks them all. Select and More tools are always on the toolbar. The choice is saved in your browser.
Task	Opens a panel with the task text, the description and the source of an imported environment.
Show minimap · Hide minimap	Turns the minimap on or off. You can pan and zoom from it.
Pin minimap always-on	Cycles **Auto**, **Pinned** and **Unpinned**. The minimap otherwise shows while the pointer is over the canvas. Auto pins it once an environment has more than 30 devices.
Refresh	Reloads the environment from the appliance.
Keyboard shortcuts	Opens the shortcut sheet.

Keyboard shortcuts

Shortcuts do not fire while you type in a field or while a dialog is open. On macOS use `Cmd` in place of `Ctrl`.

Keys	Action
`A`	Add a device.
`C`	Connect devices.
`R`	Refresh.
`Ctrl+K`	Open or close the command palette.
`?`	Show the shortcut sheet.
`Ctrl+A`	Select all.
`Delete` or `Backspace`	Delete the selection. ONEP asks you to confirm for devices and links.
`Esc`	Close the top-most open menu or dialog, or deselect when nothing is open.
Arrow keys	Nudge the selection by one pixel; with `Shift`, by 16.
`Ctrl+D`	Duplicate the selection.
`Ctrl+Z`	Undo.
`Ctrl+Y` or `Ctrl+Shift+Z`	Redo.
`Ctrl+C` · `Ctrl+V`	Copy and paste the selection. A pasted device is a new device of the same type and image, without links or configuration.
`Ctrl+F`	Fit the whole drawing in view.
`Shift`+click, `Shift`+drag	Add to the selection; select everything inside a rectangle.

Command palette

Press `Ctrl+K`, type, and press `Enter`. The arrow keys move through the results. The palette offers:

- **Environment**: Power on or Power off (whichever applies), Rename environment.
- **Canvas**: Add device, Connect devices, Fit view, Zoom to 100%.
- **Panels**: Toggle Layers panel, Toggle Notes panel, Toggle Search panel, Show or Hide minimap.
- **Appearance**: Theme: Navy, Theme: White, Theme: Graphite, Grid: Dots, Grid: Lines, Grid: Plain.
- **Devices**: every device by name, which selects it and centers it, and "Open console — name" for each device.

Right-click menus

Right-click on	Rows
Empty canvas	Add device, Paste, Select all, Delete selected, Refresh, Fit view.
A device	The device menu. See The device menu.
A cloud node or native switch	Switch to NAT or Switch to Bridge (cloud only), Change icon..., Remove....
One of several selected devices	Start, Stop, Restart, Open consoles, Export configs, Import config to all, Align (Horizontal, Vertical, Grid), Set icon, Lock positions (the row reverses once positions are locked), Delete....
A link	Disconnect link (deletes the link, after a confirmation), Cancel.
A shape or text	Color (None, Neutral, Accent, Green, Amber, Red, Blue, Gray, Outline), Text size (S, M, L, XL), Bring to front, Send to back, More (Forward, Backward), Delete.
A container shown on the canvas, or in the container panel	Open console, View logs, Start or Stop, Restart, Copy exec cmd.

Bar above a selected device or link

- Device: **Start this device** or **Stop this device**, **Open console** (running devices only), **Startup config**, **Reset device**, **Delete device** and **More device actions**, which opens the device menu.
- Link: **Capture on this link** (needs the capture permission of your role) and **Delete link**.

Dialogs

Add Device

Name, a class and a role, then for most roles an **Image** menu. For the Cloud class the dialog asks **How should this Cloud connect?** with **Bridge** and **NAT** instead. **Cancel** and **Add**. **Add** stays disabled until the device has a name.

Connect Devices

For each end: a device menu, an interface menu that lists free interfaces only, and an optional IP address field. **+ Add interface** appears under an end whose device has no free interface. Router images that use line cards show a note on interfaces that need a restart or add a line card at the next start. **Cancel** and **Connect**.

Device Settings

Opened with **Machine Settings**. A badge shows the kind of device. While the device runs the fields are locked and **Stop & edit** stops it. **Save Changes** applies the settings.

Field	Meaning	Applies to
Name	The device name.	All
Icon	A preset icon (router, switch, firewall, nac, ips, server, linux, linux-client, windows, pc, container, cloud, attacker, target, kali), **Browse...** for your own image, or **clear** to go back to the default.	All
Device Type	Class and role of this device. Sets which images the Image menu offers.	All
Advanced settings	Shows or hides the hardware options below.	Virtual machines and router images
Ethernet line cards	Default, or 1, 2, 3, 4, 6 or 8 cards of four ports each. Applies on the next stop and start. A badge notes that Cisco licenses are bring-your-own.	Router images with line cards
Serial line cards	Default (none), 0, 1, 2 or 4 cards. Applies on the next stop and start.	Router images with line cards
Network adapters	The number of network cards, 1 to 16. The field shows how many exist now. Saving a different number adds or removes interfaces.	Virtual machines
Machine type	Auto (image default), q35 (modern PCIe) or pc / i440fx (legacy).	Virtual machines
Firmware	BIOS (SeaBIOS), UEFI + Secure Boot + TPM, or UEFI (no Secure Boot).	Virtual machines
NIC model	Auto (vendor default), virtio, e1000, e1000e, vmxnet3 or rtl8139.	Virtual machines

Field	Meaning	Applies to
Disk bus	Auto (vendor default), virtio, sata or ide.	Virtual machines
CPU model	Auto (host-passthrough), host-passthrough, host-model, IvyBridge, Haswell, SandyBridge or qemu64.	Virtual machines
vCPU	1 to 32. The information mark shows where the value came from.	All except router images
RAM (MB)	128 to 65536. The information mark shows where the value came from.	All
Image	The image the device runs, limited to ready images of the chosen type. Locked until the device is stopped. A note appears when no ready image exists for the role.	All except cloud nodes

What a device shows

- **Status word** under the name: Powered on, Powered off, Starting, Stopping, Failed, Suspended, Didn't start or Crashed. A cloud node shows NAT or Bridge. The word hides when you zoom far out.
- **Status dot** on the icon: green when running, red when failed, grey otherwise. It stays visible at every zoom.
- **Amber dot** on the icon: the image changed and the disk was reset. Point at it for the details.
- **Event dot** at the top left of the icon: select it for the reason and a **Dismiss** button.
- **Tooltip**: a start failure or a crash message, or a hint to double-click a running device for its console.

USER MANUAL

AI Generator

Describe a network in English, review the proposed topology, then deploy it.

The AI Generator turns a plain-English description of a network into a proposed set of devices and links. You review the proposal, and ONEP creates the environment on the canvas, stopped, for you to edit and start. It builds topologies; it does not chat, and it never starts, deploys or downloads anything on its own. Open it from **AI Generator** in the sidebar.

How it works

A row of five steps across the top shows where you are: Describe, Generate, Review, Deploy and Done.

1. **Describe**
   Type what you want in English into the field labeled *Describe your network environment...*, up to 1,000 characters (a counter shows how many you have used), or select an example card to fill the field. Then choose **Generate**.

2. **Generate**
   ONEP sends your text to the AI source set in **Settings › AI** and gets back a proposed topology. A counter shows the seconds elapsed. Nothing is created yet, and the browser warns you if you try to leave the page while it works.

3. **Review**
   Check the devices and links. ONEP picks an image from your Centrum for each device; you can change it. See Review the proposal.

4. **Deploy**
   Choose **Deploy environment**. ONEP creates the environment on the canvas with every device stopped, exactly like one you drew yourself.

5. **Done**
   The page shows how many devices and links were added. **Open editor** opens the environment on the canvas; **Generate another** starts again.

Write a description that works

- Name concrete devices and counts: *"three routers in a triangle running OSPF, with a firewall to the internet"*.
- Keep it self-contained. The generator creates a new environment; it cannot see or change one you already have.
- If you use an external AI service, the text you type leaves the appliance. Leave out real addresses and names from your own network.

The **Examples** cards fill the field with a ready description. On Community and Lite the examples are *Two-router OSPF*, *Web + DB on one switch* and *Firewall between two segments*. Pro adds larger ones: *GOAD*, *GOAD-Light*, *MINILAB*, *SCCM Lab*, *NHA*, *DRACARYS*, *SOC Training*, *BGP Peering* and *OT / ICS*. A model can answer differently each time. If the result is not what you wanted, change the description or choose **Start over**.

Review the proposal

- The top of the proposal shows its name, description and the number of devices and links.
- Each device has an **image** list, filled in with the best match from your Centrum. A device with no image is highlighted amber, and **Register** next to it opens Centrum so you can add one. The list reads — *select an image* — until you choose.
- Each device also has editable **vCPU**, memory (**MB**) and disk (**GB**) fields. ONEP raises a value that is below the minimum for that kind of device when it creates the environment.
- **Total resources** adds up vCPU, memory and disk. If the totals exceed what the appliance has free, a warning says ONEP recommends more headroom but does not block you. If you raise the sizes after that check, a second note says the check has not been re-run for the new total.
- **Connections** lists every link as *device:interface* ↔ *device:interface*.
- **Deploy environment** stays off until every device has an image; the line beside it counts the devices still without one. ← **Back** returns to the description and **Start over** clears it.

Limits

Limit	Value
Description length	`1,000 characters`
Language	English only
Devices in one environment	A request for more devices than the platform allows is refused before the model is called. The message states the maximum.
AI topologies	Counted when the environment is created; some editions limit how many in any 30 days. See Limits per edition.

What it refuses

- **Anything that is not a network or security topology.** This is a deliberate scope check. The answer reads *I only build network topologies. Describe a network — e.g. "a firewall between two PCs" or "3 routers in a ring".*
- **Other languages.** A description in a non-Latin script is refused with *The assistant understands English only*. A description in Latin letters that is not English is refused with *ONEP Assistant works in English. Please describe the environment in English.*
- **Questions about ONEP itself.** The generator will not discuss the platform's internals, configuration or code.
- **Too many devices.** The answer says how many devices one environment can hold.

It also will not create images, write device configuration, or accept a topology that skips ONEP's checks: every proposal goes through the same device limit, role and link checks.

Set up the AI source

ONEP does not supply a model account or a key. An administrator chooses where the AI Generator gets its model in **Settings › AI**; the tab is visible to administrators only. A line at the top of the card shows *ONEP Assistant is connected*, *ONEP Assistant is not*

connected, *Checking the ONEP Assistant...* or, when the check does not answer in time, *The ONEP Assistant could not be checked. Try again in a moment.* The **AI source** list has two choices:

Source	What it is	What leaves the appliance
Model on this appliance	A model that runs on the appliance's own hardware. Nothing needs to be typed in.	Nothing. Your prompts never leave the appliance.
External AI service (your own account)	An OpenAI-compatible service you configure and pay for	Only the text you type, sent to your service with your key. ONEP does not receive it.

Save stores the choice.

Model on this appliance

The model runs on your own hardware. On an appliance without a graphics processor expect roughly ten seconds to two minutes per generation; a GPU is used automatically when one is present. For better accuracy, **Download recommended model (2 GB)** downloads a larger model and restarts the assistant on it. It needs 4 GB of free memory and takes a few minutes; the button shows its progress, and a message tells you when *ONEP Assistant is ready*.

External AI service

1. **Base URL**
   The OpenAI-compatible address of your service, for example `https://api.openai.com/v1` or your own gateway.
2. **API key**
   Paste your key. Once saved it is never shown again; the field reads *saved, paste to replace*.
3. **Model**

Pick from the list once the service answers, or type the model name if no list appears.

Save stays off until a base URL and a model are set. When you choose this source the card warns that prompts leave the appliance and go to your service, on your own account.

Your own model choice

Each person can pick the model their own requests use under **Settings › Account › AI preferences**. The **Model** list starts at *Server default* and offers the models the administrator allows. If the administrator has limited it to one model the list is read-only, and *Server default* is always available to switch back.

If it does not work

You see	What it means	What to do
Generation failed. Check ONEP - AI service is reachable. or *AI service is temporarily unavailable*	The model on the appliance is down or still starting, or the external service cannot be reached	Wait and try again, then check the status line in **Settings › AI** and **Settings › Status**. For an external service, check the base URL and key
AI generator is busy with a number of requests ahead of you	Other requests are being served first	Wait the time shown and try again
A request to describe the network in English, or *I only build network topologies*	The description was judged not English, or not about a network	Rephrase in English, naming devices and connections
A message that your edition allows a number of AI topology builds in any 30 days, with the date the next one is possible	Your edition limits how many environments the generator creates	Wait for that date. See Limits per edition
No model list for the external service	The service has not answered yet, or returned no list	Save the base URL, reopen the tab, or type the model name

Content Hub

Deploy ready environments from a card, built on your own appliance.

The Content Hub deploys complete environments from a card: a single appliance such as a threat-hunting stack, or a multi-device range such as an Active Directory attack range. Pick a card, answer a short wizard, and ONEP builds the environment and opens it on the canvas. Open the Content Hub from **Content Hub** in the sidebar.

A recipe, not a download

Each card is a recipe. The first time you deploy an appliance card, ONEP builds it on your appliance from the project's own source and installer, then registers the finished image in Centrum. That first build needs internet access from the appliance and takes a while. A card that has not been built yet shows *The first build takes a while.* when you point at its size line.

Later deploys of the same card reuse the finished image. The card shows a *Ready* chip, and the wizard offers *Already baked — registered in Centrum, deploys in seconds* as the base. If the operating system image a recipe builds on is not in Centrum, the wizard fetches it from Discover first. That fetch does not use one of your monthly Discover downloads.

For content that comes from an upstream project, the wizard names the project under its step list (*Built from*) and again on the finish screen.

Find a card

- **Search blueprints** in the page header matches a card's name, description and tags.
- The category buttons filter the list: **All**, **Cybersecurity**, **OT/ICS**, **Telco** and **Cloud**.
- The **Tier** buttons filter by the tier chip: **All tiers**, **Official**, **Community** and **Premium**.
- Cards are shown 16 to a page. When there is more than one page, **Back** and **Next** appear under the list with *Page X of Y* and the number of cards.

- If nothing matches, the list says *No blueprints match*. **Clear filters** clears the search and the category.

Reading a card

- **Title and description.** The description is cut to three lines.
- **Chips** at the top right: the tier (*Official*, *Community* or *Premium*), *Ready* when the card has already been built on this appliance, and a chip on a card that is not available yet. A range built on Microsoft evaluation media also carries an *Evaluation media* chip; the finish screen repeats that the media is not for production use.
- **Tags** such as SIEM, Blue team, CVE or Range. Up to three are shown, then *+N* for the rest.
- **Size line:** the number of devices and approximate memory, with *built* added once the card has been built on this appliance. A collection of ranges shows its number of variants instead.
- **One action:** normally **Deploy**. Other actions and lines you may see in its place are described below.

You see	What it means
Deploy	Opens the deploy wizard for the card.
Preview	On a card that is not available yet. Opens a dialog that reads the project's public repository. See Preview a card.
Take a look	On a range that is in development. Opens its description only. The range cannot be deployed in this release.
Runs on ONEP Pro / Runs on ONEP Lite	Your edition cannot run this card. See What your edition includes.
Needs N GB RAM	The appliance has too little memory for this card. See The size check.

What your edition includes

Every card stays visible on every edition. The edition decides what you can deploy:

- **Cards with several devices and every range** show *Runs on ONEP Pro* on Community and Lite.
- **A single-appliance card larger than your edition's maximum device size** shows *Runs on* followed by the smallest edition that can run it.
- **Deploy allowance.** On an edition that limits Content Hub deploys, a line under the page title shows what is left, for example *1 of 2 Content Hub deploys available · counted over 30 days*. When it is used up the line reads *No Content Hub deploys left* and gives the date the next one is possible. A deploy is counted when the device is placed on the canvas. Editions without a limit show no line.

The numbers for each edition are on Limits per edition.

The size check

Before a single-appliance card is offered, its declared size is compared with the appliance itself. The check uses the appliance's total memory and cores, not what is free at that moment.

- **Memory refuses.** If the card could never run on this appliance, the card shows *Needs N GB RAM* in place of Deploy. N is a memory size you can buy; it includes a reserve for ONEP itself. If a deploy is started another way, the server refuses it with a message of the form *Needs a box with N GB RAM*.
- **Cores warn.** If the appliance has fewer cores than the card recommends, a line under the card reads *Runs slowly: N cores recommended*. The deploy is still allowed.

If the check cannot read the appliance's memory it does not block the card.

Deploy a single appliance

Choose **Deploy** on an appliance card. The wizard opens with its steps listed on the left. Use **Back** and **Continue** to move, or select a finished step on the left to return to it. Close the wizard with the close button or Esc; after the first step it asks *Discard this deploy setup?* first.

1 **Environment**

"Where does this environment live?" Choose **New environment** (a clean canvas, named *<card> environment* unless you change it) or **Existing environment** and pick one from the list. A line shows how many environments you have used. When you are at the limit, Continue is off and the wizard tells you to delete an environment or choose an existing one.

2 **Variant**

"Which <card> edition?" Most cards have one entry, *Standard*, already selected. Enterprise SIEM (HELK) offers four: *Basic core*, *Core + ElastAlert*, *Core + Spark + Jupyter* and *Full suite*. Each shows its memory.

3 **Resolved plan**

"Here's what will land." Choose the **Base operating system**: the already built image (*Already baked*), a server image you have in Centrum, or *Get Ubuntu server from Discover*. If Centrum has no suitable image, the step says the operating system will be fetched from Discover first. Then set the appliance's **IP**, **Subnet**, and optionally **Gateway** and **DNS**; leave the last two empty to keep the appliance isolated. The plan lists the device with its vCPU, memory and disk and a badge: *edition preset* or *your override*. The pencil opens **vCPU**, **RAM MB** and **Disk GB** fields. The recipe's own minimums still apply.

4 **Companions**

"Complete the environment." Turn on **Endpoint** to add a workstation you work from, and choose its image from Centrum. Once an endpoint is on, a **Switch** option appears to connect the two; nothing is chosen for you, so pick a switch image or turn it off. **Container access** lets you inspect the appliance's containers without giving them a path out; it is on by default for appliance cards. Environments are isolated: if devices need the internet, add a Cloud on the canvas afterwards.

5 **Review**

"One last look." Shows the number of nodes, total memory, and the network (*Air-gapped*), then lists the environment, edition, base operating system, switch, endpoint and container access (shown as *Container expose*). **Deploy environment** starts the build.

6 **Deploy**

The build log and progress bar. See The build log.

The wizard checks your environment limit before it starts, and the deploy is also checked against your edition's device size and Content Hub allowance. A refusal comes back as a message in the wizard and no build starts.

Security Onion

The Security Onion card works differently. **Deploy** looks in Centrum for a Security Onion image. If it finds one, it places a Security Onion device on a new canvas and opens that environment. If it does not, it starts the download from Discover and opens Centrum; deploy the card again when the download has finished.

Deploy a range

Ranges are collections of environments, such as GOAD and the Malcolm NSM Range. A range card shows its number of variants and opens a shorter wizard with four steps: **Environment** (name the new environment), **Variant** (choose one scenario), **Review** and **Deploy**. A range always creates a new environment. Its machines, addressing and wiring come from the recipe, so there is no Companions step.

The Variant step lists each scenario with its device count, memory and a description. The description states how much free memory the appliance needs for that variant; check it against your hardware before you continue. Review shows the variant, devices, memory and the air-gapped network. The GOAD family builds its Windows machines from Microsoft 180-day evaluation media, and the wizard says so on Review and on the finish screen.

Switch choice

A range whose recipe includes switches adds a **Range switch** choice on the Review step. One choice applies to every switch in the range. The default is the **native switch** built into ONEP, with nothing to license. You can instead pick a Layer 2 switch image from your library; those images are listed as customer-licensed and are yours to license.

Preview a card

Preview on a card that is not available yet opens a dialog titled *Deploy <card>* that needs internet access. It scans the project's public repository, and then:

1. **Pick an environment**
   If the repository defines more than one, choose one. A repository with nothing ONEP can deploy says why and what you can do instead.

2. **Check the images**
   Each device appears with a green or amber dot. Green means a matching image is in Centrum. For an amber device you can use **Get <image>** to start a Discover download, **Register your own** to open Centrum, or **Skip**. **Re-check library** matches again.

3. **Deploy environment**
   Stays off until every amber device has an image or has been skipped.

The build log

After you choose **Deploy environment**, the wizard shows *Building your environment*: one line per step and a progress bar. A line turns green when the step has been confirmed, and amber when a step did not land. While a card is being built, the bar follows the real build; a deploy that reuses a finished image still shows this screen for about two minutes. Short notes about the project and about how ONEP builds appear underneath while you wait. You cannot close the wizard while it is building.

When it ends you see one of two screens:

- **Your environment is ready** when every step landed.
- **Deployed with gaps** with a list of what did not land. Everything else is up. If a feature that depends on a missing step does not behave, check it from the device's console.

How to get in lists the logins for the deployed machines. A password is hidden until you press the eye icon (*Reveal password*); the copy icon (*Copy password*) puts it on the clipboard without showing it. **Enter environment** opens the canvas. **Close** returns to the Content Hub.

After the deploy

- The environment is on your canvas like any other. Start, stop and open consoles as usual; see Environments.
- All machines of a range share one Layer 2 segment. For a routed, multi-segment design, build it on the canvas.
- Only one build runs at a time. If you start a card while another card is being built, the deploy is refused with a message naming the one in progress; try again when it finishes. A range deploy and a card build on the same appliance also compete for processor time.

Delete a deployed environment

A deployed environment is deleted from the Environments page like any other. An image cannot be removed from Centrum while an environment uses it, so delete the environment first.

USER MANUAL

Environments

Start, stop, suspend, reset, restart and delete environments and the devices in them.

An environment is a topology and the devices in it, whatever built it: the canvas, the Content Hub, the AI Generator or an import. This page covers the Environments list and the power actions for environments and devices.

The list

Open **Environments** in the sidebar. Administrators see every environment on the appliance. Other users see the environments they own. The header shows how many environments you have and how many your license allows; see Limits per edition.

- **Search** matches environment names, descriptions and folder names. The cross in the box clears it.
- **Any status** filters the list to Running, Stopped or Failed. Running means at least one device is running. Stopped means no device is running and none has failed. Failed means at least one device has failed.
- **Sort** offers Recently updated, Name (A–Z), Name (Z–A), Newest, Oldest and Most devices.
- The **refresh** button reloads the list at once. The list also refreshes about every six seconds by itself.
- **Collections** and **Folders** on the left group environments; see Folders and collections. The **Running** and **Total** counts at the bottom of the left column show how many environments have every device running and how many you can see.
- The checkbox at the left of the search box selects every environment that matches the current search and filters.

Each row shows:

- the name, with a padlock when the environment is locked, and a **REC** tag when session recording is on;

- the power state (see Status words);
- the description, the folder, the number of devices and links, a breakdown such as *12 running · 2 failed · 6 stopped*, and how long ago the environment last changed.

Select a row to open its canvas. A **Suggest** chip appears on an environment in Uncategorized. It proposes Network Engineering or Cyber from the devices in it. Select the chip to file the environment there.

With *All Environments* selected, rows are grouped by collection. Select a group heading to collapse or expand it. With no environments the list reads *No environments yet* and offers **Create your first environment**. A search or filter with no result reads *No matches*.

New environment

1. **Choose New environment**
   The button is in the top bar of the list. It is disabled when your license has no environments left; the tooltip says so.

2. **Fill in the form**
   Name is required. **Collection** offers Network Engineering, Cyber, Industrial / OT, Training, Testing and Uncategorized. Choose **New folder...** and type a name to create a new collection. **Description** is optional.

3. **Choose Create Environment**
   ONEP creates an empty environment and opens its canvas.

The **New environment** button on the Dashboard opens the same form.

Row actions

Point at a row to show its actions. Each action acts on that one environment.

Control	What it does
Checkbox	Selects the row for the bulk bar.
Session recording	Turns session recording on or off for the environment. It applies to consoles opened or reopened afterwards. Not available on Community and Lite; see Limits per edition.
Move to collection	Files the environment in another collection.
Move to folder	Moves the environment into a folder, or to *(No folder)*. It appears once at least one folder exists.
Open editor	Opens the canvas.
Power on · Power off	Powers every device on or off. While an environment is starting, the button reads *Cancel boot* and stops the devices that are still coming up.
Reset environment	Returns every device to its first boot. See Reset to first boot. It is shown while *All Environments* is selected under Collections, and is enabled only while the environment is powered off.
Rename	Opens a dialog with the current name. **Save** applies the new name.
Duplicate	Makes a copy named *name (copy)*. See Organize and protect. The button is disabled, and its tooltip reads *Power off to duplicate*, while the environment is powered on or changing state. It acts while *All Environments* is selected under Collections; in a single collection, select the row and use **Duplicate** in the bulk bar.
Delete	Deletes the environment. See Delete. The button is disabled while the environment is powered on or changing state.

Bulk actions

Select one or more rows, or use the checkbox at the left of the search box. A bar appears above the list with the number selected and **Clear**. Each action runs once per environment, and one message at the end reports how many succeeded and which failed.

Button	What it does
Start	Powers on the selected environments. Environments that are already running or starting are skipped.
Stop	Powers off the selected environments. Environments that are already stopped are skipped.
Duplicate	Copies every selected environment that has nothing running.
Move to...	Moves the selected environments to a folder, or to *(No folder)*.
Delete	Lists what will be deleted and what is skipped because it is running. You must type **DELETE** to confirm.

Folders and collections

Collections are flat groups: All Environments, Network Engineering, Cyber, Industrial / OT, Training, Testing and Uncategorized, plus any you created. A collection with no environments is hidden. The number beside each name is how many environments it holds. Drag a row onto a collection to file it there.

Folders are nested and separate from collections.

- The **+** beside *Folders* creates a folder. Point at a folder and use the icons for **Rename**, **New subfolder here** and **Delete**. Press Enter to save a name and Escape to cancel.
- Select a folder to show only its environments. A breadcrumb above the list shows where you are. Select **All Environments** in the folder list to clear the filter.

- Drag an environment onto a folder to move it. Drag it onto **All Environments** to take it out of its folder. Drag a folder onto another folder to nest it, or onto **All Environments** to move it back to the top. A folder cannot move into itself or into one of its own subfolders.
- Deleting a folder moves every environment in it to the parent folder. Environments are never deleted with a folder.

Start and stop

Power on an environment from its row, from the bulk bar or from its canvas. Start a single device from its menu on the canvas. Stopping works the same way.

- Powering on an environment starts its devices a few seconds apart, in no set order. If one device must be up before the others, for example a firewall, start the devices one by one in the order you need.
- Starting a single device also records that its environment should be running.
- Your edition limits how many devices can run at once and how large a single device can be. A start beyond a limit is refused with a message; power off another device first. See Limits per edition.
- Environments do not start by themselves when the appliance starts. Power them on when you need them.
- To power off every running environment at once, use **Power off all running environments** in **Settings › Advanced**. It is for administrators, lists the environments first and deletes nothing.

Power actions for a device

These rows are in the device menu on the canvas and in the **Power** panel of the console.

Action	What happens	Applies to
Power on · Power off	Powers the device on or off.	All devices
Force power off	Powers the device off at once when it does not stop.	All devices
Restart	A power cycle. The device keeps its disk and configuration. Available while the device is running.	All devices
Suspend · Resume	Freezes a virtual machine in memory and continues it later from the same point.	Virtual machines only
Reset...	Returns the device to its first boot. See Reset to first boot.	All devices

Suspend is only for virtual machines, because only a virtual machine can be frozen in place. When an application host stops, its containers go with it; that is why their consoles disappear too.

Reset to first boot

Reset puts devices back to the state they had at their first boot. It is not Delete: nothing is removed from the environment. Power off first; a running device or environment cannot be reset.

1. **Choose Reset**
   For one device, choose **Reset...** in its menu on the canvas. For the whole environment, choose **Reset environment** on its row.

2. **Read what is kept and what is removed**
   Kept: the device records, interfaces, links and MAC addresses; saved startup configurations and every saved version; the canvas layout, icons and annotations.
   Removed: each device's disk changes. A router's saved NVRAM is cleared so its

next boot loads the saved startup configuration. A container is recreated from its image on its next start.

3 **Type the name to confirm**
Type the device or environment name exactly, then choose **Reset device** or **Reset environment**. For a container there is also a checkbox, off by default, to reset its persistent data under `/data` as well.

Save points

- **Startup Config**: a device's saved startup configuration and its versions, from the device menu. Which devices can save a configuration, and whether versions are kept, depends on your edition; see Limits per edition.
- **Snapshots...**: save and restore a virtual machine's state, from the device menu. Pro
- **Checkpoints** and **Snapshot environment**: buttons in the canvas header. A checkpoint is a named configuration snapshot for the whole environment. Snapshot environment takes a disk snapshot of every virtual machine in it. Pro

Organize and protect

- **Lock** freezes an environment's topology. While it is locked, devices cannot be added, removed or moved, links cannot change, and configurations and annotations cannot be edited. Power on, power off and consoles still work. The padlock button is in the canvas header; the same button releases the lock. Only the owner and administrators can release it.
- **Duplicate** makes a full copy: devices with fresh identities and MAC addresses, links, canvas annotations and saved configuration versions. It does not copy runtime state, snapshots or events. The copy starts powered off, is not shared, and counts toward your environment limit. Every device must be powered off first.
- **Rename** changes the name only.

Delete

Delete removes everything the environment created: every virtual machine and its disk, every virtual switch and link, every network rule and its storage on the appliance. The confirmation names the environment and says it cannot be undone. Delete is disabled while the environment is powered on or changing state: power it off first.

To delete several environments at once, use the bulk bar. It lists what will be deleted, skips anything still running, and asks you to type DELETE.

Status words

Each row in the list shows one of these words.

Word	Meaning
Powered on	Every device in the environment is running.
Partial	Some devices are running and some are not.
Powered off	No device is running. An environment whose devices are all still starting reads Powered off until the first one is up. An environment with no devices reads Powered off as well.

The line beside the word counts devices, for example *12 running · 2 failed · 6 stopped*. It turns red when a device has failed.

What the status shows

- The canvas follows device state as it changes while an environment runs.
- The Environments list refreshes about every six seconds, so it can trail a start or stop by a few seconds. Use the refresh button to reload it at once.
- Powered on means the device is running. To know that the system inside the device is ready, open its console.

Markers on devices

A small colored dot at the top left of a device on the canvas marks a recent event. Select the dot to read what happened and when. **Dismiss** hides it until the next occurrence.

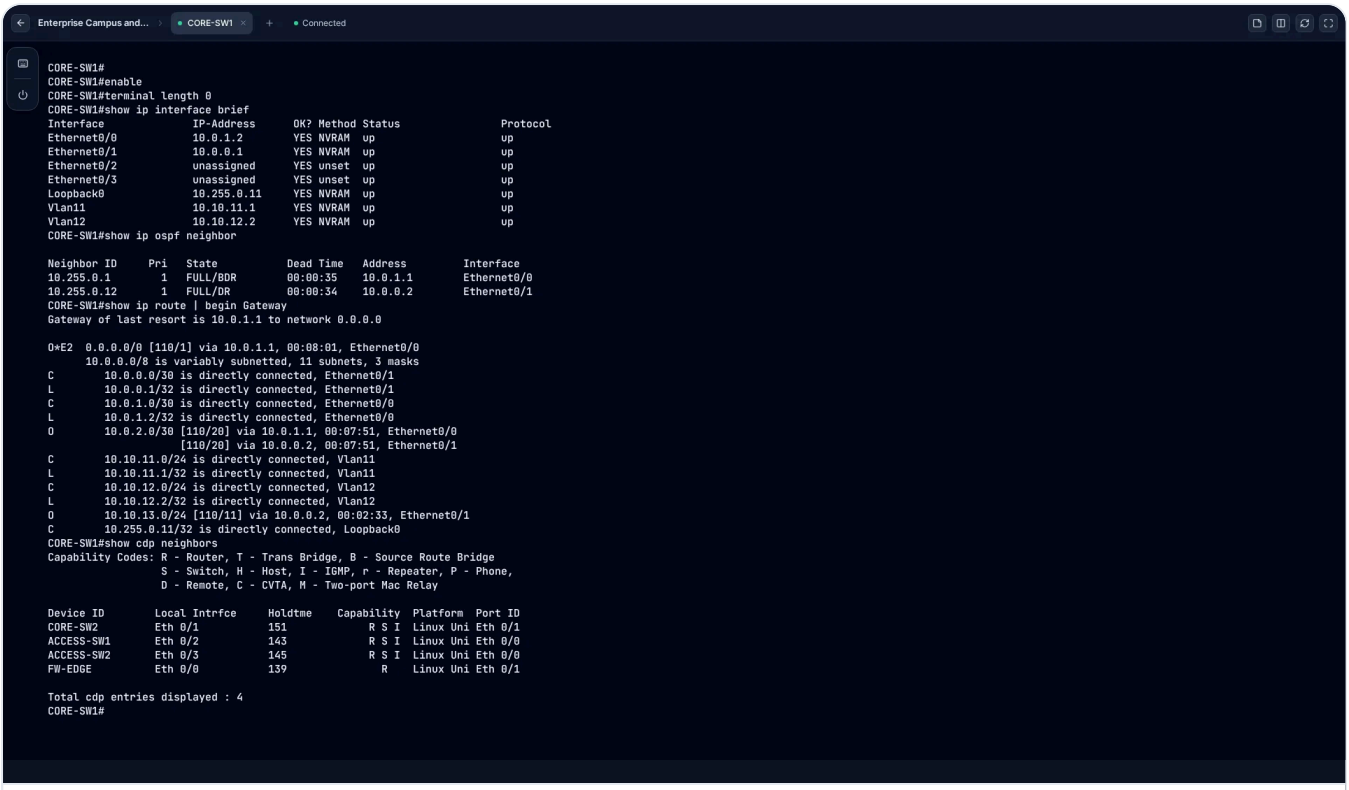
Marker	Color	Meaning
Capture refused	Amber	When the device stopped, ONEP could not take a trustworthy copy of its running configuration, so it kept the stored startup configuration. The card gives the reason, and **Open Startup Config** opens the stored one.
Blank save refused	Amber	A save that would have replaced a stored startup configuration with an empty one was refused. The stored configuration is unchanged.
Boot fell back to console paste	Amber	The device did not keep its startup configuration through boot, so ONEP applied it through the console. Other boot warnings, for example a switch that is not forwarding traffic, use this marker too; the card states the reason.
Crash-looped — failed	Red	The device kept crashing and was marked failed. The card points to the Audit log for the crash record.

USER MANUAL

Consoles

Open any device from the browser: serial, graphical desktop or container shell.

Every device opens in the browser. There is nothing to install on your laptop. Consoles go through the web interface you already signed in to.



A serial console to a switch. Each open device gets a tab; add more with the plus button.

What you get for each device

Device	Console
Routers and switches	Serial console in the browser
Virtual machines	Every virtual machine has a screen. A command-line system opens in the serial console, with a button to open its desktop. A system that boots to a desktop, such as Windows, opens in Desktop.
Containers on an application host	A shell into the container you choose

Container console and actions are available on every edition.

Open a console

- Double-click a running device on the canvas, or right-click it and choose **Open console**. The row is disabled while the device is stopped or suspended.
- In the Environment status panel, use the console control next to the device.
- The console opens in its own browser window. Opening the same device again reuses that window. If your browser blocks the window, allow pop-ups for the appliance and try again.
- The window title reads *device · environment · ONEP*.

Opening a console is recorded in the Audit log. Session recording is a setting of the environment; see Environments.

The console window

One row runs along the top, a toolbar runs down the left, and the console fills the rest.

- **Back to the canvas** (the arrow) returns to the environment. The environment name follows it.

- Each open device has a **tab** with a status dot and a cross to close it. Up to five tabs show; the rest collapse into a **+N** button.
- **Open another device** (+, or Ctrl+K when the console does not have focus) opens a search box over every device in the environment, powered-on devices first. **Open** replaces the device you are in. **Open beside** puts the new device next to it; see Side by side.
- The **status** beside the tabs reads Connected, Connecting, Starting, In use elsewhere, Powered off or Failed. Point at it to see the device type and the console size.
- On the right: **Open desktop** or **Back to console** (devices that have both), **Notes and sketch**, **Side by side**, **Reconnect** and **Full screen**.

The serial console keeps 5,000 lines of scrollback.

The toolbar

The toolbar on the left has two buttons. Each opens one panel at a time. Escape or a click in the console closes it.

Keys

- **Ctrl**, **Alt** and **Shift** are held keys. Select one and it stays lit; the next key you press or send carries it, then it releases.
- **Esc** and **Tab** send that key once.
- **Win** and **Ctrl+Alt+Del** appear for devices that have a screen. They send keys your own keyboard cannot send through a browser. If you are in the serial console, they open the desktop first.
- **Paste** sends the text on your clipboard to the device. In the serial console it types the text in. On a desktop it sends the text to the device's clipboard, and a message tells you to press Ctrl+V on its screen. Your browser may ask permission to read the clipboard.

Power

The same rows as the device menu on the canvas: **Power on**, **Power off**, **Suspend** or **Resume**, **Force power off** and **Restart**. Rows that do not apply to the device's state are

disabled, and Suspend is for virtual machines. After **Restart** the console reconnects by itself when the device is back, and waits up to three minutes. See Power actions for a device.

Serial and desktop

A virtual machine that opens in the serial console shows **Open desktop** in the top row. Select it to see the machine's screen. The same button reads **Back to console** while you are in the desktop. A device that opens in Desktop has no such switch.

- The desktop always fits the window.
- Use **Keys** for Ctrl+Alt+Del and the Windows key. Use **Paste** to send clipboard text.
- **Full screen** makes the console fill the browser screen. Use it again to leave.
- A device with no screen shows *has no screen* with a **Console** button that returns to the serial console.

Side by side

Put two devices next to each other in one console window.

- Select **Side by side** in the top row. ONEP pairs the device you are in with the device you used last. With only one device open it opens the device search instead; choose **Open beside** on a device there. Control-click a tab to open it beside the current device.
- Each side is a card with its own strip: status dot, name, type, **Swap sides** and **Close this side**. The side with the blue ring has the keyboard, the top row and the toolbar. Click a card to give it focus.
- Drag the divider to resize. Each side keeps at least 30 percent of the width.
- Select **Side by side** again to return to one device.
- The button needs a window at least 1,100 pixels wide. In a narrower window it is disabled and its tooltip reads *Needs a wider window*. A container shell is never split.

Notes and sketch

Notes and sketch opens a panel on the right with two tabs.

- **Notes** is a text area for the environment.
- **Sketch** is a drawing area with Pen, Rectangle, Line, Dotted line and Text tools, **Clear** and **Expand**. To add text, choose Text, click the sketch, type and press Enter.

Notes and sketches are kept in your browser for each environment, and the panel remembers whether you left it open.

Container shells

An application host can show the containers running inside it. When it does, select a running container in the list on the device's panel, or its terminal icon, to open a shell in that container. The top row shows *device › container*. Several containers can each have their own window.

- A container has to be running. When an application host stops, its containers go with it, so there is no shell.
- If the list is empty on a device that has only just started, wait and look again. A note under the list says when the device did not answer.
- If a shell cannot open, the window says *Could not open a shell in* the container and gives the reason, with a **Try again** button.

What the console tells you

When the console cannot show the device, it shows one message in the middle of the window.

Message	What it means	Button
Powering on *device*	The console opens when the device is up.	None
Connecting to *device*	The console is opening.	None
Connected	The desktop is connected. A guest that is still booting shows a black screen for a moment.	None
device is powered off	Power it on to open the console.	Power on
Another session took over this console	Only one session at a time can hold a serial console. A newer one took it.	Take it back
This console is in use	Another session is connected to the device.	Connect anyway
No login prompt yet	The serial console has not received a prompt. The device may present its screen instead.	Desktop
Reconnecting to *device*	The connection dropped. ONEP retries up to five times, after 2, 4, 8, 8 and 8 seconds. The message shows the attempt number.	Reconne ct now
The console could not be opened. Trying again...	The console link expired or could not be created. ONEP retries by itself.	Reconne ct now
The console could not be opened.	ONEP stopped retrying.	Reconne ct now
device has no screen	The device has only a serial console.	Console

Things that look wrong but are not

- **A serial console is blank after it says Connected.** A device prints nothing until it has something to say. Press Enter in the console to get a prompt.
- **A desktop is black for a moment.** A guest that is still booting shows a black screen. Wait for the first picture before you reconnect.
- **Your serial console closed when you opened the same device in another browser tab.** Only one session holds a serial console, and the newest connection takes over. Use **Take it back** to return.

If a console will not open

- Check that the device, and for a container its application host, is powered on. The console window offers **Power on** when the device is off.
- Choose **Reconnect** in the top row, or close the tab and open the console again.
- Restart the device from the **Power** panel if the console stays dead after a reconnect.
- See Troubleshooting for more.

USER MANUAL

Packet capture

Capture the traffic on one link while the environment runs, then download the pcap.

Links between devices are separate segments (shared segments are supported too). That is what lets ONEP capture the traffic on exactly one link, while the rest of the environment keeps running, and hand you a standard pcap file to open in Wireshark or any other analyzer. Packet capture and pcap download are available on every edition.

Capture on a link

1. **Power on the link's devices**
   A capture needs an active link. ONEP refuses to start one on a link that is not up, so power on the environment, or both devices on the link, first.

2. **Open the capture dialog**
   Right-click a device and choose **More > Diagnostics > Packet Capture**. Or select a link on the canvas and choose **Capture on this link** in the bar above it. Either way ONEP opens **Packet Capture** for a device and lists that device's links, one row per link, named after the two devices it joins. The button on a selected link opens the dialog for the device at one end of it, so start the row you want.

3. **Start the capture**
   Choose **Start** on the row. A running capture shows a pulsing dot and the size captured so far, in KB. It covers both directions of the link and stops by itself after five minutes.

4. **Make the traffic**
   you want to see: a ping, a login or a test attack.

5. **Stop the capture**
   with the stop button on the row when you have what you need.

6. **Download the pcap**
   with the download button that appears on the row once the capture has stopped and holds data. The file is named `capture_` followed by a short link id and `.pcap`.

Open it in your own analyzer.

Capture report

Once a capture has stopped, a **Report** button next to the download button builds an analysis report from it and downloads it as a PDF when it is ready. The report contains the protocol hierarchy, top talkers, conversations, the first frames, a decoded narrative of the traffic and suggested analyst filters. The report depends on your edition; where it is locked, the row says so. See Limits per edition.

Who can capture

Capturing needs the packet capture permission of your role. Without it the Packet Capture row is not shown in the device menu, **Capture on this link** is greyed out, and the dialog says "Your role does not allow packet capture." See Users and roles.

Good to know

- Capture works on links, not devices. To see all traffic of a device with several links, capture on each of its links; each row in the dialog runs its own capture.
- The download and the report are available only after the capture has stopped.
- Vendor switch images can also mirror traffic themselves with their own mirror or SPAN sessions, configured from their console.

Centrum

The image library on your appliance: what you have, where it came from, and what it is.

Centrum is where images live. Open it from **Centrum** in the sidebar. The page has two tabs: **Discover**, where you download new images from their vendors (see Discover), and **My Centrum**, the library of images already on your appliance. Discover is not a separate item in the sidebar; you always reach it through the Centrum page.

Centrum is about images; the Content Hub is about whole environments. Devices on the canvas, Content Hub builds and imports all draw on the same library. The first time you open Centrum it opens on My Centrum if the library already has images and on Discover if it is empty. After that it opens on the tab you used last, and it remembers your view, page size and search in your browser.

The two buttons at the top right work on both tabs. **Refresh** reloads the list. **Register image** adds an image you bring yourself (see Bring your own image).

The library

The **My Centrum** tab opens with a strip of counters. They always describe the whole library, whatever filter is active:

- **Images**, **Size** (an alias card shares its base disk and is counted once), **Vendors** and **Verified** (images ONEP recognized). A **Community** counter appears when the library holds community images.
- Four counts by kind: **Virtual machines**, **Cisco IOS**, **Classic Cisco** and **Containers**. Select one to filter the list to that kind; select it again to clear the filter.
- A storage bar for each disk that holds images, with the percentage used and the space free. With two bars they are labeled *System* and *Centrum*.

Find images

- **Search images** matches the name, vendor, type, class, version and kind (virtual machine, container, and so on).

- **All vendors** and **All types** are filter menus. The vendor menu shows how many images each vendor has.
- The two buttons at the right of the toolbar switch between **Tiles** and **List**. Tiles show each image's name, vendor, type, version and the number of environments that use it. In the tile view, **View 20 / 50 / 100 / All** sets the page size and **Prev** and **Next** move between pages.
- If nothing matches, the list says *No images match your search* with **Clear filters**. An empty library offers **Register image** and **Discover**.

The list view

The list is a table with these columns: **Vendor**, **Product**, **Version**, **Type**, **Class**, **Size**, **Source**, **Verified**, **Used by** and **Added**. Three more can be turned on: **Image name**, **Disk** and **Runtime**. A product that has an alias card is marked *Alias*. When two images would show the same name, vendor and version, a build month or size is added in brackets so you can tell them apart.

- **Sort.** Select a column heading. Hold Shift to add a second sort column.
- **Column menu.** The arrow on a heading opens **Sort ascending**, **Sort descending**, **Clear sort**, a **Filter** checklist for Vendor, Type, Class, Source, Verified and Used by (with **Select all** and **Clear**), **Auto-size column**, **Auto-size all columns**, **Hide column**, **Move left** and **Move right**.
- **Columns** (the button in the toolbar) shows or hides columns and has **Reset to default**. Drag a heading edge to resize a column and drag a heading to reorder it. When the window is narrow, ONEP hides the least important columns for you and brings them back when there is room.
- **Group** groups the list by Vendor, Type, Class or Source. Grouping turns paging off.
- An active column filter appears as a line above the list, for example *Type: Router, Switch*, with an × to clear it and **Clear all**.
- **Select rows** with the check boxes. A bar then replaces the toolbar with **Register to ONEP** and **Remove from Centrum** for the whole selection, and **Select all N** once a full page is selected.
- The footer shows the range of images, the selection and its total size, **View** for the page size, and **Prev**, **Next** and a page box.

- **Keyboard.** Arrow keys move through rows, Enter opens details, Space selects, Ctrl or Cmd with C copies the image name, and Esc clears the selection and then closes the details.
- **Row menu** (the three dots on a row): **Open details**, **Edit hardware**, **Edit type...**, **Copy name**, **Register to ONEP** (only where it applies) and **Remove from Centrum**.

Image details

Select a tile or a row to open the details panel on the right. **Close details** or Esc closes it. The panel has three groups, one open at a time:

- **Identity:** Vendor, Product, Class, Device type, Version, File, Source, Added, Used by and Fingerprint (the start of the image's SHA-256 hash). **Edit** changes Vendor, Class and Device type; see Set the class and type yourself.
- **Hardware:** vCPU, Memory, NICs, Console, Disk controller, Disk type, the disk file, any extra disks, Runtime and Size. **Edit** changes the Name, vCPU, Memory (MB), NICs, Console (VNC, Telnet, Serial or SPICE) and Disk controller. **Save** asks *Save changes?* before it applies them. These are the defaults a new device made from this image starts with.
- **Provenance:** Sealed, Recognition, License and, where they apply, an end-of-life status and a known-issue note.

At the top of the panel an image that ships with a default login shows it. **Remove from Centrum** sits under the panel.

What ONEP knows about an image

ONEP identifies images by fingerprint. It matches an image's hash against the fingerprints it knows first. When there is no match it falls back to the file name, and if the name does not identify the image either, the image is listed as *Needs review* and asks you to confirm it.

Every image is placed in one of ONEP's device classes: Network, Network Security, Cybersecurity, Servers, Endpoints, OT/ICS, Telco or SD-WAN. Each class has its own device types, such as Router and Switch in Network, Firewall and IPS / NDR in Network Security, and PLC and HMI / SCADA in OT/ICS. ONEP maintains the classification itself

and updates it inside product updates. The version of the classification your appliance uses is shown in **Settings › Diagnostics** as *Classification content*.

The **Verified** column and the **Provenance** group state what ONEP can say about an image:

- The ONEP mark means ONEP recognized the image.
- *Registered* means an administrator confirmed the image themselves. ONEP has not tested it.
- *Unsealed* appears on a Windows server image that has not been prepared for production use, and *Retired — do not deploy* on an image that must not be used. *Known issue* shows the note ONEP holds for the image.
- A Windows desktop image carries no seal mark, like a Linux desktop.

Set the class and type yourself

If ONEP's classification does not fit how you use an image, change it in the details panel. Choose **Edit…** on the row menu, or **Edit** in the Identity group:

- **Class** picks one of the classes, for example Network, Network Security or Servers.
- **Device type** picks the type. Choosing a class narrows the list to that class's types, and clears a type that no longer belongs to it. Save is off until a type is chosen.
- **Vendor** is a text field.

A class or type you choose by hand locks the image's label, so ONEP's own classification updates do not overwrite it. The panel then shows *Set by hand. Automatic classification will not change it.* To hand the image back to ONEP, choose **Return to automatic**; the label then follows ONEP's classification again.

Source marks

The Source of an image says where its bytes came from, and only what ONEP can prove:

Source	Means
Vendor	Downloaded through Discover, a Cisco IOS or Classic Cisco image, or a file whose hash matches the vendor's own
ONEP	Built on your appliance by a Content Hub deploy
Community	A file you registered whose hash matches a community-published list
No mark	Nothing matched. ONEP does not guess a source from a file name

Bring your own image

1. **Choose Register image**
   and select up to five files, 20 GB in total. The picker offers disk images (`.qcow2` , `.vmdk` , `.img` , `.iso` , `.bin`), OVA files and archives (`.tar` , `.tar.gz` , `.tgz` , `.7z` , `.zip`). OVA and archive bundles are unpacked for you. For a single file you can type a **Display name**.

2. **Watch the upload**
   Each file shows its progress and speed. Keep the window open; closing it cancels the files that are not finished. A file that already exists in Centrum is flagged *Image already exists* or *Same name in Centrum*, and an upload of a duplicate is refused. When the content matches an existing image you can instead add the name as an alias card (*Add ... as alias card*), which adds a second name for the same disk with no extra space. An image that backs an alias card cannot be removed until the alias is removed.

3. **Check what ONEP found**
   Validation complete lists each file with a result: *Recognized as* followed by the vendor and product, *Registered as*, *Registered - needs a look*, or *Could not register*. ONEP fills in the vendor, type, version, sizing and console where it recognizes the file.

4. **Register to ONEP (optional)**

On an image that is not recognized, **Register to ONEP** asks you to confirm. By registering you confirm the image comes from a source you trust; ONEP records its fingerprint but does not check its contents, license or safety, and you remain responsible for it. After registering, an identical upload is recognized automatically, and the Verified column shows *Registered*. A Discover download never shows this offer, because ONEP already knows where it came from.

An image ONEP cannot identify is listed as *Needs review*. Open it and fill in **vendor**, **version** and **device type**, then choose **Confirm identity**. ONEP remembers the answer for the next upload. Confirming and registering are done by an administrator or an instructor. A device can start from an image only after the image is ready in Centrum.

Windows evaluation media

Microsoft's evaluation media is time-limited and licensed for evaluation, test or demonstration. Centrum labels it in the License row and on the tile: *Microsoft 180-day evaluation media — not for production*, or *Microsoft evaluation media — expired, practice only* for a build whose evaluation has already ended. Bringing your own properly licensed Windows media (retail, OEM or volume license) avoids the question. If you use evaluation media, treat it as time-limited evaluation content. This is a statement of the facts, not legal advice.

Cisco images

Cisco IOS and Classic Cisco images are bring-your-own-license. The images and the license are yours to bring: ONEP does not supply, sell or verify a license. You upload your own license file in **Settings › Licensing** on the **Cisco IOL license** card; one license file serves every Cisco device on the appliance. The native switch works without it. See Licensing.

Images built by the Content Hub

When the Content Hub builds a card on your appliance, the result appears in the library as a ready image, with *(ready)* in its name and Source ONEP. A Content Hub wizard skips the operating system step when the image it needs is already ready. If you build the

same card again, the older image is hidden from the pickers but not deleted: environments already using it keep working.

Remove an image

Use **Remove from Centrum** under the details panel, on the row menu, or in the selection bar for several images. ONEP asks you to confirm. Removing deletes the image's record and its file from disk, so it is gone from Centrum everywhere. Images you got from Discover can be added again from there.

An image cannot be removed while an environment uses it, or while an alias card points to its disk. The message names the environments or alias cards; remove those first.

Discover

Download device images straight from their vendor to your appliance.

Discover is the catalog tab of Centrum. It lists operating system bases, container images and a small set of open-source appliances that you can fetch into your library. A download comes straight from the vendor's own source to your appliance; nothing is mirrored by ONEP.

Discover is not a separate item in the sidebar. Choose **Centrum** in the sidebar, then the **Discover** tab at the top of the page. The other tab, **My Centrum**, holds the images you already have. Centrum opens on Discover the first time you visit when the library is empty, and afterwards on the tab you used last.

Browse the cards

- **Search images** matches a card's name, vendor, class and role.
- The **VM** and **Container** buttons switch between virtual machine images and container images. ONEP remembers the choice.
- **View 20 / 50 / 100 / All** sets how many cards show at once. **Prev** and **Next** move between pages.
- On Community and Lite a line above the cards shows the monthly download meter: *N of M downloads left this month*, or, when it is used up, *This edition allows M image downloads a month. The next one is possible on* a date.

A card shows the image's logo and name. A badge at the top right says *Installed* when the image is already in your library or a short note when it cannot be downloaded. An *EOL* tag marks an image whose vendor no longer supports it. A *View details* hint at the bottom invites you to open the card.

Add an image

1. **Open Centrum › Discover**
   and choose **VM** or **Container**.

2 **Open a card**
Select it and it turns over to show who made the image, its type and role, the login and password the image signs in with, its authentication method and its status.

3 **Choose Add to Centrum**
A confirmation shows what you are adding, the login, the **Download size** and the **Free space** in your image store, and a license notice from the image's vendor. If the image would not fit, the dialog says *Not enough storage to keep this image* and Add is off; if space is tight it warns that converting the image can briefly use more. Choose **Add to Centrum** again to start.

4 **Watch the progress**
The card and a progress dialog show the phase (Downloading, Verifying, Unpacking image, Converting to a bootable disk, Saving to your library, Registering in your Centrum), the percentage, bytes and speed. While you wait the dialog tells a short story about the image's creator. When it finishes the image appears in My Centrum, ready to use on the canvas.

Controls while a download runs, on the card and in the dialog:

- **Stop** pauses the transfer; **Resume** continues it from where it stopped. A dropped connection also resumes by itself.
- **Cancel** asks *Cancel this download?* and then discards it.
- If it fails, the card shows the reason with **Retry** and **Dismiss**.

Containers are pulled rather than downloaded; the same card, meter and progress controls apply. The **ONEP Agent** card is the exception: it is built on your appliance in about three minutes instead of downloaded, and its button reads **Build & add**.

A card marked *Installed* is already in your library; turn it over to see **Remove**. A card that cannot be downloaded cannot be added.

Monthly downloads

Community and Lite allow a fixed number of Discover downloads per calendar month. Images and container pulls count together, and the meter above the cards shows what is left. See Limits per edition for the numbers on each edition.

- Past the monthly number, the download is refused until the month rolls over. Images already in your library are not affected.
- Registering your own images does not count. Fetching the operating system an appliance build needs does not count either.
- Resuming a paused download does not count again; downloading the same image again after it finished does.

Good to know

- Discover needs internet access from the appliance. Everything you have already downloaded works offline.
- Every image downloaded through Discover carries the Source mark **Vendor**, because ONEP knows where the bytes came from. It is not offered *Register to ONEP*.
- Some cards carry a Microsoft evaluation image. The confirmation says so; the media is time-limited and not for production use. See Windows evaluation media.
- **Remove** deletes the image and its file, after you confirm. It can be added again from Discover later.
- For vendor images that Discover does not list, bring your own copy through **Register image**, under your own license with that vendor.

USER MANUAL

Migration Hub

Rebuild environments from EVE-NG, GNS3 and Packet Tracer files on the ONEP canvas.

> AVAILABILITY
>
> The Migration Hub is open on Community, Lite and Pro. One environment is imported at a time. Open it from **Migration Hub** in the sidebar. For the numbers that apply to your edition, see Limits per edition.

The Migration Hub reads a topology from another product (an EVE-NG lab file, a GNS3 project, Packet Tracer files or a public GitHub repository) and rebuilds it on the ONEP canvas, with ONEP's own sizing and your own image library. It shows you a preview before anything is created. The result is a normal environment that you can edit, start and capture on.

What it reads

The page offers four sources as cards. **GitHub** is selected when you open the page; select another card to change the source.

Source	Files
EVE-NG (.unl)	`.unl` topology export
GNS3 (.gns3)	`.gns3` or `.json` project file, or a portable project (`.gns3project`)
Packet Tracer (.pkt)	`.pkt` or `.pka` file
Archive	A `.zip` or `.tar` archive that contains one of the above
GitHub	The address of a public GitHub repository

A topology file on its own can be up to 10 MB: it is a description, not an image. An archive can be up to 200 MB. An archive that contains more than one environment is refused with a message; upload an archive that holds a single environment. A file that is not one of the formats above is refused with a message listing the supported formats.

Start an import

1. **For a file**
   Drop the file on the area labeled *Drop your … here, or click to browse*; the analysis starts at once. Clicking the area instead opens the Source step, where **Choose a file** opens the file picker. You can also drop a file on that step.

2. **For GitHub**
   Type the repository address and choose **Analyze**. A repository that holds several environments lists them with their device and link counts; choose one. If a repository has none, the page says *No environments found in this repository*.

The right of the page lists what the importer understands: devices and roles, links and interfaces, startup configs, image mapping and canvas layout. On the Packet Tracer card a note says the topology is rebuilt on real device images, and that anything ONEP cannot reproduce, such as wireless and IoT devices, is listed before you deploy.

How an import runs

A row of five steps across the top shows where you are: Source, Analyze, Review, Canvas and Deploy. **Back** returns to the previous step; on the first step it returns to the source cards.

1. **Source**
   Pick the file, the GitHub repository or the environment inside it.

2. **Analyze**
   A log shows ONEP reading the devices, links, interfaces and layout and classifying every device by vendor, role and operating system. A side panel counts devices and links, shows the roles found and, once finished, the percentage of devices that matched an image in your library. The analysis takes a short while; **Review devices** turns on when it is done.

3 **Review**
Review shows first what needs a decision. Everything that matched is collapsed into a ready list. See Review the import.

4 **Canvas**
The environment is drawn on a preview canvas for you to check, with the original layout and annotations, a mini-map, zoom controls and a legend of device classes.

5 **Deploy**
Deploy to Environment creates it as an isolated environment with every device stopped; you start it when you are ready.

Review the import

The top of Review names the environment and its source and shows a verdict: *Deployable*, or for a GitHub repository *Needs Kubernetes*, *Cloud - Terraform*, *Scripts only* or *Review needed*. Four figures sit below it: **Devices**, **Links**, **Images matched** and **Footprint** (total memory as the source built it). If the footprint is more than the appliance has, a warning says so; resize the devices or use a larger appliance. ONEP keeps the source hardware unless you change it. Devices imported with no size are sized by ONEP at deploy, or you can set them.

- **Needs your attention** lists each device that has no matching image in your library, or whose role ONEP detected with low confidence. For each one you can pick an image from the list, type a **vCPU** and **RAM (MB)** (blank means automatic), open **Get / register** to add the image in Centrum, or choose **Looks right** to accept the detected role. **Re-check images** matches again after you add an image.
- Below, a collapsed line reports how many devices are ready, with their specs carried from the source file as they are. Open it for a table with **Name**, **Vendor**, **Role**, **Class**, **Runtime**, **Image**, **Config** (a **View** link opens the startup config, with **Copy**), **vCPU**, **RAM (MB)** and **Confidence**. Name, vendor, image and sizing can be edited in place, and columns can be resized.
- The image dot shows how a device matched: green for a match in your library, blue for a device ONEP supplies itself (such as a workstation), amber for an image ONEP substituted from the same family, and grey for none. Point at the dot for the note.

Deploy stays off while any device has no image. Fix it on Review, or the Canvas step tells you how many devices are missing one.

After you deploy

The Deploy step shows a log (creating the environment, placing nodes, wiring links, drawing annotations) and a summary. When it finishes, ONEP opens the environment on the canvas. If something needs attention first, a *Review before continuing* notice appears instead, with **Continue to environment**. It can say:

- the internet exit is queued and finishes shortly after the environment opens;
- devices that were kept isolated because no internet exit could be confirmed;
- links that could not be reproduced and were skipped;
- any other warning from the importer.

If the import fails, the page returns to the Canvas step and shows an error message.

What carries over

- **Devices and links**, mapped onto images in your library. The importer also keeps each device's own icon where the source has one.
- **Hardware**: each device keeps the CPU and memory it had in the source file. Only blank values get a default for the device type.
- **Drawing**: text labels, shapes and pictures, at their original positions.
- **Environment details** that the source file carries, such as the author and the description.

Startup configurations come across where the source file carries them, and you can read them on Review.

What ONEP does not reproduce

Anything ONEP cannot reproduce is listed in a **What ONEP will not reproduce** panel on the Deploy step, and the first such line also appears in the analysis log. For Packet Tracer files the list covers:

- devices ONEP has no equivalent for, such as wireless and IoT devices, named as *Not imported*, and the cables that ended at them;
- command support and behavior: Packet Tracer devices run a teaching model of the Cisco operating system, and ONEP rebuilds them on real device images, so commands and behavior differ;
- simulation-mode scenarios, PDU animations, activity grading in `.pka` files, and the physical-workspace layout.

What you supply

- **The images.** An import maps the topology onto your library; it does not bring vendor images with it. Review lists what is missing, and you add it through Discover or **Register image** in Centrum.
- **Your own Cisco license**, for devices that boot Cisco IOS images. It is added on the *Cisco IOL license* card in Settings › Licensing. See Licensing.

One at a time

ONEP imports one environment at a time. If you start a second import while one is running, it is refused with the message *ONEP imports one environment at a time. Another import is in progress; try again when it finishes.* A license can also limit how many imports are allowed in any 30 days; the refusal then states the date the next import is possible.

Remote access

Reach the appliance from outside your network with WireGuard, Cloudflare Tunnel, Tailscale or Dynamic DNS.

Settings › Remote access makes the appliance reachable from outside your local network. It is for administrators. Every method publishes the **management interface** only (sign-in, canvas and Settings). It never exposes anything inside a running environment; opening an application inside an environment is a separate, per-device action.

Methods by edition

Choose a method from the **Method** list. A method that is on shows · *on* after its name. The page then shows only that method's card.

Method	What it does	Editions
WireGuard VPN	Opens a VPN listener on the appliance. The appliance prepares peer configurations; you give each one to a device as a file or QR code	Community, Lite, Pro
Cloudflare Tunnel	Publishes the management interface at your Cloudflare hostname, using your Cloudflare account	Lite, Pro
Tailscale	Joins the appliance to your Tailscale network	Lite, Pro
Dynamic DNS	Keeps a public hostname pointed at your site's public address	Lite, Pro

Cloudflare Tunnel, Tailscale and Dynamic DNS use your own accounts with those services. On Community the list offers WireGuard only.

Before you turn a method on

Each method has an on/off switch at the top of its card. Each method changes who can reach the sign-in page. ONEP asks you to confirm, and says what will happen:

Method	Who can reach the appliance
WireGuard VPN	A VPN listener opens on a UDP port. It becomes reachable once you forward that port on your router. Only devices with a peer configuration can connect.
Cloudflare Tunnel	The management interface is reachable over the public internet at your Cloudflare hostname. Anyone with the URL reaches the ONEP sign-in page. Environments stay isolated.
Tailscale	Every device on that tailnet can reach the management interface. Nothing becomes publicly reachable.
Dynamic DNS	A public DNS name points at your site's public address. The appliance is reachable only once you also forward a port on your router.

PROTECT THE SIGN-IN PAGE

With a public method, the sign-in page is on the internet. Use a strong password and turn on two-factor authentication in **Settings › Account** first.

Fields by method

Method	Fields
WireGuard VPN	**Listen port** and **Server address** (what peers connect to: a LAN address, public address or DNS name; leave it empty to detect the public address)
Cloudflare Tunnel	**Tunnel token** from your Cloudflare account, and **Public hostname** (optional)
Tailscale	**Auth key** from your Tailscale admin console, and **Machine name** (optional)
Dynamic DNS	**Provider** (Cloudflare DNS or DuckDNS), **Zone** (required for Cloudflare DNS, empty for DuckDNS), **Hostname** and **API token**

Choose **Save** on the card to store the fields. A card with edits you have not saved shows *Unsaved changes*, and ONEP asks before you leave the tab with edits unsaved.

Set up WireGuard

1. **Open Settings › Remote access**
   and choose **WireGuard VPN** from the Method list.
2. **Set the Listen port and the Server address**
   and choose **Save**.
3. **Turn it on**
   with the switch on the card and confirm. The appliance opens its VPN listener on the UDP port shown. The switch reads *Starting…* until the service confirms.
4. **Forward the port**
   on your router to the appliance, if you connect from outside your network.
5. **Hand out the peers.**

The **Peers** list shows each peer with a QR code. Scan the QR code in the WireGuard app on a phone, or choose **Download .conf** and import the file on a laptop. **Show** displays the configuration text.

Each peer configuration is for one device. **Rotate keys** replaces the keys for every peer: every configuration issued so far stops working, and new ones appear in the list. Rotating needs WireGuard to be on.

Secrets

A tunnel token, Tailscale auth key or Dynamic DNS API token that you paste in is stored on the appliance and never shown again. The field then reads *saved — paste to replace*. To change one, paste a new value.

Turning a method off

ONEP warns that remote access through that method stops, and that if you are connected through it now, your session will end. Make sure you can reach the appliance another way, for example from your LAN, before you turn off the method you are using.

If a method does not confirm within 90 seconds, the page says so and shows the state the service reports. The Exposure card on Status shows which methods are active.

ADMINISTRATION

Users and roles

Signing in, multi-factor authentication, sessions and user accounts.

Signing in

Enter your username or email address and your password, then choose **Sign in**. If two-factor authentication is on for your account, ONEP then asks for the 6-digit **Two-factor code** from your authenticator app. Choose **Verify & sign in**, or **Back** to start again. On a new appliance, first-time setup replaces the sign-in page until the administrator password is set; see First boot and network.

Two protections apply, and neither can be changed from the interface:

- **Account lockout.** Repeated wrong passwords lock that account for a growing period. The sign-in page then says *Account locked. Try again in N minute(s).* An administrator can clear a lockout; see Managing users.
- **Sign-in rate limit.** After 10 sign-in attempts in a minute from the same network address, ONEP answers *Rate limit exceeded: Too many login attempts, try again in a minute*. Everyone behind one shared internet connection shares that budget, so a whole classroom or office signing in at once can hit it together. Wait a minute and try again.

Sessions

- **One session per user.** Signing in on a second browser or device ends the earlier session, which then reads *Signed in on another device — this session has ended*. If your session drops unexpectedly, this is the most common reason.
- **Forced password change.** When a password change is required, ONEP shows **Set a new password** before anything else. Enter your current password and a new one of at least 12 characters that differs from it. The step cannot be skipped.
- Deactivating a user ends their session immediately. Changing their role takes effect on their next request.
- **Sign out** is at the bottom of the sidebar, under your username and role.

Your account

Every user has **Settings › Account**. On Community and Lite it holds the Password and Two-factor cards. On other editions it also holds the Profile card (username, role, email and two-factor state), API tokens where available, and AI preferences.

Password and two-factor authentication

- **Password.** Enter your **Current password**, a **New password** of at least 12 characters and **Confirm new**, then choose **Change password**. You stay signed in.
- **Two-factor authentication.** The card shows *Enabled — a code is required at login* or *Disabled*. To turn it on, choose **Set up two-factor**, scan the QR code or enter the manual key in any standard authenticator app (TOTP), type the 6-digit code and choose **Verify & enable**. To turn it off, enter your account password and choose **Disable**.

> KEEP YOUR AUTHENTICATOR SAFE
>
> ONEP issues no recovery codes, and there is no way to reset a lost authenticator from the web interface. Recovery is a console procedure on the appliance, as on other network and security appliances. If you lose your authenticator, write to hello@onep.io. On an edition with more than one account, your administrator can also arrange the reset.

API tokens

An **API tokens** card lets scripts call the ONEP API as you. It appears only on installations whose license includes scripted API access. Community, Lite and Pro are used through the web interface only, and the card is not shown.

- Enter a **Token name**, optionally **Expires in (days)** (empty means it never expires), and choose scopes: **read** (view data), **write** (create and change data) or, for administrators, **admin** (full administrative access, including user management). Then choose **Create token**.
- The token is shown once. Copy it before you choose **Done**.

- Each token in the list shows its prefix, scopes, creation date, expiry and last use. The trash icon revokes it after you confirm; any script using it stops working at once.

AI preferences

The **Model** list sets which AI model your own environment-generation requests use. *Server default* follows the administrator's choice in Settings › AI. If the administrator restricted the choice to one model, the list is read-only. Choose **Save** to apply.

Users by edition

Community and Lite have one account, the administrator, and the **Users & access** tab is not shown. Pro includes more accounts. The number of accounts for each edition is on Limits per edition. Deactivated users still count; delete a user to free a seat. When every seat is in use, **New user** is refused with a message that says so.

Managing users

On an edition with more than one user, administrators manage accounts in **Settings › Users & access**. Only an administrator can do these things, and only an administrator can reach the Settings tabs beyond their own account. The list shows **User**, **Email**, **Role**, **Status** and **Last login**, with a count of users above it.

Action	How
Create a user	**New user**, then Username, Email, Full name, Password (at least 12 characters) and Role, then **Create**
Change a role	Pick another role in the Role list on the user's row and confirm with **Change role**. Choosing Administrator shows a warning that administrators can change every setting. You cannot change your own role
Deactivate or enable	Choose the *Active* or *Disabled* status on the row and confirm. A deactivated user is signed out at once and cannot sign in again until enabled. You cannot deactivate yourself
Clear a lockout	A locked user shows *Locked* and a **Clear lockout** icon. Choose it and confirm; the failed sign-in counter resets
Reset a password	The key icon opens **Reset password**. Enter a new password of at least 12 characters and choose **Set password**. Resetting also clears a lockout
See or revoke API tokens	The API tokens icon on a row expands that user's tokens, with **Revoke** for each. Only where the installation includes API tokens
Delete a user	The trash icon, then **Delete user**. The account is signed out and hidden and can no longer sign in. Its username and email are released for reuse. The record is kept for the audit trail. You cannot delete yourself

With more than one page of users, **Previous** and **Next** move between pages. User changes are recorded in the audit log.

Roles

Access is role-based. Each user has one role.

Role	What it allows
Administrator	Everything: all environments and devices, images, users, every Settings tab and the Audit page
Contributor	Full control of environments and devices, packet capture, snapshots, export, import and the AI Generator. Images are view only
Operator	View, create, edit, delete and run environments and open their consoles, plus packet capture, snapshots, export, import and the AI Generator. Images are view only
Read-only	View environments, open consoles, export, and view images

ADMINISTRATION

Licensing

Install a license file, what happens at expiry, and moving a license.

What a license is

An ONEP license is a small signed file, `onep.lic`. It tells the appliance which edition it runs and what its limits are. It is not a login, holds no password, and is not tied to a user account.

- The file is signed with Ed25519. The matching public key is built into the appliance. The private signing key is not part of it. A file that does not verify is treated exactly like no license at all.
- The numbers in a license win over the edition's defaults. On Community, a license number is used only when it is higher than the default.
- The license file is never logged and never shown in full in the interface. A support bundle carries only the verdict: license ID, customer, edition and days left. It never carries the file.

One appliance serves every edition, so changing edition is a license upload, with no reinstall. An appliance with no license file runs as Community.

Install a license

After you buy, your license file is emailed to you, normally within one business day. You can also install it during the first-time setup.

1. **Open Settings › Licensing**
   as an administrator.
2. **Choose Install license file...**
   or **Replace license file...** if one is already installed, and select your `.lic` file. A `.json` file is accepted too.
3. **Check the confirmation**

ONEP verifies the file before it writes anything. On success a message confirms the edition, seats and expiry, for example *ONEP license installed: LITE, 1 seat(s), expires 2027-01-31T00:00:00Z.*, and the interface reloads with the new edition. No restart is needed.

A file that fails verification is refused and nothing is saved. Both accepted and refused uploads are recorded as events. An accepted upload records the edition, seats and expiry, and a refused one records the reason. Neither records the file's contents.

What Settings › Licensing shows

The tab has four parts.

ONEP license card

The card names the edition: *ONEP Community* with the line *free, single-seat edition*, or *ONEP Lite* with *single-seat edition*. On other editions it shows the edition as read-only text with the line *Your edition follows your license.* You cannot choose an edition here; the license sets it.

- **Version** shows the product, edition, version and build on one line, in the form *ONEP Lite <version> · build <date>.<commit>*. The same line appears on the sign-in page and under Settings › Status and Updates. If no version was recorded for the build, it reads *Version not recorded*.
- **Included and In use** is a table of the edition's allowances next to what the appliance uses now: user accounts, devices running at once, largest device, environments, Discover downloads, Content Hub, AI topology builds and environment imports. A row that has reached its limit turns amber, with *limit reached* and the date the next one is possible. The numbers themselves are in Limits per edition.
- **ONEP Pro adds** appears on Lite. It lists what Pro adds: more user accounts, more devices running at once and larger devices, snapshots and checkpoints, multi-device ranges, and the audit log.

ONEP license file

Field	Shows
License	The license ID. Quote it when you contact support.
Customer	The name the license was issued to
Edition	The edition and seats, for example *ONEP Lite, 1 seat*
Expires	The expiry date and the days left

When 30 days or fewer are left, the Expires line turns amber and adds *renew soon*. That is the only reminder: ONEP sends no email.

The block also shows **This appliance's install id** with a copy button. You need the install ID to ask for a license that is bound to this appliance. With no license file installed, the block says so and offers **Install license file...**.

License check-in card

Reads *Not active on this build.* See License check-in.

Cisco license card

See Cisco license below.

One license, one installation

Each appliance creates its own random install ID the first time it needs one. A license that names an install ID is valid only on the appliance with that ID. A license without an install ID is not bound to an appliance.

ONEP compares two hardware identifiers, as one-way hashes: the virtual machine's hardware UUID and the MAC address of its first physical network interface.

- **Neither changed.** Restoring a snapshot, or moving the virtual machine in a way that keeps both, leaves the license valid.
- **One changed.** Replacing a network card, or a hypervisor that assigns a new hardware UUID, is recorded and the license stays valid. Settings › Licensing shows *Installation change recorded* with the field that changed. No action is needed.
- **Both changed.** ONEP treats the appliance as a copy. It creates a new install ID, and the license that names the old ID is refused. A commercial license keeps working for a grace period first, 14 days from the change. Settings › Licensing shows the old and new install IDs, the date the installation changed, and *license needs re-issue*. When the grace period ends, the appliance runs as Community.

To move to new hardware or run a second copy, write to hello@onep.io with your license ID and the new install ID.

Expiry

A license carries its own grace period. A paid license has 14 days. During the grace period the appliance keeps its edition, and Settings › Licensing says *License expired — in grace until* a date, with *Renew before then to avoid dropping to Community.*

After the grace period the appliance runs as **Community**, and Settings › Licensing says *This appliance is running as Community*:

- Nothing is deleted or stopped. Your environments stay open and editable, and devices that are running keep running.
- A new environment is refused while the appliance holds as many as Community allows. A power-on that would take the appliance past Community's running-device limit is refused. A device larger than Community's largest device size is refused when you create or edit it and when you power it on. The refusal names the limit and says to delete, stop or upload a license. See Limits per edition.
- Features that are not in Community are locked, as on any Community appliance. See What is hidden or locked.

An appliance with no license at all runs the same way: Community, with no time limit.

If the system clock moves back by more than 24 hours, ONEP judges expiry against the latest time it has seen, so setting the clock back does not extend a license. If the file that

holds that record cannot be read, Settings › Licensing says *Clock guard unavailable (file unreadable) — contact support.*

Renew

Install the renewed `.lic` file with **Replace license file...**. A renewal is a new license file. The appliance returns to its edition as soon as the file is accepted, with no restart.

License check-in

This release sends no license check-in. The appliance checks the signed license file on the appliance, and the **License check-in** card on Settings › Licensing reads *Not active on this build.*

Moving a license

To move a license to new hardware, or to run a second copy, write to hello@onep.io with your license ID and the install ID shown in Settings › Licensing.

Cisco license

Settings › Licensing also has a **Cisco IOL license** card. This is a Cisco license file used to boot Cisco devices, and it is separate from your ONEP license. As the card says, it is not supplied, sold or verified by ONEP: it is a Cisco license you bring yourself. Vendor images and packages that a Content Hub item downloads is licensed by the vendor to you, not by ONEP.

1. **Choose Cisco license file...**
   and select the file.
2. **Upload**
   The card lists four steps as they run: Uploading, Validating format, Checking host match, Installed.

- One license file serves every Cisco device on the appliance.

- The status line reads *Installed — this appliance* when the file is valid and matches this appliance. If it was issued for a different host, it reads *Installed but host mismatch* and names both hosts. A file that is not a Cisco license reads *Present but not a valid Cisco license file*. With no file it reads *No license installed*.
- ONEP checks only that the file is well formed and matches this appliance. It cannot vouch for how the license was obtained; that is your responsibility.
- The status check runs in the background. If the card says *Could not check (a background task is running) — try again shortly*, the check has not finished; it does not mean no license is installed. An upload that is still queued after 15 seconds shows *Queued* and finishes in the background.

Without a Cisco license you can still use every other device type, including the native switch.

If a license will not install

Message	Meaning	What to do
That is not a license file (not JSON). or *malformed license file*	The file is not an ONEP license, or it is damaged	Upload the `.lic` file you were sent
signature does not verify	The file was not issued for ONEP, or it was changed	Download the file again; never edit a license file
signed by an unknown key	The file was signed with a key this appliance does not carry	Ask for a fresh license file
this license is for another product	The license was issued for a different product	Check you picked the right file
no expiry in license	The file is damaged or was edited	Ask for a fresh license file
license expired on <date>	The license has passed its expiry date and any grace period	Install the renewed license
This license was issued for installation <id>; this appliance is <id>.	The license is bound to a different install ID	Write to hello@onep.io with the install ID shown in Settings › Licensing
That file is too large to be an ONEP license.	The upload is over 64 KB	Check you picked the right file

Message	Meaning	What to do
install id unreadable, *install id could not be created* or *identity directory missing - installation incomplete*	The appliance cannot read or create its install ID	Contact support

If the edition shown after an upload is not the one you bought, write to hello@onep.io with your license ID.

ADMINISTRATION

Settings

Every Settings tab, what it changes, and who can see it.

Settings is a list of tabs on the left, in four groups: System, Platform, Security and Administration. On a narrow screen the list becomes a drop-down above the page. Tabs that only make sense with more than one user are not shown on single-user editions (Community and Lite): they are removed, not greyed out.

System

Tab	What it shows or does
Status	Your profile; the platform version and build, system health, uptime, last start and virtualization; and, for administrators, service health, network health checks and whether the appliance is published through remote access. See Monitoring and health
Diagnostics	A health summary, the version, the classification content version, a collapsible list of service details and the **Collect diagnostic bundle** button. See The diagnostic bundle
Updates	Shows the installed version and build. See Updates

Platform

Tab	What it shows or does
Network	The management address: automatic (DHCP) or a static address. Applying a change ends your session. Details below
AI	Which model the AI Generator calls. Details below
Remote access	WireGuard, and on Lite and Pro also Cloudflare Tunnel, Tailscale and Dynamic DNS. See Remote access
Images & storage	Disk use and the number and size of images. Details below

Security

Tab	What it shows or does
Account	Your password and two-factor authentication. Where the edition allows it, also your profile, API tokens and your AI model preference. See Users and roles
Licensing	Your ONEP license and the Cisco IOL license card. See Licensing
Users & access	Create users, change roles, deactivate, clear a lockout, reset passwords and delete. Not shown on Community or Lite. See Users and roles

Administration

Tab	What it shows or does
Backup & restore	States that backup and restore are not included in this release. See Backups and restore
Reset	Lists **Delete all environments and images** and **Reset appliance to first boot**. Both buttons are disabled and say *Not available in this release.*
Advanced	The network card environments use to reach your network, and one button that powers off every running environment. Details below
Config history	A link to the audit log, where configuration changes are recorded. Not shown on Community or Lite. See Audit log

Who can see what

- **Every user** sees Status, Diagnostics, Updates, Images & storage and Account. On Status, the service health, network and exposure cards are for administrators only.
- **Administrators** also see Network, AI, Remote access, Licensing, Backup & restore, Reset and Advanced. Collecting and downloading a diagnostic bundle needs an administrator.
- **Users & access** and **Config history** are administrator tabs that are also hidden on Community and Lite, which have one account.
- On Community and Lite, **Account** shows the password and two-factor cards only, and **Advanced** shows only the power-off button.
- An administrator-only tab shows *Admin only.* to any other user who opens it by its address.

Anything under **Remote access** changes how exposed the appliance is to the outside world. ONEP asks you to confirm each change and says what it will do.

Network

The tab holds one card, **Management interface**. It shows the live state of the appliance. If the live state cannot be read, it says so and shows the last saved values.

1. **Choose an Address mode.**
   Automatic (DHCP) or *Static address*.

2. **For a static address,**
   fill in **IP address**, **Subnet (prefix)**, **Gateway**, **Primary DNS** and, if you want, **Secondary DNS**, then choose **Apply static IP**.

3. **For DHCP,**
   the card shows the current address, gateway and DNS. Choose **Use DHCP** to switch.

4. **Confirm.**
   Your session ends. Reconnect at the new address. If the new gateway cannot be reached, the appliance reverts.

First-boot behavior is described in First boot and network.

AI

A status line says whether the ONEP Assistant is connected. Under **AI source** you choose where the AI Generator sends its requests:

- **Model on this appliance.** Requests stay on the appliance. A **Download recommended model** button fetches a better model and restarts the assistant on it.
- **External AI service (your own account).** Requests go to the service you name. You enter its **Base URL** (an OpenAI-compatible address), a **Model** and an **API key**. The key is stored on the appliance and never shown again; paste a new one to replace it.

Choose **Save** to apply. See AI Generator. Each user can also pick a model for their own requests under **Account**; see Users and roles.

Images & storage

- One bar per disk, with the percentage used and the free and total size. A bar turns amber at 70 percent used and red above 85 percent.
- An **Images** line with the number of images and their total size.
- A **Storage areas** list. Each area reads *Ready*, or states its problem and advises restarting ONEP and, if it persists, contacting support.

Advanced

- **Environment uplink.** Choose the network card environments use to reach your network, then **Apply**. ONEP asks you to confirm, because it changes host networking and may briefly affect environments already using the current uplink. Not shown on Community or Lite.
- **Power off all environments.** The **Power off all running environments** button first lists the environments that are running. The confirmation names them and says it affects every user. Choose **Power off all** to proceed. Nothing is deleted.

ADMINISTRATION

Backups and restore

How to protect an appliance, and what Settings › Backup & restore and Reset show.

ONEP has no backup or restore that you run from the web interface. **Settings › Backup & restore** says so, and has no buttons. **Settings › Reset** lists two actions, **Delete all environments and images** and **Reset appliance to first boot**, with their confirmation boxes and buttons disabled and the line *Not available in this release.*

Protecting an appliance

ONEP runs as a virtual machine, so the dependable way to protect it is your hypervisor's own backup or snapshot of the whole virtual machine. Stop your environments first, shut the appliance down from the hypervisor, and take the backup or snapshot while it is off.

- **Your license survives a restore.** Restoring a snapshot or restoring the appliance in place keeps its license. Running a cloned copy does not. See Licensing.
- **Images are large.** Images and environments live on the appliance's disk and make up most of a backup's size. Images downloaded through Discover can be downloaded again, but each re-download counts against your Discover download limit; see Limits per edition.
- **Reset one device, not the appliance.** Returning a single device to its first boot is an everyday action on the canvas; see Environments.

Secrets and support files

AI provider keys and remote-access secrets are stored on the appliance and never shown again. Support bundles never include passwords, keys, certificates or license files; see The diagnostic bundle.

ADMINISTRATION

Monitoring and health

Read the health of the appliance in Settings, and monitor it from your own tools.

Settings › Status

The Status tab is the first place to look when something seems wrong. Check it after the first boot. Every user sees the first two cards; the cards after them are for administrators.

Profile

Your username, role, email address and whether two-factor authentication is on.

System information

Row	What it shows
Platform	One line: ONEP, the edition word, the version, then *build* and the build stamp. Quote it when you contact support
System health	Healthy, Degraded or Critical. Only the Database, Cache and Background tasks decide it. The ONEP Assistant never turns it to Degraded
Uptime	How long the appliance has been running, for example *7 days 22 h*
Last start	The report written when the appliance last started, not a live check. For example *Ready in 52 s*. If that start-up reported a problem but the platform is healthy now, it says so
Virtualization	**Ready** means ONEP can start virtual machines. If it is not ready the row explains that virtual machines need nested virtualization on your hypervisor; see Requirements

Under **Last start** an amber line can read *Scheduled backups are not enabled on this appliance.* ONEP does not schedule backups; see Backups and restore.

Service health

Row	What it covers	Words
Database	Where ONEP keeps environments, devices and settings	Online, Offline
Cache	The platform's fast working store	Online, Offline
Backgroun d tasks	The services that start devices, build Content Hub cards and run downloads	Online, Offline
ONEP Assistant	The model source set in **Settings › AI** for the AI Generator	Connected, Not connected

A row that is Offline means that service is unreachable. It does not by itself mean running environments are affected: devices run as their own virtual machines and containers, not inside these services. The ONEP Assistant is optional, so *Not connected* is shown in amber as a note, not as a fault.

Network

A list of health checks for the parts that carry environment and management traffic. The card heading reads *Healthy* or *Needs attention*. Each check reads *Healthy* or states its problem in plain words. The checks are:

- Networking and virtualization drivers
- Virtual switch service
- Virtual machine service
- Management network
- Management network address
- Management address service
- Name resolution
- Traffic forwarding
- Address translation

- Management address (DHCP)

ONEP repairs some of these by itself. A repaired check says *ONEP repaired this at* followed by the time. If the check has not run recently, the card says so in one line instead of showing old results.

Exposure

Whether the appliance is published outside your network through a remote access method. It reads *Not published — reachable only on your network.* or names each method that is active, with its hostname. **Manage remote access** opens the Remote access tab.

Settings › Diagnostics

A one-line headline names the cause when something needs attention: *All services running*, *Running. The ONEP Assistant is not connected.* or *Needs attention* followed by the service that is not running. **Service details** expands to the same rows as Service health. The tab also holds the support bundle button; see The diagnostic bundle.

Capacity and alerts

The dashboard shows CPU, Memory and Disk in use on the appliance, and a **Recent alerts** card with the latest events. Settings › Images & storage shows disk use in detail.

Monitor from your own systems

ONEP is monitored like other appliances, from the monitoring system you already run. It bundles no Grafana or Prometheus of its own.

Endpoint	What it gives you
`/health`	Whether the service is up. No sign-in needed, for simple up or down polling
`/metrics`	Metrics in Prometheus text format, to scrape with Prometheus, Grafana, Zabbix or similar

```
curl -sk https://<address>/health
```

ADMINISTRATION

Updates

Version numbers, what the Updates tab shows, and how releases are published.

One version number

ONEP uses one version number for every edition. The edition is shown as a word next to it. The number changes like this:

Change	Raises	Which number
A fix: a bug, security or wording fix, with no new capability	Patch	The third number
A new feature	Minor	The second number
A breaking change	Major	The first number

Every build also carries a build stamp, a date and a short code, after the version number. Quote the version and build when you contact support.

Where the version is shown

The same line appears in four places: below the sign-in form, in **Settings › Status**, in **Settings › Diagnostics** and in **Settings › Updates**. It reads ONEP, the edition word, the version, then *build* and the build stamp. If a build carries no version, the line reads *Version not recorded*.

Settings › Updates

The Updates tab shows the installed version and build. It adds one line: *This appliance is updated by installing a new ONEP release. Update checks and one-click upgrades are not part of this release.* The tab has no buttons.

How releases are published

- One appliance per version, for all editions.
- Changes are listed in the Release notes.

What an update carries

- Fixes and features for the platform.
- The rules ONEP uses to identify images. The **Classification content** row in **Settings › Diagnostics** shows their version.

Changing edition is not an update

Moving between Community, Lite and Pro needs no new version and no reinstall. Install the license file for the edition in **Settings › Licensing**; see Licensing.

ADMINISTRATION

Report a Problem and support bundles

Send a problem report, collect a diagnostic bundle, and reach ONEP support.

There are two ways to give ONEP support what it needs: **Report a problem**, a form that sends a short report when you press Submit, and the **diagnostic bundle**, a file you download from Settings and send yourself. Nothing is sent to ONEP support unless you send it.

Support by edition

Edition	Report a problem	Support
Community	–	Documentation and the community
Lite	Yes	Response in 3–5 working days
Pro	Yes	Response in 1–3 working days

On Community, the sidebar and the dashboard show **Community** instead of Report a problem. It opens the ONEP community. You can also write to hello@onep.io. The response time of the edition is shown under the Report a problem entry in the sidebar.

Report a problem

Open it from **Report a problem** at the bottom of the sidebar, or the **Report a Problem** tile on the dashboard. It is open to every role. The form asks:

- **Where is the problem?** A fixed list: Dashboard, Environment (with Canvas), Content Hub, Migration Hub, Centrum (with Discover and My Centrum), AI Generation, Audit Logs, Settings and Other. It is already set to the screen you came from.
- **What happened?** A short description, up to 500 characters. A counter shows how many are left.

- **Your name** and **Your email**, filled in from your account and editable. The email must be a valid address.
- **Screenshot**, optional. Choose a PNG or JPG file of up to 3 MB. ONEP checks the real file content, so a renamed file that is not an image is refused.
- **Attach recent activity from this appliance**, a tick-box that is off by default. It adds ONEP's own recent activity events, with secrets removed.
- **Attach a support bundle**, a tick-box that is off by default. It adds services, logs and hardware facts, with no passwords or keys.

Choose **Submit report** to send it, or **Cancel**. The form says: *Attachments are encrypted and only ONEP support can open them. Nothing is sent until you press Submit.* On success a message reads *Report sent. Reference* followed by a reference; quote it if you follow up by email. If anything is missing or invalid, the form names the field and keeps what you typed.

When the appliance cannot reach ONEP support

On an isolated network the form says *ONEP could not reach the report service. Save the report and email it to support.* and offers **Save report file**. You get the same report as one encrypted file, which you can email to hello@onep.io from another machine.

If the form says *Problem reporting is not set up on this appliance yet. Contact your administrator.*, the appliance has no delivery path configured and the form cannot send the report.

The diagnostic bundle

1. **Open Settings › Diagnostics**
   as an administrator.
2. **Choose Collect diagnostic bundle.**
   The button reads *Collecting...* while it works. When it finishes, **Download support bundle** appears with the file size.
3. **Send the file to support**
   at hello@onep.io, with the install ID shown on the Diagnostics tab.

The bundle holds service state, recent logs, hardware and resource facts and the last 500 activity events. It holds no passwords, keys, certificates or license files. Collecting a bundle sends nothing anywhere; it only produces the file. The collection is recorded in the audit log. The appliance keeps the last five bundles and removes older ones.

Everything that leaves for support is encrypted

A problem report's attachments, a saved report file and a diagnostic bundle all leave the appliance as one encrypted file with the ending `.onep-archive`. The contents are encrypted with AES-256. The key is random for each file and is locked with ONEP support's public key, so only ONEP support, who hold the matching private key, can open it. Two plain files travel inside the archive, a README and a manifest, which list what was collected. You can read them with any zip tool before you send the file.

ADMINISTRATION

Audit log

The record of who did what on the appliance, with filters and export.

> AVAILABILITY
>
> The audit log with export is part of **Pro**. On Community and Lite the sidebar has no Audit entry, and the address shows *Audit log is part of ONEP Pro*.

The **Audit** page, titled **Audit log**, is the appliance's record of who did what and when. It is a page of its own in the sidebar, not a Settings tab, and like Settings it is for administrators. **Settings › Config history** is a link to it.

What an event holds

The table has these columns: **Time**, **Severity**, **Category**, **Event**, **Resource**, **User**, **Status** and **Description**. The Event column reads as a sentence, for example *Signed in*, *Environment created* or *User role changed*. Times are local, in the form 7 Oct 2026, 03:24.

The categories are **System**, **Authentication**, **Security**, **Environment**, **Node** (devices), **Network**, **Worker** (background tasks), **Resource**, **Storage** and **Error**.

The severities are **Info**, **Warning**, **Error**, **Critical** and **Audit**. **Audit** marks a deliberate record of a significant action. Status reads *Success* or *Failed*.

Choose a row to expand it. The expanded row lists every field of the event, with the event code and event name. **Details** shows the full record as text.

Find and export

- **Search events…** searches the text of events.
- **All categories** and **All severities** filter by category and severity.
- **More filters** adds **Actor (user)**, **Resource type**, **Resource ID**, **From** and **To**. **Clear all filters** resets them.

- **Show 20**, 50, 100 or 200 sets the page size. **Previous** and **Next** move between pages. The page shows the range and the total number of events.
- **Refresh** reloads the list. The list also refreshes by itself about every 15 seconds.
- **Export CSV** and **Export JSON** download every event that matches the active filters, not just the page on screen, up to 50,000 events. The file is named `onep-audit` followed by the filters and the time. Export is recorded in the log as *Audit log exported*.

Coverage

The log records sign-in activity, the life of environments and devices, and changes made by administrators: users, roles, password resets, lockout clears, two-factor and API token changes, network settings, remote access, AI settings, license uploads and diagnostic bundles. License uploads, both accepted and refused, are recorded with the edition, seats and expiry but never the license file itself. Where a change has a before and after, the event records both.

REFERENCE

System requirements

The requirements in one table.

Host

Item	Minimum	Recommended	Notes
CPU	4 vCPU	More cores run more devices at once	Intel VT-x or AMD-V, with nested virtualization on for the appliance before you start it
Memory	8 GB	16 GB	Small environment (2 to 3 devices, one virtual machine, or a dozen routers and switches): 8 GB. Medium (4 to 8 devices, 3 or 4 virtual machines): 16 GB. Large (10 to 20 devices, 6 to 8 virtual machines): 32 GB. Security appliances follow their vendor's own numbers
Disk	200 GB virtual disk, thin-provisioned	Room for your images and environments	The disk takes space on the host only as it fills. Large monitoring cards declare up to 200 GB
Network	One interface	One interface	DHCP is fine
Hypervisor	Proxmox VE, VMware Workstation, VirtualBox		Install steps are given for all three
Browser	A current Chromium-based browser		Nothing to install on your laptop

Sizing for environments is covered in Requirements and sizing.

Appliance

Delivery	ONEP appliance as an `.ova`
Base	Ubuntu 22.04 LTS
System disk	200 GB, thin-provisioned
Images	You bring your own images, or fetch them through Discover
Inbound ports	`443/tcp`, `80/tcp` (redirects to HTTPS), and a WireGuard UDP port when remote access is enabled
SSH	Port 22 is closed by the appliance firewall
TLS certificate	Created by the appliance on first boot
Devices	Router and switch images, virtual machines, containers
Consoles	Serial; graphical desktop in the browser; container shell

Monitoring	`/health` and `/metrics` (Prometheus text format)
Internet use	ONEP sends nothing to ONEP on its own. ONEP itself connects out only for what you ask for: Discover downloads, the first build of a Content Hub card, container pulls, the model download in Settings › AI, an external AI service you configure, and Report a Problem when you press Submit. The appliance's operating system may fetch its own security updates from package mirrors, and needs DNS and time (NTP) on your network

REFERENCE

Network and ports

Which ports are open, what leaves the appliance, and how environments reach the outside.

The management interface

The appliance needs one network interface: the address you sign in on. DHCP is fine; you can set a static address in **Settings › Network**. Environments do not use this interface for their own traffic.

Port	State	Use
`443/tcp`	Open	The web interface and consoles, over HTTPS
`80/tcp`	Open	Redirects to HTTPS
Device console ports	Closed	Consoles go through the web interface instead
SSH (22/tcp)	Closed	The appliance firewall allows only the web ports
WireGuard (UDP)	Closed until you turn it on	The listen port is set in **Settings › Remote access** when you enable WireGuard

The appliance creates its own TLS certificate on first boot, so your browser warns once. This is expected. `/health` and `/metrics` answer on the HTTPS port without a sign-in, so your own monitoring can read them.

What leaves the appliance

ONEP sends nothing to ONEP on its own. It has no telemetry. The license is checked locally against the signed license file, and this release sends no license check-in. The

appliance's operating system may fetch its own security updates from package mirrors, and needs DNS and time (NTP) on your network. ONEP itself connects out only for what you ask for:

Reason	Goes to	When
Discover downloads	The vendor's own site	When you add an image
Container pulls	The container image's registry	When you add a container image through Discover
First build of a Content Hub card	The vendor sources of that card's parts	The first deploy of a card on this appliance
AI Generator, external AI service	The service you configured, on your own account	When you ask it to build a topology; only the text you type is sent. A model on this appliance sends nothing out
AI model download	The model library	Only when you choose **Download recommended model** in Settings › AI
Remote access	Cloudflare, Tailscale or your Dynamic DNS provider, on your accounts	Only while that method is on
Report a Problem	ONEP support	Only when you press Submit; attachments are encrypted
Operating system updates	The operating system's package mirrors	On the operating system's own schedule, not something ONEP asks for
Time (NTP)	Time servers reachable from your network	Whenever the appliance keeps its clock in step

Reason	Goes to	When
Name resolution (DNS)	The DNS server on your network	Whenever the appliance looks up a name

Environments you have already deployed do not need the internet to run.

How environments reach the outside

Every environment starts sealed: it has no path to the ONEP host, your network or another environment, whichever switch it uses. It reaches the outside only through a door you open:

Door	What it does	Editions
Cloud node, NAT	Outbound internet for the environment through the shared address space (`100.64.0.0/10`, RFC 6598). The environment cannot reach private address ranges, and nothing on your network can reach in. This is the same range Tailscale uses, so avoid overlap	All
Cloud node, bridge	The environment joins your real network, as if plugged into your switch	All
Container expose	Open an app from an environment in your browser (**Expose Containers** in the device menu)	Which devices can be exposed depends on the edition. See Limits per edition

BRIDGE IS A REAL DOOR

A cloud node in bridge mode puts the environment on your LAN by design. Environments often contain attack tools and deliberately vulnerable systems, so use bridge mode only when you mean it. The Add Device dialog starts with Bridge selected, so choose NAT or Bridge on purpose when you add a cloud node. Right-click a cloud node and choose **Switch to NAT** or **Switch to Bridge** to change its mode later.

Because environments are isolated, the addresses inside them do not clash with your own network, even when they reuse the same ranges, unless you bridge them onto it.

Remote access

Remote access publishes the management interface only (sign-in, canvas and Settings), never anything inside an environment. See Remote access for what each method opens.

REFERENCE

Limits per edition

Every limit of Community, Lite and Pro, in one place.

This page is the reference for what each edition includes and where every limit sits. The Editions page gives the summary and links here. Lite is USD 129 per year plus tax, for one machine, with no automatic renewal.

Every limit, side by side

Community

Price and seats	
Price	Free
Users	1
Limits	
Devices running at once, whole appliance	10
Largest single device	2 CPU · 8 GB
Saved environments	3
Devices you can draw	No limit
Discover downloads, images and container pulls	5 a month
Content Hub deploys	2 in any 30 days
AI topologies	7 in any 30 days
Migration Hub imports	No limit, one at a time
Build and deploy	

Canvas: routers, virtual machines, containers	Yes
Cloud node (the internet door for an environment)	Yes
Content Hub	Starter blueprints
Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes
Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Content Hub apps
Packet capture and pcap download	Yes
Configuration save	Cisco IOL, without history
Snapshots and checkpoints	Not included
Session recording	Not included
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes
Report a Problem (support request)	Not included
Support	Email
Audit log with export	Not included

If your license ends	You stay on Community
Moving to a new machine	Install again

Lite

Price and seats

Price	USD 129 / year
Users	1

Limits

Devices running at once, whole appliance	30
Largest single device	8 CPU · 24 GB
Saved environments	5
Devices you can draw	No limit
Discover downloads, images and container pulls	10 a month
Content Hub deploys	No limit
AI topologies	No limit
Migration Hub imports	No limit, one at a time

Build and deploy

Canvas: routers, virtual machines, containers	Yes
Cloud node (the internet door for an environment)	Yes

Content Hub	All single-device blueprints
Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes
Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Content Hub apps
Packet capture and pcap download	Yes
Configuration save	Cisco IOL, without history
Snapshots and checkpoints	Not included
Session recording	Not included
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes, plus tunnels and dynamic DNS
Report a Problem (support request)	Yes
Support	Response in 3–5 working days
Audit log with export	Export only
If your license ends	Back to Community, every environment and all data kept
Moving to a new machine	We move your license

Pro

Price and seats	
Price	USD 249 / year per appliance
Users	3, extra seats USD 49 / year
Limits	
Devices running at once, whole appliance	128
Largest single device	No limit
Saved environments	No limit
Devices you can draw	No limit
Discover downloads, images and container pulls	No limit
Content Hub deploys	No limit
AI topologies	No limit
Migration Hub imports	No limit, one at a time
Build and deploy	
Canvas: routers, virtual machines, containers	Yes
Cloud node (the internet door for an environment)	Yes
Content Hub	All, including multi-device ranges
Migration Hub (EVE-NG, GNS3, Packet Tracer)	Yes
AI topology builder	Yes

Run	
Browser consoles	Yes
Container console and actions	Yes
Container expose: open an app from an environment in your browser	Any device
Packet capture and pcap download	Yes, plus capture report
Configuration save	With version history
Snapshots and checkpoints	Yes
Session recording	Yes
Reset to first boot, restart	Yes
Access and support	
Remote access	Yes, plus tunnels and dynamic DNS
Report a Problem (support request)	Yes
Support	Response in 1–3 working days
Audit log with export	Yes
If your license ends	Back to Community, every environment and all data kept
Moving to a new machine	We move your license

How the limits work

- **Devices running at once** counts machines that are powered on, starting or suspended, across the whole appliance and every environment. Devices that run no machine of their own, such as the built-in switch and cloud nodes, do not count. A

start beyond the limit is refused with a sentence of the form *ONEP Community runs up to <number> devices at a time (...). Stop some, or upload a license for more.* Stop another device first.

- **Largest single device** limits the CPU and memory of one device. It is checked when you create or edit a device and again at every power-on, including bulk power-on and Content Hub deploys. The refusal names the limit, the device and its size, and the smallest edition a device of that size runs on. Drawing devices is not limited. ONEP sets no ceiling on total memory; the hardware of the appliance is the limit.
- **Saved environments** counts every saved environment on the appliance, whoever owns it. At the limit, creating, importing or generating another is refused with *ONEP Community allows up to <number> environments (...). Delete one, or upload a license for more.*
- **Discover downloads** count images and container pulls together, per calendar month. The base image that a Content Hub build downloads does not count. Past the number, Discover refuses further downloads with *The next one is possible on* a date, until the month rolls over.
- **Content Hub deploys**, **AI topologies** and **Migration Hub imports** that an edition limits count over any 30 days, so the next one is possible on an exact date. The Content Hub shows what is left, for example *1 of 2 Content Hub deploys available · counted over 30 days*. A refusal reads *... allows <number> Content Hub deploys in any 30 days (...). The next one is possible on* a date.
- **Migration Hub imports** run one environment at a time on every edition. While one import is running, another is refused with *ONEP imports one environment at a time. Another import is in progress; try again when it finishes.*
- **Content Hub cards** that an edition cannot run stay visible, with *Runs on ONEP Lite* or *Runs on ONEP Pro* in place of Deploy. A single-device card is locked when its device is larger than the edition's largest single device. Multi-device ranges are larger, need a bigger appliance and are **Pro** only.
- **User accounts** are limited by the number of seats. Creating one more than the edition allows is refused.
- A license can carry its own numbers, and those win over the defaults above. A limit that the license marks as unlimited is not enforced. On Community, a license number counts only when it is higher than the default.

Settings › Licensing shows what is included next to what is in use. See What Settings › Licensing shows.

Editions

ONEP carries Community and Lite together: one build, and the license sets the edition. An appliance with no license, or with an expired one, runs as Community; when a paid license ends there is a 14-day grace period first, and nothing is deleted or stopped. See Community or Lite: one download and Release notes. Features that Community and Lite do not include are listed in What is hidden or locked.

REFERENCE

Glossary

The words ONEP uses, and what each one means.

A to C

AI Generator

The builder that turns a plain-English description into a topology, using the AI source set in Settings. It builds topologies; it does not chat.

AI source

Where the AI Generator gets its model: **Model on this appliance** or **External AI service (your own account)**. Set in **Settings › AI**. The Status page lists the model as the **ONEP Assistant**, *Connected* or *Not connected*.

Appliance

Either the ONEP virtual machine you import, or a single-device Content Hub card, such as a monitoring product, as opposed to a multi-device range.

Blueprint, card

One tile in the Content Hub, representing one deployable appliance or range. A card can have several **variants**, for example different Active Directory topologies.

Bridge

A cloud node mode in which the environment joins your real network, as if plugged into your switch.

Build

The first deploy of a Content Hub card on your appliance, which downloads the card's parts from the vendor and prepares a ready image. Later deploys reuse it. A built card is marked *built*.

Centrum

The image library on your appliance. It has two tabs: **My Centrum**, the images you have, and **Discover**. Centrum is about images; the Content Hub is about whole environments.

Class

A Centrum column that groups images by kind of device, such as Router or Firewall.

Cloud node

The device, added as a Cloud, that connects an otherwise sealed environment to anything outside it, through NAT or Bridge.

Community

The free edition, and what the appliance runs without a license or after a paid license ends. See Limits per edition.

Console

The in-browser terminal or desktop of a device, or the shell of a container.

Expose Containers

A device menu row that opens an app from an environment in your browser. Which devices can be exposed depends on the edition.

D to L

Diagnostic bundle

A file you collect in **Settings › Diagnostics** with **Collect diagnostic bundle** and send to support yourself. Collecting it sends nothing.

Discover

The Centrum tab where you download images straight from their vendors to your appliance.

Edition

Community, Lite or Pro, set by the license file. Every edition runs the same appliance and the same version.

Environment

A topology and the devices, links and switches in it, whatever built it.

Fingerprint

The hash ONEP uses to recognize an image. It is shown in the image details.

Grace period

The time after a paid license expires during which the appliance keeps its edition. Settings › Licensing shows the date it ends. After it, the appliance runs as Community.

Install ID

A random identity each appliance creates for itself, shown in Settings › Licensing. A license issued for an install ID is valid on that appliance only.

Cisco IOL

A Cisco router and switch image type. It is bring-your-own-license: ONEP does not supply, sell or verify Cisco licenses.

License

The signed file `onep.lic` that sets the edition and its limits. It is not a login.

License check-in

A card in **Settings › Licensing**. In this release it reads *Not active on this build*: the appliance sends nothing.

Lite

The single-user paid edition. It runs all single-device Content Hub cards. See Limits per edition.

M to R

Management interface

The one network interface of the appliance, and the address you sign in on. Set in **Settings › Network**.

Migration Hub

The importer that brings EVE-NG, GNS3 and Packet Tracer files, and public GitHub repositories, onto the ONEP canvas as environments. It runs one import at a time.

NAT

A cloud node mode that gives an environment outbound internet access, from the shared address space, without exposing it.

Native switch

ONEP's built-in virtual switch: no image, no extra memory, no license. Cable devices to it to build a shared segment.

Nested virtualization

Hardware virtualization that your hypervisor passes through to the ONEP appliance. Virtual machine devices need it; routers and containers do not.

Powered on

The device is running. Whether the system inside is ready is shown by its console.

Pro

The largest edition: more users, more devices running at once, no device size limit and multi-device ranges. See Limits per edition.

Range

A multi-device Content Hub environment, such as an Active Directory attack range. Ranges are larger and need a bigger host.

Recipe

The definition behind a Content Hub card: its install steps, images and sizing. An image the appliance built shows *Built here from an ONEP recipe*.

Register to ONEP

A Centrum action for an image of your own. ONEP fingerprints it and recognizes identical images in future.

Reset

The device menu row **Reset…**. It returns a device to its first boot, discarding its changes. Not the same as Restart.

Resolved plan

The step of the Content Hub wizard that shows the vCPU, memory and disk of every device before you deploy, and lets you change them.

Restart

A power cycle. The device keeps its disk and configuration.

S to Z

Sealed

The default state of every environment: no path to the ONEP host, your network or other environments until you open a door.

Shared address space (100.64.0.0/10)

The range (RFC 6598) a cloud node in NAT mode uses to give an environment outbound internet access. It is the same range Tailscale uses, so avoid overlap.

Source

A Centrum column showing where an image came from: *Vendor*, *Community* or *ONEP*. A dash means none of these applies, for example an image you added yourself.

Suspend

Freezes a virtual machine in memory so it can continue later from the same point (**Resume**). Virtual machines only.

Variant

The Content Hub wizard step where you choose an edition of an appliance or a topology of a range.

Vendor switch

A switch image from a vendor, such as a Cisco IOL Layer 2 image, used instead of the native switch when you need that switch's own behavior. Bring-your-own-license.

Verified

A Centrum column. A mark means ONEP recognized the image by its fingerprint.

REFERENCE

Release notes

What is in this release, by feature area.

One version number covers every edition, and the edition is shown as a word, for example **ONEP Lite**. How the number changes is described in Updates.

Version 1.0.0

Community and **Lite** come in one build. The appliance runs as Community until a Lite license is installed in **Settings › Licensing**. An appliance with no license runs as Community. When a paid license ends, the appliance keeps its edition for a grace period and then runs as Community. The full comparison is in Limits per edition.

What the release includes

- **Appliance**: an OVA that imports into Proxmox VE and VMware Workstation. The appliance creates its own TLS certificate on first boot, shows a console banner with the edition, version and address, and grows its file system when you enlarge its virtual disk. You create the administrator password yourself, then complete a first-time setup.
- **Canvas**: router images, virtual machines and containers in one environment. Links between devices, shared segments on the native switch, and a cloud node for NAT or bridge. Navy, Graphite and White themes.
- **Environments**: power on, power off, restart, reset to first boot, and suspend and resume for virtual machines.
- **Content Hub**: ready environments and ranges from a card and a wizard with a Resolved plan step, and a check against your appliance before a deploy.
- **Centrum and Discover**: the image library on your appliance, downloads from the vendor, and image recognition by fingerprint.
- **Migration Hub**: import EVE-NG, GNS3 and Packet Tracer files, and public GitHub repositories, one import at a time.

- **AI Generator**: describe a network in English. Choose a model on the appliance or an external AI service on your own account.
- **Consoles and packet capture**: a browser console for every device, and capture on a link with pcap download.
- **Remote access**: WireGuard, Cloudflare Tunnel, Tailscale and Dynamic DNS, by edition.
- **Administration**: licensing, users and multi-factor authentication, status and diagnostics, Report a Problem and encrypted diagnostic bundles. The appliance is updated by installing a new ONEP release; Backup & restore and the Reset actions are not part of this release.

REFERENCE

FAQ

Short answers to the questions people ask first.

Install and hardware

Is there a cloud version?

Which hypervisors can I use?

How big a host do I need?

A virtual machine device never starts. What should I check?

Which browser should I use?

Can I sign in over SSH?

Images and licenses

Where do device images come from?

What about vendor licenses?

Does ONEP need internet?

Does ONEP send data about me?

Editions and licensing

How do I change edition?

What happens when my license expires?

Is there a limit on how many devices I can draw?

Can I move my license to new hardware?

Using ONEP

Can my environments reach my network?

Do my environments start again after the appliance restarts?

Can I bring my EVE-NG lab files or GNS3 projects?

Which model does the AI Generator use?

Can I update from inside the product?

Help

Where do I get help?

Troubleshooting

Symptom, likely cause, and what to do, for the problems people meet most.

Each table lists a symptom, its likely cause and what to do. Several of these are expected behavior rather than faults. If nothing here helps, collect a diagnostic bundle and contact support.

Install and first boot

Symptom	Likely cause	What to do
A virtual machine device does not start, and the message says virtual machines need nested virtualization. The console banner shows the same	The hypervisor does not pass hardware virtualization through to the appliance. Routers and containers are not affected	Shut the appliance down. Set CPU type `host` (Proxmox VE) tick **Virtualize Intel VT-x/EPT or AMD-V/RVI** (VMware Workstation) or **Enable Nested VT-x/AMD-V** (VirtualBox), then start it again. **Settings › Status** shows **Virtualization: Ready** when it works
The console banner shows no address	No network card, or no DHCP on its network	Check the virtual machine has a network card on a network with DHCP
The banner's Status line says *Platform not ready* and names a step	The start-up check found a step that did not complete	Open **Settings › Status** and read **Last start**. If it does not clear, collect a diagnostic bundle in **Settings › Diagnostics**
The browser warns about the certificate	Expected: the appliance created its own certificate on first boot	Continue to the site
Create and sign in stays dimmed	The password has fewer than 12 characters, or the two entries differ	Use at least 12 characters and type the same password in both fields
Device consoles cannot be reached directly from the LAN	By design: console ports are closed on the appliance's firewall	Open consoles from the web interface

Symptom	Likely cause	What to do
SSH to the appliance is refused	By design: the firewall allows only the web ports	Use the web interface, and your hypervisor's console for the virtual machine
The session drops after changing the network settings	Expected: the address your browser used has changed	Open the new address. If the new gateway cannot be reached, ONEP puts the previous settings back

Devices and environments

Symptom	Likely cause	What to do
A start is refused with a message about devices at a time	You are at your edition's limit of devices running at once	Stop another device, or see Limits per edition
A device cannot be saved or started, and the message says its size is above your edition's maximum	The device has more CPU or memory than your edition's largest-device limit	Give the device less CPU or memory
A new environment cannot be created	You are at your edition's limit of saved environments	Delete an environment you no longer need
Environments are off after the appliance restarted	Expected: environments stay off after a restart	Start the ones you need
A link will not delete	Both devices on a link must be powered off first. A link to a cloud node is the exception	Power off both ends, then delete the link
The Delete button on an environment is dimmed	The environment is running or changing state	Power the environment off, then delete it
An environment you meant to keep behind NAT is on your LAN	Its cloud node is in bridge mode. The Add Device dialog starts with Bridge selected	Right-click the cloud node and choose **Switch to NAT**

Consoles

Symptom	Likely cause	What to do
Another session took over this console	Only one session at a time can hold a console, and another browser tab or user opened it	Choose **Take it back**
This console is in use	Another session is connected to the device	Choose **Connect anyway**
No login prompt yet	The device may present its screen instead of a serial prompt	Choose **Desktop**
Reconnecting with an attempt count, or *The console could not be opened*	The connection to the device dropped or could not be made	Wait for the retries, or choose **Reconnect now**
<device> is powered off	The device is not running	Choose **Power on**
Connected with a black screen	A guest that is still booting shows a black screen for a moment	Wait; the screen appears when the guest draws it

Content Hub and images

Symptom	Likely cause	What to do
A card shows *Needs N GB RAM* in place of Deploy	The appliance has too little memory for this card	Choose a smaller card, or give the appliance more memory
A card shows *Runs slowly: N cores recommended*	The appliance has fewer cores than the card recommends	You can still deploy; expect a slower environment
The first deploy of a card takes a long time	The first build downloads the card's parts from the vendor	Let it finish; later deploys reuse the build. Run one heavy job at a time
A Discover download is refused, and the message names a date	You have used this month's Discover downloads	Wait for that date, or use an image already in your library
A Content Hub deploy is refused, and the message names a date	Your edition limits deploys over a rolling period	Wait for that date. See Limits per edition
An import is refused with *ONEP imports one environment at a time*	Another import is still running	Try again when it finishes

License and editions

Symptom	Likely cause	What to do
That is not a license file, or *signature does not verify*	Wrong file, or a file that was changed	Upload the `.lic` file you were sent, unedited
The appliance runs as Community after a license expired	The license ended and its grace period passed	Install the renewed license in **Settings › Licensing**
You expected the appliance to contact ONEP about its license	This release sends no license check-in: the license is checked locally against the signed file	Nothing to do. An isolated or offline appliance runs normally
You bought a license but have not received it	The license file is emailed, normally within one business day	If it has not arrived after one business day, write to hello@onep.io
The edition shown is not the one you bought	The license did not install	Install it again in **Settings › Licensing**; if it persists, write to support with your license ID
A feature says it is not available on your edition	Expected: your edition does not include it	See Limits per edition
Report a Problem says *ONEP could not reach the report service*	The appliance cannot reach ONEP support, for example on an isolated network	Choose **Save report file** and email the file to hello@onep.io
Report a Problem says *Problem reporting is not set up on this appliance yet*	This appliance has no way to deliver reports	Write to hello@onep.io, and attach a diagnostic bundle from **Settings › Diagnostics**

Symptom	Likely cause	What to do
The Reset tab's actions cannot be pressed, and Backup & restore has no buttons	Expected: they are not available in this release	See Backups and restore

AI Generator

Symptom	Likely cause	What to do
AI service is temporarily unavailable (model host not responding)	The model is not running or cannot be reached	Check **Settings › AI** and the ONEP Assistant row in **Settings › Status**, which reads *Connected* or *Not connected*
AI generator is busy with a count of requests ahead of you	Other requests are being built first	Wait the time shown and try again
The assistant understands English only	The description was not in English	Describe the network in English
I only build network topologies	The description did not look like a network request	Name devices and connections, for example *a firewall between two PCs*
That topology is larger than I can build	The request asks for more devices than one environment can hold	Ask for fewer devices
Prompt too long	The description is above the length limit	Shorten it
Generation is slow	A model on this appliance runs on the CPU unless a GPU is present	Wait, or use an external AI service in **Settings › AI**