



Cisco Modeling Labs

Version 1.5

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1. General

Q. What is Cisco Modeling Labs?

A. Cisco® Modeling Labs is a scalable and extensible software platform that comprises a Cisco Modeling Labs server and Cisco Modeling Labs client. The following virtual images are available with Cisco Modeling Labs: Cisco Virtual IOS (IOSv) software, including Cisco IOSv Layer 2 switching code, Cisco NX-OSv 9000 demo image, Cisco IOS® XRv demo image, Cisco IOS XRv 9000 demo image, Cisco Adaptive Security Virtual Appliance (ASAv), and Cisco IOS XE (CSR 1000V) demo image, as well as an Ubuntu Linux server image. Together, they create a sandbox environment in which customers can design new network topologies or replicate existing ones for testing, modeling, and troubleshooting network issues with little risk to physical production networks or the need for a lab network.

Q. Why use Cisco Modeling Labs?

A. Cisco Modeling Labs helps corporate customers save Capital Expenditures (CapEx) by reducing the need for physical network equipment for designing network changes, troubleshooting problems, and testing operations. With Cisco Modeling Labs, customers can reduce risks for errors with selected network changes in actual network deployment, because they can first be simulated and verified in the virtual environment. Because there is no hardware setup required, building and tearing down network topologies can take minutes on an on-demand basis.

Q. Who uses Cisco Modeling Labs?

A. Cisco Modeling Labs is targeted to customers and partners who design, build, monitor, and manage Cisco networks and who need a lab environment. The power of the product is that it enables you to build and tear down large and small topologies on a case-by-case basis. It is also designed for shared use. The Cisco Modeling Labs server can be accessed by an unlimited number of end users who have the Cisco Modeling Labs client. The only limitation is based on the CPU and memory sizing of the physical server that hosts the Cisco Modeling Labs server, and the number of nodes licensed.

Q. What reference platforms (virtual images) are available with Cisco Modeling Labs?

A. Table 1 lists the reference platforms available with Cisco Modeling Labs:

Table 1. Cisco Modeling Labs supported virtual images

Image
Cisco IOSv 15.6(3)M image
Cisco IOSv Layer 2 15.2 image
Cisco IOS XRv 6.1.3 CCO demo image
Cisco IOS XRv 9000 6.2.2 CCO demo image
Cisco Nexus® 7000v 7.3.0.1
Cisco Nexus 9000v 7.0.3.17.1 (Nexus 9000)
Cisco CSR 1000V 16.5.1b XE-based demo image
Cisco ASAv 9.8.2 demo image
Ubuntu 16.04.3 Cloud-init

Q. What Linux containers are bundled with Cisco Modeling Labs?

A. The following Linux containers are available with Cisco Modeling Labs:

- LXC Ubuntu 16.4.1
- iPerf 2.0.2

- Routem 2.1(8)
- Ostinato-drone 0.8

Q. What products are offered to corporate customers?

A. For service provider, enterprise, and commercial customers, Cisco Modeling Labs Corporate Edition is available. The corporate edition is for customer on-premises deployment of large-scale and multiple simulations on virtual servers and for multiple-user access. This edition is offered as a software subscription with entitlement to maintenance releases, minor and major release upgrades, online resources, and Cisco Technical Assistance Center (TAC) support services. Corporate customers have the option of 1-year, 2-year, or 3-year subscriptions.

Q. What are the server requirements for Cisco Modeling Labs 1.5?

A. Table 2 lists the server requirements for Cisco Modeling Labs.

Table 2. Cisco Modeling Labs server requirements

Requirement	Description
Disk space	500 GB*
Chipset	Intel with Intel® virtualization technology VT-x and Extended Page Tables (EPTs)
Hypervisor	VMware ESXi 5.1 U2, ESXi 5.5 U1, ESXi 6.0 (Build 2494585), ESXi 6.5 (Build 4564106)
Server type for OVA package	Any server with Intel with Intel virtualization technology VT-x and EPTs
Server type for ISO package	Supported only on Cisco UCS® C220 M4 and C460 M4 with local storage*
Server recommendation	Cisco UCS C-Series

* **Important note:** 4K sector drives are not supported.

Q. What is the recommended hardware for Cisco Modeling Labs 1.5?

A. The recommended servers for Cisco Modeling Labs are the Cisco UCS C220 M4 and C460 M4 servers.

For more information on these servers, see the data sheets at

<https://www.cisco.com/c/en/us/products/servers-unified-computing/ucs-c-series-rack-servers/index.html>.

Q. Can I use other vendors' servers to run the Cisco Modeling Labs 1.5 OVA package?

A. Yes, but only for the OVA package. Further, the server must have an Intel chipset that supports the following:

- Intel VT-x (virtualization extension)
- Extended Page Tables (EPTs)

Q. Can I use other vendors' servers to run the Cisco Modeling Labs 1.5 ISO package?

A. No. Other vendors' servers are not supported for the ISO package.

The Cisco Modeling Labs ISO package is certified only with the Cisco UCS C220 M4 and C460 M4 servers.

- Q.** How do I calculate the memory and core requirements for the Cisco Modeling Labs server?
- A.** The general rule of thumb is three virtual nodes to one physical core CPU for simulation of 49 or fewer nodes, and two virtual nodes to one physical core CPU for 50 or more nodes. So to simulate 60 nodes, you would need 30 cores, and to simulate 45 nodes you would need 15 physical cores. This is a general rule because there are many variables, so in some cases you might have to adjust. Some contemporary images may require multiple vCPUs on a nonshared basis. Please use [the CML 1.5 calculator](#) to estimate the number of cores required.
- Q.** How do customers estimate Cisco Modeling Labs memory requirements?
- A.** The key factor for determining memory requirements is to determine the number of virtual devices (nodes) that you want to simulate. This should be based on a cumulative number:
- Number of concurrently active simulations and the sizing of the topologies
 - Types of nodes that users can activate, for example, Cisco IOS or IOS XRv Software, and so forth
- As a guide, Table 3 provides the general memory requirements for supported virtual images. **Customers should use the [CML 1.5 Capacity Calculator](#) to estimate needed memory requirements.**

Table 3. General memory requirements for Cisco Modeling Labs supported virtual images

Image	Memory requirement (MB)
Cisco IOSv 15.6(3)M image	512
Cisco IOSv Layer 2 15.2 image	768
Cisco IOS XRv 6.1.3 CCO demo image	3072
Cisco IOS XRv 9000 6.2.2 CCO demo image	6144
Cisco Nexus 9000v 7.0.3.I7.1	4096
Cisco CSR 1000V 16.6.1 XE-based demo image	3072
Cisco ASAv 9.8.2 demo image	2048
Ubuntu 16.04.3 Cloud-init	512

- Q.** What are the supported versions of VMWare ESXi?
- A.** The supported ESXi formats for Cisco Modeling Labs 1.5 are:
- ESXi 5.1U2 (Build 1483097)
- ESXi 5.5U1 (Build 1623387)
- ESXi 6.0 (Build 2494585)
- ESXi 6.5 (Build 4564106) and above
- Verify that you are using vSphere **client** v5.5 Update 2 (Build 1993072) or later before deploying Cisco Modeling Labs. Failure to use the minimum version will result in a failed deployment that creates an error of nested virtualization that is not supported.
- Q.** What is the difference between Cisco Modeling Labs and Cisco Virtual Internet Routing Lab Personal Edition?
- A.** Cisco Modeling Labs is a production-quality product focused on corporations requiring a scalable solution to mirror production-like environments. Cisco Virtual Internet Routing Lab Personal Edition is a sandbox tool focused on Software-Defined Networking (SDN) developers and personal use. Table 4 lists the differences between Cisco Modeling Labs and Cisco Virtual Internet Routing Lab Personal Edition.

Table 4. Differences between Cisco Modeling Labs and Cisco Virtual Internet Routing Lab Personal Edition

	Cisco Modeling Labs Corporate Edition	Virtual Internet Routing Lab Personal Edition Personal Edition
Type of user	Corporate	Individual
Number of users	Unlimited	Single user
Cisco node limit	300 per system	20
Expansion capability for Cisco node	10, 50, and 100 PACs	N/A
Technical support	Cisco TAC	Community support only
Where to purchase	Cisco Commerce Workspace and Cisco partners	http://cs.co/GetVirIPE
Call home required for installation and operation	No	Yes, weekly Internet connectivity is required
Usage tracking sent to Cisco	No	Yes (can turn off)
Purchase capability with learning credits	Not supported	Not supported
Contact for more information	cml-info@cisco.com	ciscovirt@cisco.com

- Q.** Does Cisco Modeling Labs require external access to Cisco?
- A.** No. Cisco Modeling Labs is an on-premises solution and does not require any external connectivity.
- Q.** Does Cisco Modeling Labs track usage and report to Cisco?
- A.** No. Cisco Modeling Labs does not track any usage information.
- Q.** Can customers get a trial copy?
- A.** Yes. A one-time 30-day trial license is available for qualified customers.
- Q.** How can I apply for the trial license?
- A.** Send an email to cml-info@cisco.com with the following information:
- **Company name**
 - **Company address**
 - **Customer name**
 - **Customer email**
 - **Customer phone**
 - **Customer CCO user ID:**
 - **Target purchase date**
 - **Cisco account manager**
- Q.** How do customers purchase Cisco Modeling Labs?
- A.** The Corporate Edition is on the Global Price List (GPL) and can be ordered on Cisco Commerce Workspace (CCW) at Cisco.com. It is also available through qualified Cisco partners.
- Q.** Can serial interfaces be modeled between virtual devices?
- A.** No. Cisco Modeling Labs supports only Gigabit Ethernet interfaces.
- Q.** Can I connect Cisco Modeling Labs to a physical lab or network?
- A.** Yes. You can use the FLAT or SNAT connectivity types to do so.

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- Q.** Can I simulate the physical network hardware in Cisco Modeling Labs?
- A.** No. The virtual images are hardware platform independent and do not model the physical hardware chassis, modules, line cards, power supplies, fans, serial numbers, Application-Specific Integrated Circuits (ASICs), high availability, Cisco In-Service Software Upgrades (ISSU), or switch fabrics.
- Q.** Can Cisco Modeling Labs connect to physical devices?
- A.** Yes, using a FLAT connection, you can connect a virtual network to external traffic generators, network management tools, and other applications in your lab. A virtual network simulated in Cisco Modeling Labs is for your lab environment only and should not be connected to production networks.
- Q.** Can I run third-party virtual machines in Cisco Modeling Labs?
- A.** Third-party virtual machines should work if compiled to run on Linux kernel-based virtual machines; however, features of Cisco Modeling Labs, such as Auto Configuration, are designed for Cisco virtual operating systems only. Cisco TAC support does not answer questions about third-party virtual machines or their interworking with the software.
- Q.** When the subscription expires, how do I extend it?
- A.** Corporate customers can reorder and obtain a new license key.
- Q.** How can customers get training on how to use Cisco Modeling Labs?
- A.** The software includes online help, which describes how to use the application's features. In addition, videos are posted on [the Cisco Modeling Labs Support Community](#).
- Q.** How do channel partners buy the product for internal use?
- A.** Cisco Modeling Labs Corporate Edition is available on the GPL. Channel partners can purchase it through Cisco Commerce Workspace at the regular price or, if preferred, they can use the Not for Resale (NFR) Program to purchase the software application for their internal use. **NFR will apply only to the base software (R-CML-CE-K9=) and not to the expansion packs** and is intended only for training and marketing activities, not to run an internal network.
- Q.** How is Cisco Modeling Labs delivered?
- A.** Cisco Modeling Labs is delivered through the Cisco eDelivery system.
- Q.** What is the external webpage for Cisco Modeling Labs?
- A.** <https://www.cisco.com/go/cml>
- Q.** What is the internal webpage for Cisco Modeling Labs?
- A.** <https://cisco.jiveon.com/groups/cml>

2. Features

- Q.** What are the new features in Cisco Modeling Labs Version 1.5?
- A.** The major new features are:

- Improved clustering
- Streamlined and improved installation and configuration process

For a detailed description of the new features, see the Cisco Modeling Labs 1.5 Release Notes on the external and internal Cisco Modeling Labs websites.

- Q.** Is Cisco Modeling Labs clustering available for both the OVA and ISO packages?
- A.** No. Currently, Cisco Modeling Labs clustering is supported only for the OVA package.
- Q.** How many nodes does a Cisco Modeling Labs cluster support?
- A.** Cisco Modeling Labs supports one controller node and up to eight compute nodes in one cluster.
- Q.** Are the compute node images the same as the controller node?
- A.** No. The controller node is the base node software image that is normally used for the standalone system. Compute nodes are separate images and are provided when ordering Cisco Modeling Labs.
- Q.** Can I run 300 nodes of any type in the Cisco Modeling Labs cluster?
- A.** The scalability to 300 nodes in a single cluster depends on the type of virtual images and protocols you are running.
- Q.** Can I connect more than one cluster through the Cisco Modeling Labs external connectivity features (FLAT or SNAT)?
- A.** Yes. In this case, they will be two separate clustering systems communicating through external connectivity and managed as two separate systems.
- Q.** What interfaces are available in Cisco Modeling Labs?
- A.** Currently, Cisco Modeling Labs supports Gigabit Ethernet only. The Gigabit Ethernet interface is actually pointing to the E1000 driver in the hypervisor environment.
- Q.** Can I connect Cisco Modeling Labs to other virtualization networks?
- A.** Yes. If the virtual networks can reach each other, the virtual environments can connect.
- Q.** Are there any limitations with the Visio import feature?
- A.** Visio imports support the VSDX format, which is available in Visio 2013 and later.
- Q.** What version of Visio is compatible with this feature?
- A.** Visio 2013 and later.
- Q.** What version of Cariden MATE is supported?
- A.** Cariden MATE is support with version 5.0 and later.

3. Virtual images

- Q.** Are there new versions of images included in Cisco Modeling Labs Version 1.5?
- A.** Yes, Cisco Modeling Labs 1.5 is shipped with the images listed in Table 5.

Table 5. Cisco Modeling Labs 1.5 reference platform images

Image	Bundled?
Cisco IOSv 15.6(3)M image	Yes
Cisco IOSv Layer 2 15.2 image	Yes
Cisco IOS XRv 6.1.3 CCO demo image	Yes
Cisco IOS XRv 9000 6.2.2 CCO demo image	No. Included in eDelivery and available on CML File Exchange
Cisco Nexus 9000v 7.0.3.I7.1 CCO demo image	No. Included in eDelivery and available on CML File Exchange
Cisco CSR1000V 16.6.1 XE-based CCO demo image	No. Included in eDelivery and available on CML File Exchange
Cisco ASAv 9.8.2 CCO demo image	Yes
Ubuntu 16.04.3 Cloud-init	Yes

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- Q.** Are the reference platforms shipped with Cisco Modeling Labs demo or production images?
- A.** The reference platform images are demo versions of the platforms.
- Q.** Can I install the older images that were available in previous versions of Cisco Modeling Labs?
- A.** Yes. Additional images can be installed from the UWM images tab. Notice that the amount of disk space allocated to the server should be reviewed to ensure that there is sufficient space.
- Q.** Can I run the Cisco NX-OSv (Titanium based) image in Cisco Modeling Labs?
- A.** Yes, you can. However, the Cisco NX-OSv image is an experimental image that is not fully featured, has very limited Layer 2 support, and has no commitment from the business unit for release. As such, it is not supported by Cisco TAC. Cisco Modeling Labs 1.5 supports Cisco NX-OS 9000v, which is a released and supported image.
- Q.** How do I get the prereleased, unsupported Cisco NX-OSv?
- A.** The Cisco NX-OSv image can be made available upon request. Contact the cml-info@cisco.com alias for download information.
- Q.** As a current customer, where do I go to download the updated software?
- A.** Customers who have a valid subscription can order the appropriate upgrade SKU from CCW or from their account contact. The two upgrade SKUs are R-CML-1.5-UOV-K9= for the ESXi version of the product, and R-CML-1.5-UIS-K9= for the ISO version of the product.
- Q.** Why is the software not available on Cisco Connection Online?
- A.** Cisco Modeling Labs is updated via placing a no-charge order for the upgrade SKUs above. That will trigger an eDelivery that will provide the information for obtaining the appropriate installation media.
- Q.** The Cisco Cloud Services Router (CSR) 1000V image, which I downloaded from Cisco Connection Online, loads, but I cannot access the console. Why?
- A.** The Cisco Connection Online version is compiled to use the virtual machine console, but Cisco Modeling Labs uses the serial console. For this functionality to work, there is a Cisco Modeling Labs build version of CSR 1000V, with the "serial.qcow2" format.
- Q.** When will other images, such as wireless, voice, data center, etc., work in Cisco Modeling Labs?
- A.** As Cisco applications become available in the virtual environment, we will make them available in Cisco Modeling Labs. We are proactively working with the business units to drive these products.
- Q.** What hardware is virtualized in Cisco Modeling Labs?
- A.** The Cisco IOSv images are compiled for the virtual environment using the same code train and do not reflect a specific hardware type. The reason is that the Cisco IOS code is compiled to use the virtualization drivers instead of using line cards.
- Q.** Where can I download other images of the reference platforms?
- A.** Other images of the reference platforms are available on the Cisco Modeling Labs File Exchange. Please send an email with your CCO ID to cml-info@cisco.com to get access.

4. Ordering and licensing

- Q.** Are there any important license terms or restrictions?
- A.** Standard Cisco end-user license agreements are applicable. For more information, see the End User License Agreement, <https://www.cisco.com/go/eula>.
- Q.** Have the part numbers changed for Cisco Modeling Labs Version 1.5?
- A.** No. The Cisco Modeling Labs part numbers (PIDs) have not changed.
- Q.** Has the pricing changed for Cisco Modeling Labs Version 1.5?
- A.** No. The Cisco Modeling Labs pricing has not changed.
- Q.** What are the part numbers to order Cisco Modeling Labs Version 1.5?
- A.** The part numbers are as follows:

Description	
Base Software	
R-CML-CE-K9=	CML CE SW subscription with 15 nodes, OVA Package
R-CML-CE-ISO-K9=	CML CE SW subscription with 15 nodes, ISO Package
Expansion Nodes	
L-CML-CE-10N=	CML CE, 10 nodes expansion
L-CML-CE-50N=	CML CE, 50 nodes expansion
L-CML-CE-100N=	CML CE, 100 nodes expansion

- Q.** What packages are available for Cisco Modeling Labs?
- A.** Cisco Modeling Labs is available in two packages:
- An Open Virtual Appliance (OVA) to be installed on VMware ESXi
 - An ISO image for bare-metal installation
- Q.** What licensing model does Cisco Modeling Labs use?
- A.** Cisco Modeling Labs uses SWIFT licensing. Customers get an eDelivery email with the PAK, which has to be redeemed at the licensing portal for a license.
- Q.** Does Cisco Modeling Labs 1.5 support Smart Licensing?
- A.** No.
- Q.** What happens if I use a reference platform VM that uses Smart Licensing?
- A.** When the simulation runs in Cisco Modeling Labs, OpenStack spins a new instance of the virtual machine with a New Unique Identifier (UID). This means the Smart License has to be reapplied every time you run the simulation.
- Q.** Do I need to purchase a node license per image? For example, a 15-node Cisco IOS license, a 15-node Cisco IOS XR license, and a 15-node Cisco IOS XE license?
- A.** No. You can purchase a 15-node license for Cisco Modeling Labs and then a right-to-use license for Cisco IOS XR and Cisco IOS XE. With these licenses you can mix and match to the purchased node count.
- Q.** Is there a node count per user?
- A.** No. The number of nodes licensed is not per user but rather is based on the nodes being simulated. So the number of nodes is based on the number of active, simultaneous nodes running in a simulation.

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- Q.** Is there a license per user?
- A.** No. The licensing is per node, not per user. The client software can be downloaded and installed by an unlimited number of users.
- Q.** Does the Cisco IOSv Layer 2 managed switch count as a licensed node?
- A.** Yes.
- Q.** Does the Cisco IOSv Layer 2 unmanaged switch count as a licensed node?
- A.** No.
- Q.** What is considered a licensed node?
- A.** Only Cisco devices are counted as licensed nodes. Servers, such as Linux, Windows, or third-party images, are not part of the license count.
- Q.** How is Cisco Modeling Labs priced?
- A.** The pricing structure is an annual subscription based on the number of virtual nodes to be simulated in the Cisco Modeling Labs installation and the term. Cisco Modeling Labs is available in 1-, 2-, and 3-year terms.
- Q.** Do I need to purchase Cisco Smart Net Total Care™ Service for Cisco Modeling Labs?
- A.** No. Pricing for Cisco Modeling Labs is based on a subscription model. This means that the customer is entitled to free Cisco TAC support, as well as updates and upgrades during the term of the subscription.
- Q.** Can I use my learning credits to purchase Cisco Modeling Labs?
- A.** No.
- Q.** Will the product continue to work if my license expires?
- A.** No. After the license expires, you cannot run any simulations. You can still access your topologies and designs, because these are saved on the client.
- Q.** I purchased the basic software, and 3 months later I purchased an expansion pack. What happens at the end of the subscription?
- A.** If a customer purchases an expansion pack after they purchase the baseline (R-CML) PID, the base software license will expire before the expansion pack license and CML will stop working, even though the expansion pack license is still valid.
- This means that although the L-CML PID expires at a later date, the simulations cannot run until a new R-CML license is purchased.
- Q.** I purchased Cisco Modeling Labs but did not receive the eDelivery notification. What do I do?
- A.** Send email with your CCO ID and sales order number to cml-info@cisco.com to have the eDelivery email re-sent to you.

Q. What do I need to order if I want to run 100 Cisco IOS XRv nodes in Cisco Modeling Labs for 1 year?

A. Table 6 shows what products to order, along with their PIDs.

Table 6. Products needed to run 100 Cisco IOS XRv nodes

Description	Product number	Quantity
Cisco Modeling Labs base software	R-CML-CE-K9	1
100-node Cisco Modeling Labs capacity expansion license	L-CML-CE-100N	1
1 Cisco IOS XRv site license	R-IOSEXRV-IMG L-XRV-CMLSIM-1YR	1

Q. What do I need to order if I want to run 50 Cisco IOSv nodes and 15 Cisco IOS XRv nodes?

A. Table 7 shows what products to order, along with their PIDs.

Table 7. Products needed to run 50 Cisco IOSv nodes and 15 Cisco IOS XRv nodes

Description	Product number	Quantity
Cisco Modeling Labs base software	R-CML-CE-K9=	1
50-node Cisco Modeling Labs capacity expansion license	L-CML-CE-50N=	1
Cisco IOS XRv site license	R-IOSEXRV-IMG L-XRV-CMLSIM-1YR	1

Q. Where can I get more info on the reference platforms?

A. Table 8 gives hyperlinks to the reference platform websites.

Table 8. Cisco Modeling Labs reference platforms information links

Virtual image name	Link for information
Cisco NX-OS 9000v	https://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus9000/sw/7-x/nx-osv/configuration/guide/b_NX-OSv_9000.html
Cisco IOS XRv 9000	https://www.cisco.com/c/en/us/products/collateral/routers/asr-9000-series-aggregation-services-routers/datasheet-c78-734034.html
Cisco IOS XE (CSR 1000v)	https://www.cisco.com/c/en/us/products/routers/cloud-services-router-1000v-series/index.html
Cisco ASA v	https://www.cisco.com/c/en/us/products/security/virtual-adaptive-security-appliance-firewall/index.html

5. Upgrading

Q. How do I get updates or upgrades during the subscription term?

A. You can order the upgrades at no charge from either CCW or your account rep. Order R-CML-1.5-UOV-K9= for the ESXi version, or R-CML-1.5-UIS-K9= for the ISO version (for bare metal installations).

Q. Is Cisco Modeling Labs available on CCO?

A. No.

Q. Can I do in-place upgrades from earlier versions of Cisco Modeling Labs to Version 1.5?

A. No. Currently, Cisco Modeling Labs does not have an in-place upgrade. However, you can export existing projects and image subtypes and import them into Cisco Modeling Labs 1.5.

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- Q.** How do I move my existing images?
- A.** Images in Cisco Modeling Labs Version 1.5 are reinstalled with the User Workspace Management (UWM) interface. If you have any special image subtypes that you created, you can use the Import/Export function to move them. You would also need to manually move the special images that you have saved to the new server.
- Q.** How do I move projects, users, etc.?
- A.** Use the Project Export/Import function in the UWM interface to move them between Cisco Modeling Labs 1.1, 1.2, or 1.3 to Cisco Modeling Labs 1.5.
- Q.** Do I have to move my topologies?
- A.** No. Topologies are stored on the client, so they are not lost or changed when upgrading.
- Q.** Do I need to update my client?
- A.** Yes. It is **mandatory** to upgrade the client to match the new version of Cisco Modeling Labs. To download the client, users should access the following: <http://<your-CML-server-IP-address>/download>.
- Q.** Where do I go to download the Cisco Modeling Labs client?
- A.** You can download the client from the Cisco Modeling Labs server as follows: <http://<your-CML-server-IPaddress>/download>.
- Q.** How do I transfer my license across systems (rehost)?
- A.** The license is built with the dynamically built MAC address and the host name of the server.

For OVA installations:

When you install the new Cisco Modeling Labs version, the MAC address will be different. As such, you must get an update license. To update your license, contact cml-licensing@cisco.com.

For ISO installations:

Provide you are using the same server with the same MAC address, you can use your existing license. Simply reapply it at the UWM interface of the Cisco Modeling Labs 1.5 licensing page.

6. Support

- Q.** Who do I contact if I need post-sales technical assistance?
- A.** For support issues, contact Cisco TAC and have your contract number available (<https://www.cisco.com/support>).
- Q.** Who do I contact if I need pre-sales assistance?
- A.** For customers, please contact your Cisco account team. For internal teams, contact cml-info@cisco.com.
- Q.** Are there any training videos that I can watch?
- A.** Yes. Videos are available from the external Cisco Modeling Labs User Forum: <https://supportforums.cisco.com/community/12269101/cisco-modeling-labs>.




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