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## Cisco Meraki Licensing Guidelines and Limitations

All current Cisco Meraki products require valid licensing to operate. This article describes how Cisco Meraki licensing operates and applies to an Organization. All licensing related operations can be performed from the **Organization > Configure > License Info** page. For more information about the **License Info** page specifically, please refer to our [License Info Page article](#).

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### License Start Date

Licenses start consuming time from the date purchased, not the date they are added to an Organization.



**Note:** Waiting to activate a license in Dashboard does not delay its activation date. There is no time benefit gained from delaying an activation.

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### Device types

Licenses are sold based on the specific model of device, so for example an MS220-24 will require a separate license from an MS220-8. This applies even to PoE vs non-PoE versions of devices and Wireless vs non-Wireless versions for MX devices. For example, an MS220-8 will require a different license than an MS220-8P, and an MX64 license will not work for an MX64W.

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### Organization-wide Licensing

Cisco Meraki licensing is applied on an Organization-wide basis. This means that a license isn't purchased for a specific serial number or device, rather each license added to the Organization increases the number of a specific device type (the **License Limit**) that can be added to Networks within the Organization.

#### The 30 day Grace Period

The number of devices in an Organization can not exceed the **License Limits**, if this occurs the Organization will enter a **30 day Grace Period** during which the Organization must be brought back in compliance. Should the Organization not be brought back into Compliance it will be [shut down until proper licensing is applied to the Organization](#).



**Note:** During the **Grace Period** network clients will notice no difference.

Should an Organization enter the **30 day Grace Period** because of exceeding device **License Limits** it can be brought back into compliance either by removing devices from Networks within the Organization or through purchasing additional licensing. The only other time an Organization will enter this **30 day Grace Period** would be if its licensing has expired by passing the **Co-term** date. If this occurs the only way to bring it back into licensing compliance is through the purchase of additional licensing.

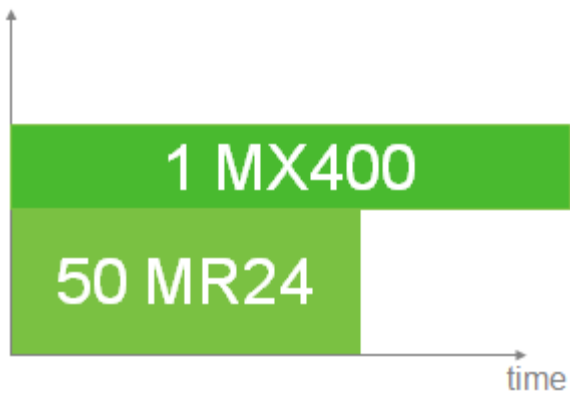
For example if an AP is added to an Organization that already has 5 APs and licensing for 10 APs no additional licensing is required because the Organization's **License Limit** is higher than the number of APs in the Organization. But if an MX series Security Appliance was added to the same Organization it would enter the **30 day Grace Period** because the Organization is not licensed for any MX Security Appliances. For more information about the **30 day Grace Period**, read over the [License Limit and Current Device Count](#) section of this article or refer to the [License Info](#) article.

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## Co-termination

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Cisco Meraki licensing works on the basis of **Co-termination**. This means that for any given Organization, regardless of how many licenses were applied or when they were applied, the license expiration date for all licenses claimed to that Organization will be exactly the same. This is accomplished by averaging all active licenses together and dividing by the **License Limit** count of devices in the Organization.



For example, suppose an Organization had 2 separate Enterprise AP licenses, one license for 2x APs spanning 1-year (365 days) and another for 1x AP spanning 5-years (1825 days). The **Co-termination** value would be calculated as  $((1825*1)+(365*2))/3= 851$  days total for all 3 APs. So assuming all 3 licenses were applied on the same day, the Organization would have a **Co-term** date of 851 days from the start date of the licenses.

If the licenses were not applied at the same time, for example if the 5 year license was applied half-way through the 1 year license, the **Co-term** calculation will take that into affect. In this case the calculation would be  $((1825*1)+(182*2))/3=730$  days total for all 3 APs.



**Note:** The Organization **Co-termination** date does not depend on the current device count, but rather the **license limit**. Removing devices from a Network or Organization will not impact the Co-termination date.

To calculate how licenses impact each other in an Organization, check out the [License Calculator](#). To see a more detailed explanation and the exact calculations that are used to determine **Co-term** dates, please refer to our detailed [Co-term Explanation](#) page.

## License Limit and Current Device Count

The image below shows an example **License Limit** and **Current Device Count** table for an Organization. Notice how

each hardware model has its own individual **License Limit** and **Current Device Count**. Each column is explained in more detail below.

	License limit	Current device count
MS22/MS42	1	1
MS220-8	1	1
MS220-8P	2	2
MV	1	1
MX60	1	1
MX64	2	2
MX80	1	1
Systems Manager Agent	100	0
Wireless AP	11	10
Z1	1	1

## License Limit

The **License Limit** is defined by the sum of the device count for all currently active licenses applied to an Organization. Licenses that have been **Invalidated** or were applied prior to the most recent **Renewal** operation will not be counted when calculating the **License Limit**. For example, if an Organization has three active licenses, one license for 1x MX65, one license for 2x MR devices, and one license for 1x MS220-8P and 1x MR device, the total **License Limit** for that Organization would be 1x MX65, 1x MS220-8P, and 3x MR devices.

## Current Device Count

The **Current Device Count** column lists the total number of each type of device that is currently added to any network inside the Organization. Devices that are claimed to the Organization **Inventory** but not added to any Networks will not count towards the **Current Device Count**. For example, if one network has 1x MX65 and 2x MR33, and a second network has 1x MS220-8P and 1x MR52, the **Current Device Count** for that Organization would be 1x MX65, 1x MS220-8P, and 3x APs.



**Note:** All MR and MV series devices are grouped under the same respective licensing group. So an MR18 will require the same license as an MR72 and both will count equally toward the total device count of MR devices.

The **Current Device Count** does not impact the **Co-Term** date of an Organization, the **Co-term** date is instead calculated based on the **License Limit** of the Organization. Because of this, adding or removing devices from networks will not affect the **Co-term** date of the Organization except in situations where adding a device will put the Organization outside of its **License Limit** and invoke the **30 day Grace Period**. In this situation, either removing the device(s) from

the Network(s) or adding the required licensing prior to the end of the **30 day Grace Period** will put the Organization back into compliance. If new licensing is added, the **Co-term** date will be updated to reflect this change. If no new licensing is added then the **Co-term** date should remain unchanged.

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## Licensing Options

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### MR Licensing Options

The MR Access Points only have one license type, a general "wireless AP" license. This license can apply to any Meraki access point, so long as there is one license for every AP in the account. For example, a network containing 2x MR18s and 1xMR32 will require licensing for 3x APs.

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### MS Licensing Options

The MS Switches have licenses on a per-model basis, so every MS model has a corresponding license. Please note that these licenses are non-transferrable between switch models. For example, an MS220-48 switch will not be covered by an MS320-48 license; it will require an MS220-48 license.

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### MX Licensing Options

The MX Security Appliances have licenses on a per-model basis, so every MX model has a corresponding license. Please note that these licenses are non-transferrable between appliance models. For example, an MX64 will not be covered by an MX84 license; it will require an MX64 license.

The MX Security Appliance has multiple license editions: **Enterprise** and **Advanced Security**. Please note that the MX licensing edition is uniform across the Organization. For example, you can have all 25 appliances using **Enterprise Edition** or **Advanced Security Edition**, but you cannot have 20 appliances using one edition and 5 using the other edition. If you wish to use **Enterprise Edition** for some appliances and **Advanced Security Edition** for other appliances, you need to create two Organizations, one for your appliances with the **Enterprise Edition**, and another for the appliances with the **Advanced Security Edition**.



**Note:** Advanced Security licensing and features are currently **only available on MX devices**, not on Z-Series devices, or any other Meraki series of devices.

**Note:** For Advanced Security features available in China mainland, please refer to the following article for the detail.

[https://documentation.meraki.com/zGeneral\\_Administration/Licensing/Cisco\\_Meraki\\_Licensing\\_Guidelines\\_and\\_Limitations/CH](https://documentation.meraki.com/zGeneral_Administration/Licensing/Cisco_Meraki_Licensing_Guidelines_and_Limitations/CH)

The following table provides a list of major MX features and their required license edition:

Feature	Enterprise license	Advanced Security license
Stateful firewall	✓	✓
VLAN to VLAN routing	✓	✓
Link bonding / failover	✓	✓
3G / 4G failover	✓	✓
Traffic shaping / prioritization	✓	✓
Site-to-site VPN	✓	✓
Client VPN	✓	✓
MPLS to VPN Failover	✓	✓
Splash pages	✓	✓
Configuration templates	✓	✓
HTTP content caching	✓	✓
Group Policies	✓	✓
Client connectivity alerts	✓	✓
SD-WAN	✓	✓

Geography based firewall rules		✓
Intrusion detection / prevention		✓
Content filtering		✓
Youtube for Schools		✓
Web Search Filtering		✓
AMP		✓

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## SM Licensing Options

Meraki Systems Manager has only one license type, which is used for all managed clients in SM, regardless of operating system type. Licenses need to be available for devices to enroll into your network.

Please refer to our documentation for more information on [Systems Manager Licensing](#).

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## Managing Licenses

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### Adding New Licenses

From the **Organization > Configure > License Info** page, the '**Add another license**' link allows Organization Administrators to add additional licensing to their Organization. This can be done to either increase the total number of devices licensed to the Organization or to renew the existing licensing for all devices in the Organization. Adding additional licensing to an Organization is a simple 5 step process, outlined below.

1. Click '**Add another license**'
2. Choose either '**License more devices**' or '**Renew my Dashboard license**'
3. Enter the 12 digit license key you would like to claim
4. Click '**Add license**'
5. Review the changes on the License Info Preview Page, the click '**Add license**' again to finish claiming the license



**Note:** Claiming a new license with the claim type of '**License more devices**' will simply add the new license count to the existing **License Limit** of the Organization and alter the **Co-term** date appropriately.



**Warning:** Claiming a new license with the claim type of '**Renew my Dashboard license**' will invalidate any previous **License Limit** counts and force the Organization **License Limit** to match only licenses applied during or after the most recent Renewal action, in addition to altering the **Co-term** date for the Organization.

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## Renewing your Dashboard licensing

When a license key is applied using the '**Renew my Dashboard license**' operation the Organization's licensing state updates to exactly match the device count of that license key, and any remaining time from previous licenses is kept and added to the new **Co-term** date. For example, if an Organization with licensing for 5x APs were to have a 2x AP, 3 year license applied as a renewal, that Organization would only be licensed for 2x APs for 3 years plus the remaining time from prior to the renewal. In this instance, the Organization would be 3x APs over the license limit, and therefore out-of-compliance.



**Note:** The recommended practice for applying a **Renewal** is to purchase a single license key that covers all devices currently in the Organization for X number of years. Applying that license key as a **Renewal** will then extend the Organization's **Co-term** date by that many years while keeping the same **License Limit** for devices.

Even if the Organization is still compliance, (Co-term date has not passed and the Organization has not yet expired or been shut down,) the **Renewal** license should still be applied immediately because the time on the license starts counting down from the date purchased.



**Warning:** Holding onto a license does not delay its activation date. There is no time benefit gained from delaying a **Renewal**.

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## Removing and Undoing License Claims

There are a number of licensing issues that are caused by misapplication of a single license key. If a license has been applied incorrectly, the undo license claim tool can be used to remove the license so it can be re-added correctly.

This article will explain how to remove licenses from organizations, using the undo license claim tool.



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## Use Cases

There are two common situations where a license application can cause problems on an organization:

- **License was applied to the wrong organization.**

A license may have accidentally been applied to the incorrect organization. The undo license claim tool will release the license so it can be applied to the correct organization.

- **License was incorrectly applied as a renewal or add devices.**

When a license key is applied to an organization, there are two options for the license type: Renewal or add devices. Applying a license as the incorrect type will have an undesired effect on the organization's licensing, and will likely take the organization out of compliance. The undo license claim tool can be used to remove the license, so it can be reapplied correctly.

For more information on different ways to apply licenses, please refer to our documentation regarding [Licensing Guidelines and Limitations](#).

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## Using the Undo License Tool



The undo license claim button will only be available within 7 days of the license application. For issues with older licenses, please follow these steps:

1. Make sure you are a full organization administrator on both organizations. If not, this process will need to be followed by another admin.
2. Contact [Meraki Support via phone](#) or email [licensing@meraki.com](mailto:licensing@meraki.com) with the following information:
  - Your [support passcodes](#) for both the source and destination organizations.
  - The URL for both organizations License Info pages.
  - The license key to be transferred and the device models and the number of devices that need to be moved to the new organization.

The following steps explain how to undo a license application:

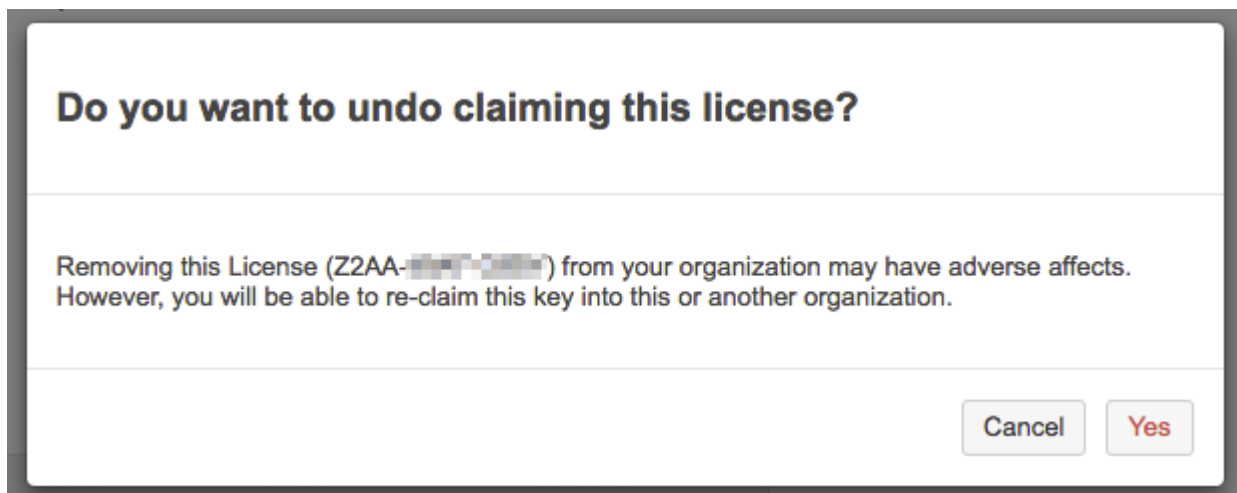
1. In Dashboard, navigate to **Organization > Configure > License info**.
2. Click the undo button next to the license in question:

## License History ?

Show invalidated licenses

Key	Start date <span>?</span>	Claimed at <span>▼</span>	Type	Edition	Devices	License Term
Z2AA-██████████	05/20/2016	05/20/2016 11:28AM	Add devices	Enterprise	1 MC Phone	60 days
Z2C7-██████████	09/23/2015	09/23/2015 07:30PM	Add devices	Advanced Security	1 MX64W	10 years
Z2Q5-██████████	12/04/2014	12/04/2014 08:13PM	Add devices	Advanced Security	1 MX64	13 years
Z2RX-██████████	08/02/2013	08/02/2013 02:48PM	Add devices	Advanced Security	1 MS220-8, 1 MX60, 1 Z1	10 years
Z2BY-██████████	07/09/2013	07/09/2013 09:36AM	Renewal	Enterprise	6 Wireless APs	69 days
Z2NF-██████████	05/17/2013	05/29/2013 06:20PM	Add devices	Enterprise	1 Wireless AP	3 years

3. Review the confirmation window that pops up. If you are sure this is the correct license to remove, click **Yes**:



Upon confirming the change and closing the pop-up, the organization will be reverted to the previous licensing state. The original license will be invalidated, so a replacement key will be generated. The new license key can then be re-applied or added to another organization for the remaining license term. The new license key can also be found under **Organization > Change log**.

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## Out-of-Licensing Compliance Warnings and Solutions

Cisco Meraki devices use the Cisco Meraki cloud for centralized management and control. The Cisco Meraki cloud is licensed on a “per device, per year” basis. Each organization is licensed for a certain number of devices through a termination date. When out of compliance, due to expiration of licenses or insufficient device counts, you will be notified by e-mail.

This e-mail will begin with "Thank you for being a valued Cisco Meraki customer. Our records show that your organization is over the device limit for your Cisco Meraki Cloud license."

To see the current status of your licensing, login to [Dashboard](#) and go to **Organization > License info**. This page will include information about your licensing status, MX Advanced Security features (if applicable), license expiration date,

and details of your current and licensed device counts. Points where you are out of compliance will be indicated in **red**. To return your organization to a compliant status, you will need to purchase the appropriate licensing.

For more information about Cisco Meraki licensing, please review the [Licensing FAQ](#).

To purchase licensing, contact your Cisco Meraki account executive, or visit [Sales Contacts](#).

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## Out of Compliance Examples

### Over Device Limit

In this case, the organization has more APs than they are licensed for, and would need to purchase more in order to achieve compliance:

#### License information

License status	<b>License Required</b>
License expiration ⓘ	Aug 30, 2017 (48 days from now)
Trial expiration	Aug 9, 2017 (27 days from now)
MX Advanced Security	Enabled
Systems Manager	Enabled (paid)

**Reason:** Your organization requires a dashboard license, because your organization limits. Visit the [Knowledge Base](#) for more information.

	License limit	Current device count
MC Phone	1	1
MS22/MS42	0	<b>1</b>

Since devices that are not in a network do not count towards the device count, two APs can be [removed from their network\(s\)](#) and left in the [organization inventory](#) until additional licensing is added.

### Licensing Expired

In this case, licensing for the organization expired on May 23rd. The licenses would need to be renewed, or new licenses purchased in order to return to a compliant state.

#### License information

License status	<b>License Required</b>
License expiration ⓘ	N/A

**Reason:** Your organization requires a dashboard license, because you do not have any valid license keys applied. Visit the [Knowledge Base](#) for more information.

## Licensing Expired & Network Shutdown

In this case, licensing for the organization expired and the organization has been shutdown. This will not occur until after the 30 day grace period, and may also occur if the organization has been in excess of the licensed device count.

This network has been disabled for non-payment. Please contact Meraki Sales for assistance.

### License information

License status	<b>License Required</b>
License expiration ⓘ	License expired on May 11, 2017
MX Advanced Security	Enabled
Systems Manager	Legacy

**Reason:** Your organization requires a dashboard license, because your license has expired. Visit the [Knowledge Base](#) for more information.

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## Compliant Licensing

In this case, the organization has more device licenses than they have devices and their licensing will expire in 899 days.

### License information

License status	<b>Ok</b>
License expiration ⓘ	Mar 15, 2020 (976 days from now)
MX Advanced Security	Enabled
Systems Manager	Enabled (free <= 100 devices)

	License limit	Current device count
MX64	2	1
Systems Manager Agent	100	1

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## Additional Resources

Please reference our [License Calculator](#) in Dashboard to understand how specific licenses will co-terminate.

For more detailed information about how Co-termination is calculated, see the [Co-termination details](#) article.

For more information about the License Info page, see the [License Info Page article](#).

More information on Cisco Meraki Licensing can be found here: [https://documentation.meraki.com/zGeneral\\_Administration/Licensing/Licensing\\_FAQ](https://documentation.meraki.com/zGeneral_Administration/Licensing/Licensing_FAQ)