

# Juniper AP32 Access Point Deployment Guide

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# Table of Contents

[About This Guide | v](#)

1

## [Overview](#)

[AP32 Access Points Overview | 2](#)

[AP32 Components | 4](#)

2

## [Requirements and Specifications](#)

[AP32 Specifications | 7](#)

[AP32 Power Requirements | 9](#)

3

## [Installation and Configuration](#)

[Claim a Juniper Access Point | 11](#)

[Obtain the Claim Code or Activation Code for an AP | 11](#)

[Claim an AP Using a Web Browser | 12](#)

[Claim an AP Using the Mist AI Mobile App | 13](#)

[Mount an AP32 Access Point | 15](#)

[Supported Mounting Brackets for AP32 | 16](#)

[Universal Mounting Bracket \(APBR-U\) for Juniper Access Points | 17](#)

[Mount an Access Point on a Single-Gang or 3.5-Inch or 4-Inch Round Junction Box | 19](#)

[Mount an Access Point on a Double-Gang Junction Box | 21](#)

[Mount an Access Point on an EU Junction Box | 22](#)

[Mount an Access Point on a US 4-Inch Square Junction Box | 24](#)

[Mount an Access Point on a 9/16-Inch or 15/16-Inch T-Bar | 25](#)

[Mount an Access Point on a Recessed 15/16-Inch T-Bar | 26](#)

[Mount an Access Point on a Recessed 9/16-Inch T-Bar or Channel Rail | 28](#)

[Mount an Access Point on a 1.5-Inch T-Bar | 30](#)

Mount an Access Point on a 1/2-Inch Threaded Rod | 31

Mount an AP32, AP33, AP41, or AP43 Access Point on a 5/8-Inch Threaded Rod | 34

Mount an AP32, AP33, AP41, or AP43 Access Point on a 16-mm Threaded Rod | 35

**Connect an AP32 to the Network and Power It On | 37**

**Rename a Juniper Access Point in the Mist Portal | 38**

**Assign an Access Point to a Site | 40**

**Release an Access Point from an Organization | 40**

**Upgrade the Firmware on a Juniper Access Point | 41**

Check for AP Firmware Updates | 41

Upgrade the Firmware on an AP Manually | 42

**Reset an Access Point to the Factory-Default Configuration | 43**

## 4

### **Troubleshoot**

**Troubleshoot a Juniper Access Point | 46**

Status LED Blink Patterns | 46

Troubleshoot AP Claiming Issues | 57

Troubleshoot Access Point Disconnection Issues | 58

**Contact Customer Support | 71**

# About This Guide

Use this guide to install, manage, and troubleshoot the Juniper® AP32 High-Performance Access Point. After completing the installation procedures covered in this guide, refer to the Juniper Mist™ Wi-Fi Assurance documentation for information about further configuration.

# 1

CHAPTER

## Overview

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[AP32 Access Points Overview | 2](#)

[AP32 Components | 4](#)

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# AP32 Access Points Overview

## IN THIS SECTION

- [AP32 Access Point Models | 3](#)
- [Benefits of AP32 Access Points | 4](#)

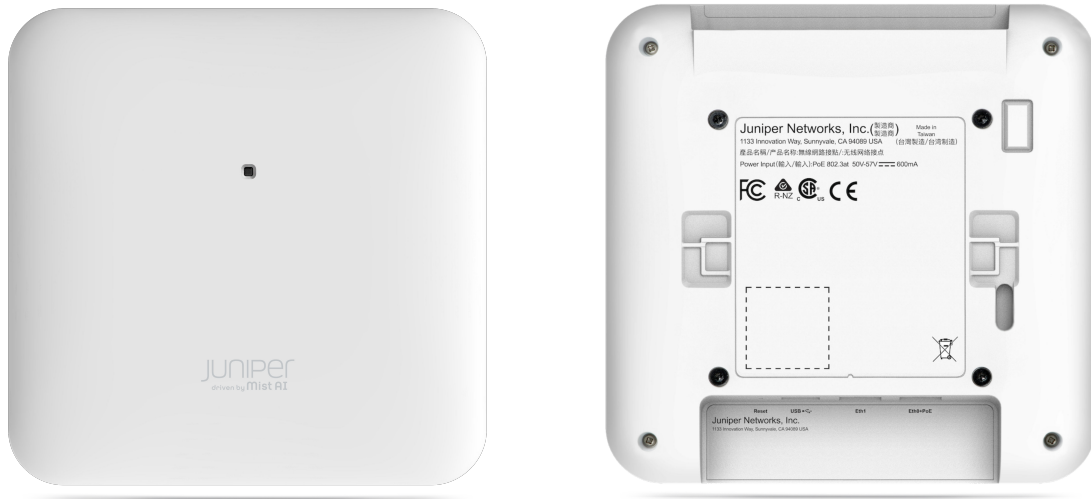
The Juniper® AP32 High Performance Access Point is a Wi-Fi 6 indoor access point (AP) that leverages the Mist AI to automate network operations and boost Wi-Fi performance. The AP32 is suitable for retail, warehouse, school, clinic, and home office environments.

The AP32 has three IEEE 802.11ax radios, which deliver up to 4x4 multiple input, multiple output (MIMO) with four spatial streams. Out of the three radios, one is dedicated for scanning. The AP uses this radio for radio resource management (RRM) and wireless security. The AP can operate in either multi-user or single-user mode. The AP is backward compatible with the 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac wireless standards.

The AP32 has an omnidirectional Bluetooth antenna to support asset visibility use cases. The AP32 provides real-time network insights and asset location services without the need for battery-powered Bluetooth Low Energy (BLE) beacons and manual calibration.

The AP32 provides maximum data rates of 2400 Mbps in the 5-GHz band and 575 Mbps in the 2.4-GHz band.

**Figure 1: Front and Rear View of AP32**



**NOTE:** AP32E has five external antennas at the top of the device. Of the five antennas, four are data radio antennas and one is a scanning radio antenna.

## AP32 Access Point Models

The AP32 is available in four models with internal or external antennas. [No Link Title on page 3](#) lists the AP32 models.

Model	Antenna	Regulatory Domain
AP32-US	Internal	United States only
AP32-WW	Internal	Outside of United States
AP32E-US	External	United States only
AP32E-WW	External	Outside of United States



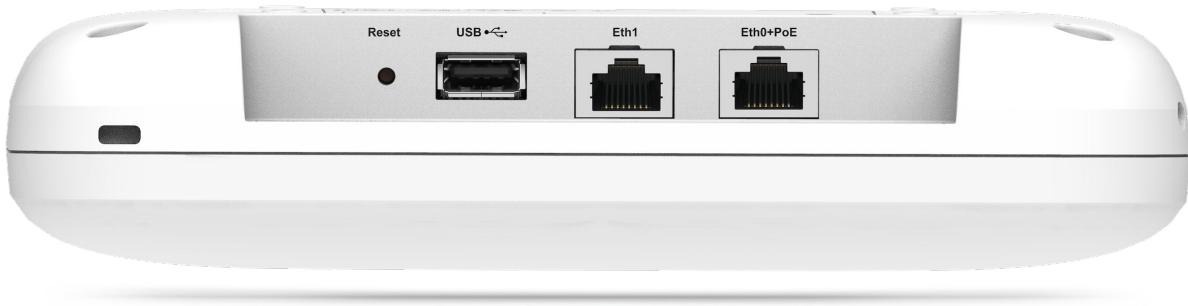
**NOTE:** Juniper products are manufactured in accordance with electrical and environmental regulations specific to certain regions and countries. Customers are responsible for ensuring that any regional or country-specific SKUs are used only in the specified authorized area. Failure to do so may void the warranty of Juniper products.

## Benefits of AP32 Access Points

- Simple and quick deployment—You can deploy the AP with minimal manual intervention. The AP automatically connects to the Mist cloud after powering on, downloads its configuration, and connects to the appropriate network. Automatic firmware upgrades ensure that the AP runs the latest firmware version.
- Proactive troubleshooting—The AI-driven Marvis® Virtual Network Assistant leverages the Mist AI to identify issues proactively and provide recommendations to fix issues. Marvis can identify issues such as offline APs and APs with insufficient capacities and coverage issues.
- 
- Improved performance through automatic RF optimization—Juniper radio resource management (RRM) automates dynamic channel and power assignment, which helps to reduce interference and enhance user experience. The Mist AI monitors the coverage and capacity metrics and optimizes the RF environment.

## AP32 Components

Figure 2 on page 5 shows the components on the AP32.

**Figure 2: AP32 Components****Table 1: AP32 Components**

Component	Description
Reset	A pinhole reset button that you can use to reset the AP configuration to the factory default
USB	USB 2.0 port
Eth1	10/100/1000BASE-T RJ-45 port
Eth0+PoE	10/100/1000BASE-T RJ-45 port that supports an 802.3at PoE-powered device
Antenna connectors (available only in AP32E models)	Five reverse-polarity SubMiniature version A (RP-SMA) connectors
Kensington lock slot	Slot for a Kensington-style lock that you can use to secure the AP
Safety tie	Slot for a safety tie that you can use to either secure or hold the AP in place
Status LED	A multicolor status LED to indicate the status of the AP and to help troubleshoot issues.

# 2

CHAPTER

## Requirements and Specifications

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[AP32 Specifications | 7](#)

[AP32 Power Requirements | 9](#)

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# AP32 Specifications

Table 2 on page 7 lists the specifications for the AP32.

**Table 2: Specifications for AP32**

Parameter	Description
<b>Physical Specifications</b>	
Dimensions	7.95 in. (202 mm) x 7.95 in. (202 mm) x 1.73 in. (44 mm)
Weight	AP32—1.83 lb (0.83 kg) AP32E—1.78 lb (0.81 kg)
<b>Environmental Specifications</b>	
Operating temperature	AP32—32 °F (0 °C) through 104 °F (40 °C) AP32E— -4 °F (-20 °C) through 122 °F (50 °C)
Operating humidity	10% through 90% maximum relative humidity, non-condensing
Operating altitude	Up to 10,000 ft (3,048 m)
<b>Other Specifications</b>	
Wireless standard	802.11ax (Wi-Fi 6)
Internal antennas (AP32)	<ul style="list-style-type: none"> <li>Two 2.4-GHz omnidirectional antennas with a peak gain of 5 dBi</li> <li>Four 5-GHz omnidirectional antennas with a peak gain of 6 dBi</li> </ul>

Table 2: Specifications for AP32 (*Continued*)

Parameter	Description
External antennas (AP32E)	<p>The AP does not support an antenna if its gain exceeds the values listed here:</p> <ul style="list-style-type: none"> <li>• Omnidirectional antennas <ul style="list-style-type: none"> <li>• 2.4-GHz antenna—4 dBi peak gain</li> <li>• 5-GHz antenna—6 dBi peak gain</li> </ul> </li> <li>• Directional antennas <ul style="list-style-type: none"> <li>• 2.4-GHz antenna—8 dBi peak gain</li> <li>• 5-GHz antenna—10 dBi peak gain</li> </ul> </li> </ul>
Bluetooth	Omnidirectional Bluetooth antenna that supports superbeacon mode with iBeacon and Eddystone
Power options	802.3at (PoE+) or 802.3af (PoE)
Radio frequency (RF)	<ul style="list-style-type: none"> <li>• 5-GHz radio—Supports 4x4:4SS 802.11ax MU-MIMO and SU-MIMO</li> <li>• 2.4-GHz radio—Supports 2x2:2SS 802.11ax MU-MIMO and SU-MIMO</li> <li>• 2.4-GHz or 5-GHz scanning radio</li> <li>• 2.4-GHz Bluetooth® Low Energy (BLE) with omnidirectional antenna</li> </ul>
Maximum PHY rate (maximum transmit rate at the physical layer)	<ul style="list-style-type: none"> <li>• Total maximum PHY rate—2975 Mbps</li> <li>• 5 GHz—2400 Mbps</li> <li>• 2.4 GHz—575 Mbps</li> </ul>
Maximum devices supported on each radio	512

# AP32 Power Requirements

The AP32 requires 802.3at (PoE+) power. The AP32 requests 19.5-W power to provide wireless functionality. However, the AP32 is capable of running on 802.3af (PoE) power with reduced functionality as described below:

- The 5-GHz radio operates in 2x2 mode instead of 4x4 mode.
- The Eth0+PoE port operates at a maximum speed of 1 Gbps.
- The Eth1 port is disabled.

You can use any of the following options to power on the AP:

- Power over Ethernet plus (PoE+) from an Ethernet switch

We recommend that you use an Ethernet cable with a maximum length of 100 m to connect the access point (AP) to the switch port.

If you use an Ethernet cable that is longer than 100 m by placing an Ethernet PoE+ extender in the path, the AP might power up, but the Ethernet link does not transmit data across such a long cable. You might see the status LED blink yellow twice. This LED behavior indicates that the AP is unable to receive data from the switch.

- PoE injector

# 3

CHAPTER

## Installation and Configuration

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[Claim a Juniper Access Point | 11](#)

[Mount an AP32 Access Point | 15](#)

[Connect an AP32 to the Network and Power It On | 37](#)

[Rename a Juniper Access Point in the Mist Portal | 38](#)

[Assign an Access Point to a Site | 40](#)

[Release an Access Point from an Organization | 40](#)

[Upgrade the Firmware on a Juniper Access Point | 41](#)

[Reset an Access Point to the Factory-Default Configuration | 43](#)

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# Claim a Juniper Access Point

## IN THIS SECTION

- [Obtain the Claim Code or Activation Code for an AP | 11](#)
- [Claim an AP Using a Web Browser | 12](#)
- [Claim an AP Using the Mist AI Mobile App | 13](#)

You need to claim an access point (AP) to be able to manage the AP from the Juniper Mist cloud. You'll need a claim code or an activation code to claim an AP. You can claim an AP by using one of the following methods:

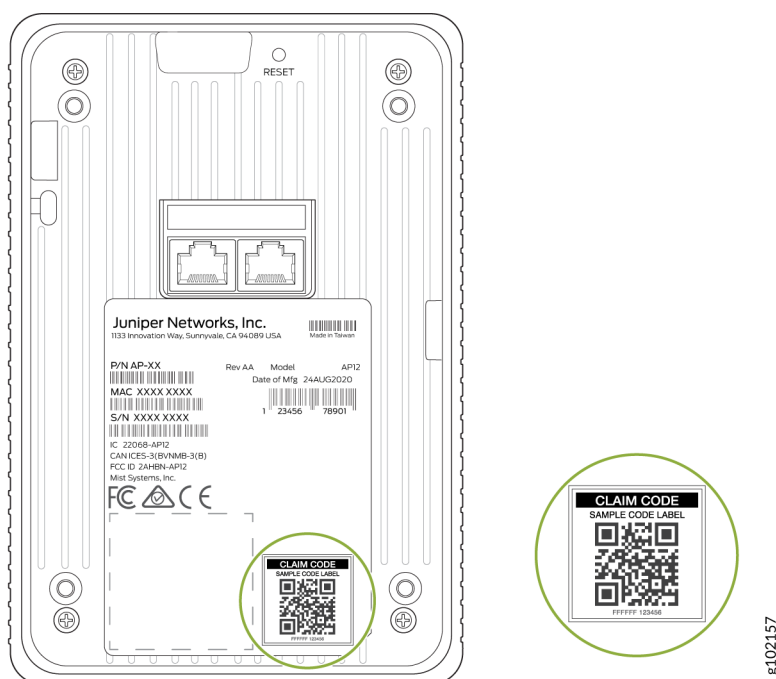
- Mist AI Mobile App
- A Web browser

## Obtain the Claim Code or Activation Code for an AP

You can claim either a single AP using a claim code or multiple APs using an activation code. You can use any of these methods to claim an AP:

- To claim a single AP, use the claim/QR code located on the rear of the AP.





- To claim multiple APs, you'll need to use an activation code. When you purchase multiple APs, we provide you with an activation code along with your PO information.

## Claim an AP Using a Web Browser

You can onboard a single AP or multiple APs using a Web browser. If you're onboarding a single AP, use the claim code or QR code located on the rear of the AP. If you're onboarding multiple APs, use the activation code that is listed in your purchase order.

**NOTE:** You can simultaneously claim multiple APs and activate the subscriptions listed in the PO using the activation code. See [Activate a Subscription](#).

To claim an AP using a Web browser:

- Log in to your account at <https://manage.mist.com/>.  
If you don't have an account, see [Create a Mist Account and Organization](#) for details about creating one.
- Go to **Organization > Inventory > Access Points** and click **Claim APs**.
- Enter the activation code or claim code.

4. (Optional) Select the site to which you want to assign the AP.  
You can choose to assign the AP to a primary site (default) or any other site. If you want to assign the AP to a site later, clear the **Assigned claimed APs to site** check box.
5. (Optional) Select the **Generate names for APs, with format:** check box and enter a name format for the AP.  
You can use this option only if you are assigning the AP to a site.  
You can also choose to rename and assign an AP to a site after you claim the AP.
6. Click **Claim**.  
Review the information and close the window.

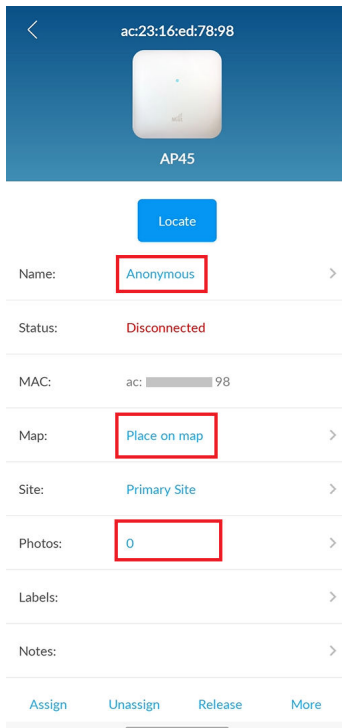
## Claim an AP Using the Mist AI Mobile App

To onboard a single AP using the Mist AI mobile app from your mobile phone:

1. Download and install the Mist AI app from the Google [Play Store](#) or Apple [App Store](#).
2. Open the Mist AI app and log in using your account credentials.  
If you do not have an account, see [Create a Mist Account and Organization](#) for details about creating one.
3. Select your organization.
4. Tap the site to which you want to assign the AP.
5. Ensure that the Access Points tab is selected and tap +.
6. Locate the QR code on the AP. The QR code is located on the rear panel of the AP.
7. Focus the camera on the QR code.

The app automatically claims the AP and adds it to your site. You'll see the new AP listed under the Access Points tab.

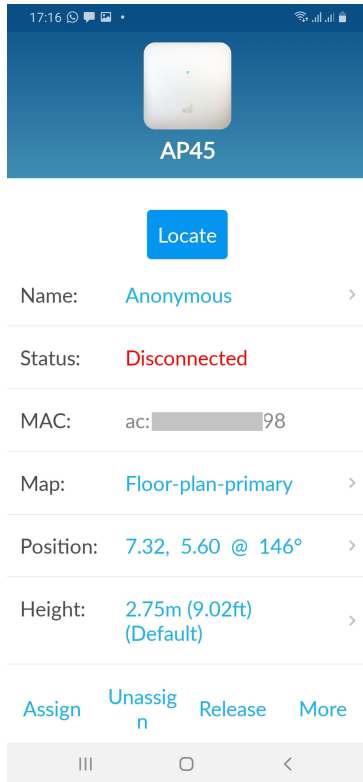
8. Tap the AP to view its details.



You can perform various tasks from the AP details screen such as renaming the AP, setting it on a floor plan, releasing an AP, or even adding a photo. Simply tap the option and you can update the details. To rename an AP, tap the AP name and enter a new name.

To place an AP on a floor plan, tap **Place on map**. You need to have a floor plan already set up in **Location > Live View** in the Mist to use this option. See [Adding and Scaling a Floorplan](#).

After you place the AP on the floor plan, you'll see more details such as the position of the AP and the height at which the AP is mounted (default value that you can modify).



## Mount an AP32 Access Point

### IN THIS SECTION

- Supported Mounting Brackets for AP32 | 16
- Universal Mounting Bracket (APBR-U) for Juniper Access Points | 17
- Mount an Access Point on a Single-Gang or 3.5-Inch or 4-Inch Round Junction Box | 19
- Mount an Access Point on a Double-Gang Junction Box | 21
- Mount an Access Point on an EU Junction Box | 22
- Mount an Access Point on a US 4-Inch Square Junction Box | 24
- Mount an Access Point on a 9/16-Inch or 15/16-Inch T-Bar | 25
- Mount an Access Point on a Recessed 15/16-Inch T-Bar | 26
- Mount an Access Point on a Recessed 9/16-Inch T-Bar or Channel Rail | 28
- Mount an Access Point on a 1.5-Inch T-Bar | 30

- Mount an Access Point on a 1/2-Inch Threaded Rod | 31
- Mount an AP32, AP33, AP41, or AP43 Access Point on a 5/8-Inch Threaded Rod | 34
- Mount an AP32, AP33, AP41, or AP43 Access Point on a 16-mm Threaded Rod | 35

This topic provides the various mounting options for the AP32. You can mount the AP on a wall, ceiling or junction box. The AP ships with a universal mounting bracket that you can use for all mounting options. To mount the AP on a ceiling, you'll need to order an additional adapter based on the type of ceiling.

**NOTE:** We recommend that you claim your AP before you mount it. The claim code is located on the rear of the AP and it might be difficult to access the claim code after you mount the AP. For information about claiming an AP, see ["Claim a Juniper Access Point" on page 11](#).

## Supported Mounting Brackets for AP32

[Table 3 on page 16](#) lists the brackets available for the AP32.

**Table 3: Mounting Brackets for AP32**

Part Number	Description
<b>Mounting Brackets</b>	
APBR-U	Universal bracket for T-bar and drywall mounting
APBR-T58	Bracket for mounting the AP on a 5/8-in. threaded rod
APBR-M16	Bracket for mounting the AP on a 16-mm threaded rod
<b>Bracket Adapters</b>	
APBR-ADP-CR9	Bracket adapter for mounting the AP on a recessed 9/16-in. T-bar or channel rail

Table 3: Mounting Brackets for AP32 *(Continued)*

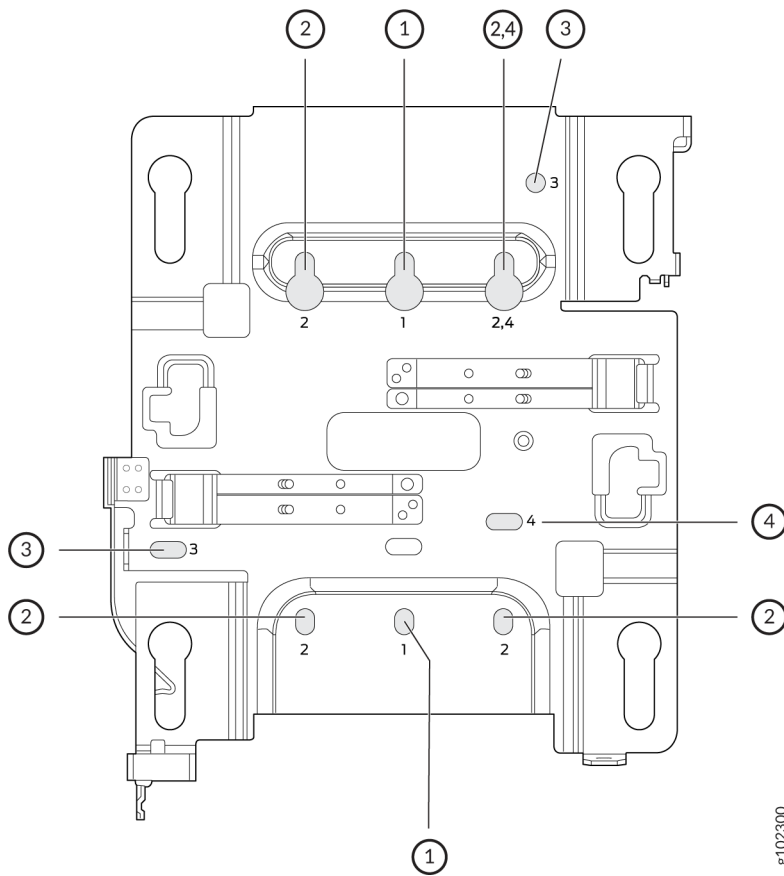
Part Number	Description
APBR-ADP-RT15	Bracket adapter for mounting the AP on a recessed 15/16-in. T-bar
APBR-ADP-WS15	Bracket adapter for mounting the AP on a recessed 1.5-in. T-bar
APBR-AP-T12	Bracket adapter for mounting the AP on a 1/2-in. threaded rod

**NOTE:** Juniper APs ship with the universal bracket APBR-U. If you need other brackets, you must order them separately.

## Universal Mounting Bracket (APBR-U) for Juniper Access Points

You use the universal mounting bracket APBR-U for all types of mounting options—for example, on a wall, a ceiling, or a junction box. [Figure 3 on page 18](#) shows the APBR-U. You'll need to use the numbered holes to insert screws when mounting the AP on a junction box. The numbered holes that you use vary based on the type of junction box.

**Figure 3: Universal Mounting Bracket (APBR-U) for Juniper Access Points**



If you're mounting the AP on a wall, use screws with the following specifications:

- Diameter of the screw head: ¼ in. (6.3 mm)
- Length: At least 2 in. (50.8 mm)

The following table lists the bracket holes that you need to use for specific mounting options.

Hole Number	Mounting Option
1	<ul style="list-style-type: none"> <li>• US single-gang junction box</li> <li>• 3.5 in. round junction box</li> <li>• 4 in. round junction box</li> </ul>

*(Continued)*

Hole Number	Mounting Option
2	<ul style="list-style-type: none"> <li>• US double-gang junction box</li> <li>• Wall</li> <li>• Ceiling</li> </ul>
3	<ul style="list-style-type: none"> <li>• US 4-in. square junction box</li> </ul>
4	<ul style="list-style-type: none"> <li>• EU junction box</li> </ul>



Video:

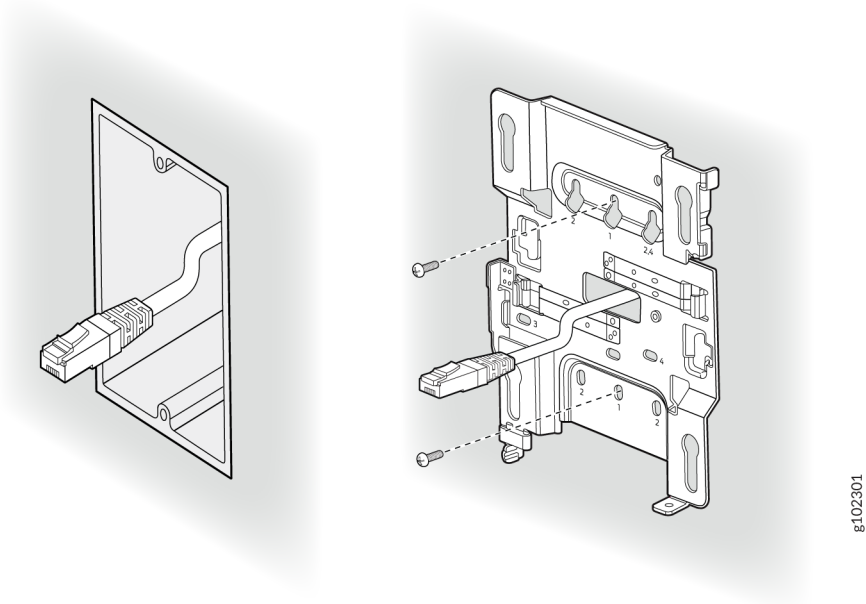
## Mount an Access Point on a Single-Gang or 3.5-Inch or 4-Inch Round Junction Box

You can mount an access point (AP) on a US single-gang or a 3.5-in. or 4-in. round junction box by using the universal mounting bracket (APBR-U) that we ship along with the AP. To mount an AP on a single-gang junction box:

1. Attach the mounting bracket to the single-gang junction box by using two screws. Ensure that you insert the screws in the holes marked 1 as shown in [Figure 4 on page 20](#).

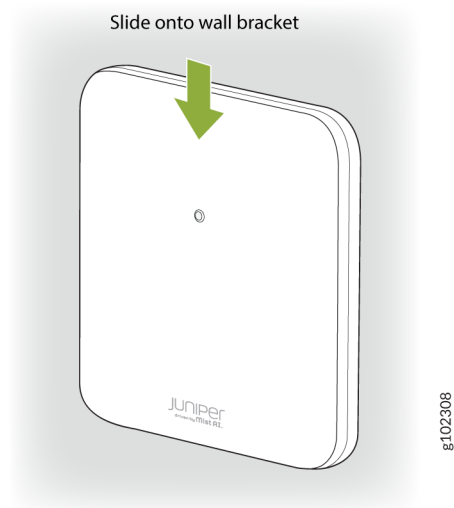


**Figure 4: Attach the APBR-U Mounting Bracket to the Single-Gang Junction Box**



2. Extend the Ethernet cable through the bracket.
3. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 5: Mount the AP on the Single-Gang Junction Box**





Video:



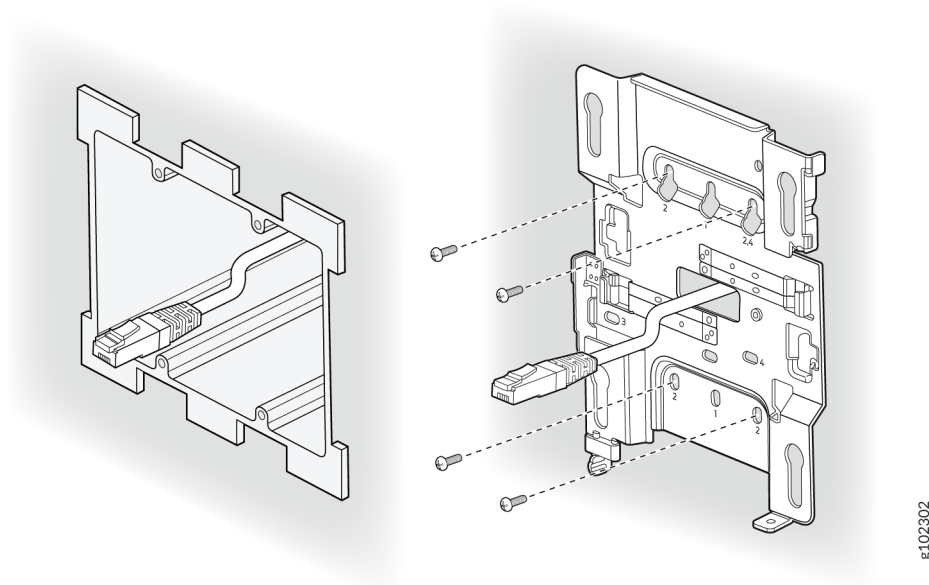
Video:

## Mount an Access Point on a Double-Gang Junction Box

You can mount an access point (AP) on a double-gang junction box by using the universal mounting bracket (APBR-U) that we ship along with the AP. To mount an AP on a double-gang junction box:

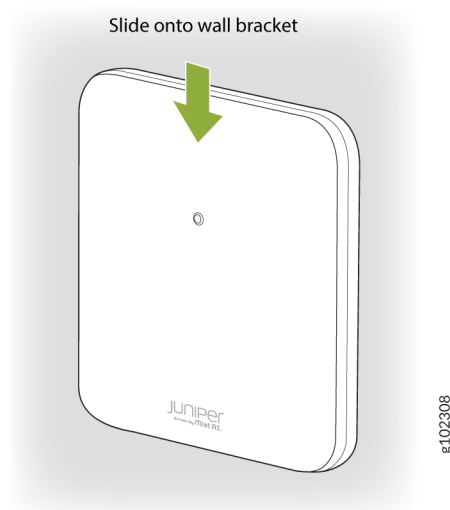
1. Attach the mounting bracket to the double-gang junction box by using four screws. Ensure that you insert the screws in the holes marked 2 as shown in [Figure 6 on page 21](#).

**Figure 6: Attach the APBR-U Mounting Bracket to the Double-Gang Junction Box**



2. Extend the Ethernet cable through the bracket.
3. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 7: Mount the AP on the Double-Gang Junction Box**



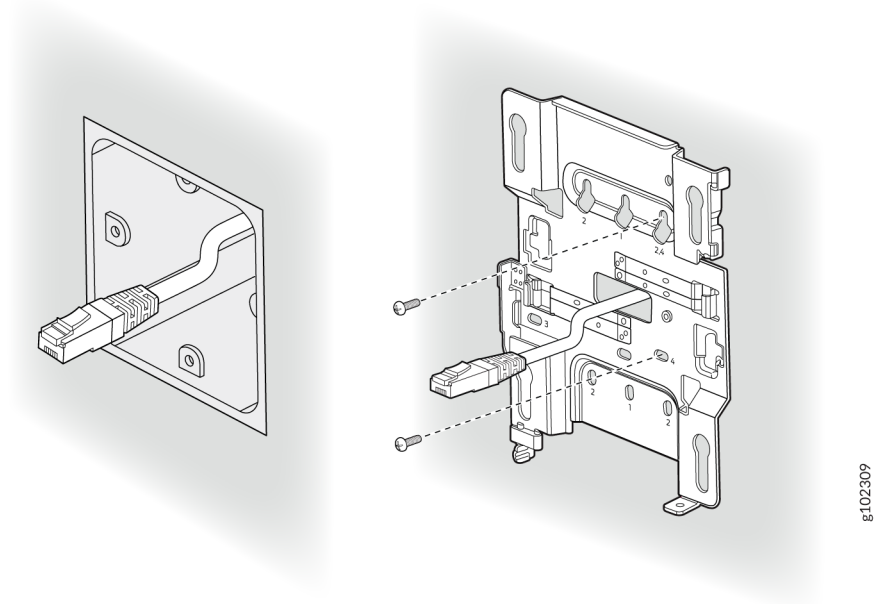
**Video:**

## Mount an Access Point on an EU Junction Box

You can mount an access point (AP) on an EU junction box by using the universal mounting bracket (APBR-U) that ships with the AP. To mount an AP on an EU junction box:

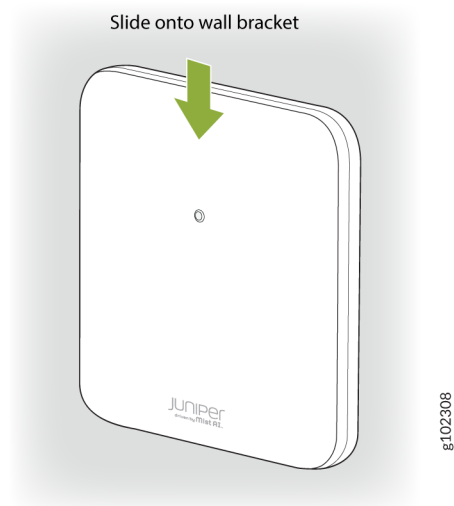
1. Attach the mounting bracket to the EU junction box by using two screws. Ensure that you insert the screws in the holes marked 4 as shown in [Figure 8 on page 23](#).

**Figure 8: Attach the APBR-U Mounting Bracket to an EU Junction Box**



2. Extend the Ethernet cable through the bracket.
3. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 9: Mount an Access Point on an EU Junction Box**

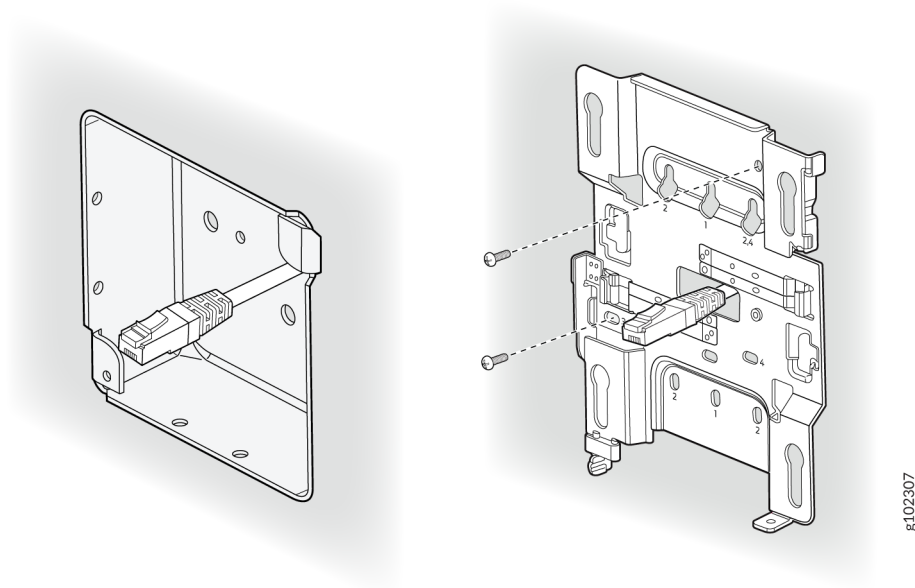


## Mount an Access Point on a US 4-Inch Square Junction Box

To mount an access point (AP) on a US 4-in. square junction box:

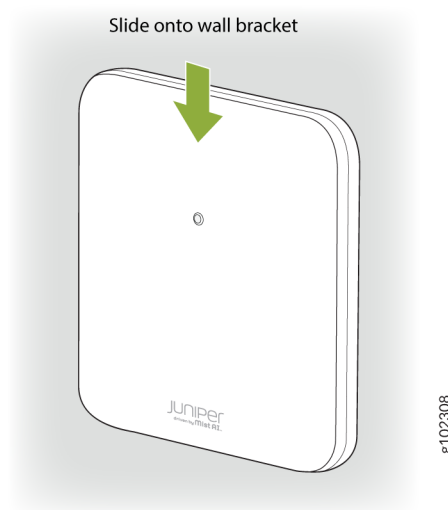
1. Attach the mounting bracket to the 4-in. square junction box by using two screws. Ensure that you insert the screws in the holes marked 3 as shown in [Figure 10 on page 24](#).

**Figure 10: Attach the Mounting Bracket (APBR-U) to a US 4-Inch Square Junction Box**



2. Extend the Ethernet cable through the bracket.
3. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 11: Mount the AP on a US 4-Inch Square Junction Box**



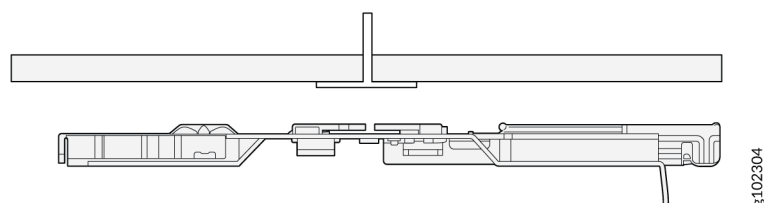
**Video:**

## Mount an Access Point on a 9/16-Inch or 15/16-Inch T-Bar

To mount an access point (AP) on a 9/16-in. or 15/16-in. ceiling T-bar:

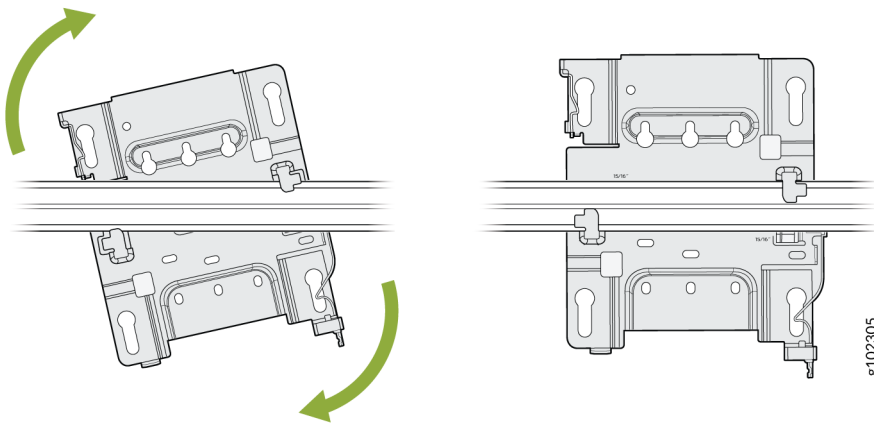
1. Attach the universal mounting bracket (APBR-U) to the T-bar.

**Figure 12: Attach the Mounting Bracket (APBR-U) to a 9/16-in. or 15/16-in. T-Bar**



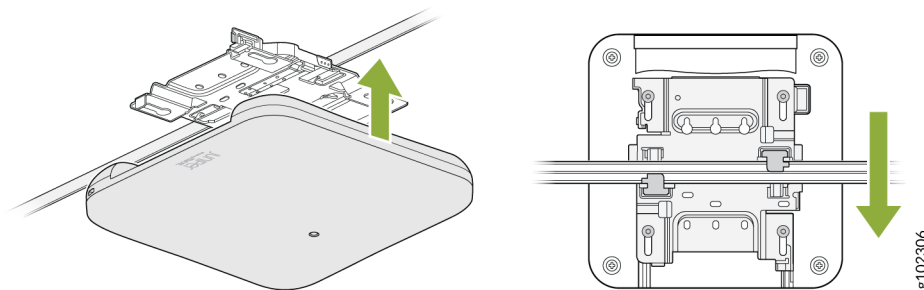
2. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

**Figure 13: Lock the Mounting Bracket (APBR-U) to a 9/16-in. or 15/16-in. T-Bar**



3. Position the AP such that the keyholes of the mounting bracket engage with the shoulder screws on the AP. Slide and lock the AP in place.

**Figure 14: Attach the AP to a 9/16-in. or 15/16-in. T-Bar**



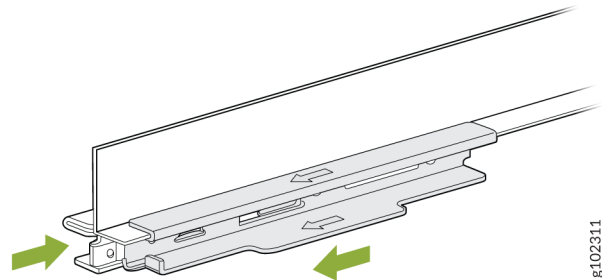
Video:

## Mount an Access Point on a Recessed 15/16-Inch T-Bar

You'll need to use an adapter (ADPR-ADP-RT15) along with the mounting bracket (APBR-U) to mount an access point (AP) on a recessed 15/16-in. ceiling T-bar. You need to order the ADPR-ADP-RT15 adapter separately.

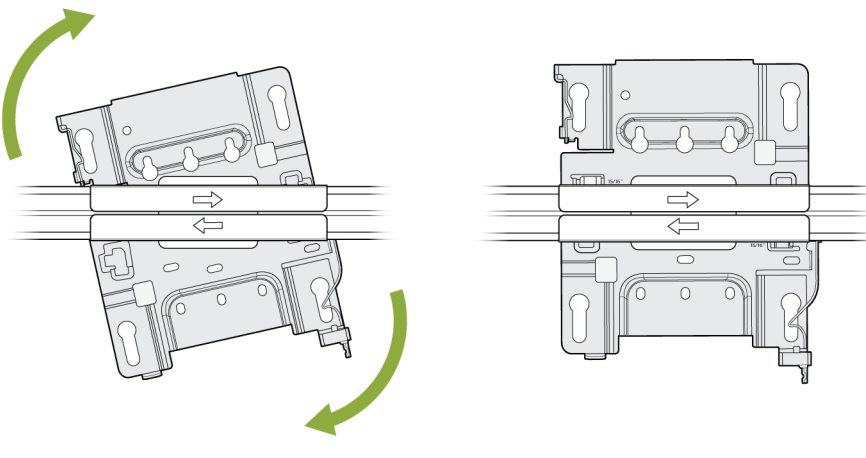
1. Attach the ADPR-ADP-RT15 adapter to the T-bar.

**Figure 15: Attach the ADPR-ADP-RT15 Adapter to the T-Bar**



2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

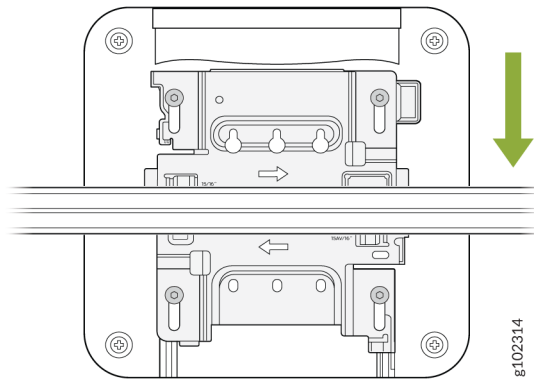
**Figure 16: Attach the Mounting Bracket (APBR-U) to the ADPR-ADP-RT15 Adapter**



3. Position the AP such that the keyholes of the mounting bracket engage with the shoulder screws on the AP. Slide and lock the AP in place.



**Figure 17: Attach the AP to a Recessed 15/16-Inch T-Bar**

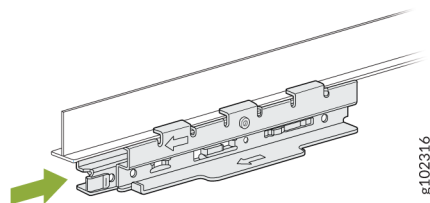


## Mount an Access Point on a Recessed 9/16-Inch T-Bar or Channel Rail

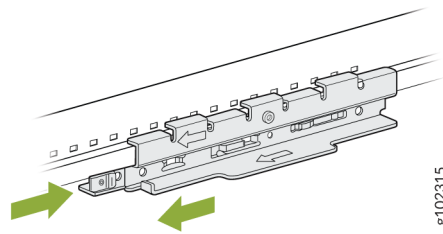
To mount an access point (AP) on a recessed 9/16-in. ceiling T-bar, you'll need to use the ADPR-ADP-CR9 adapter along with the mounting bracket (APBR-U).

1. Attach the ADPR-ADP-CR9 adapter to the T-bar or channel rail.

**Figure 18: Attach the ADPR-ADP-CR9 Adapter to a Recessed 9/16-Inch T-Bar**

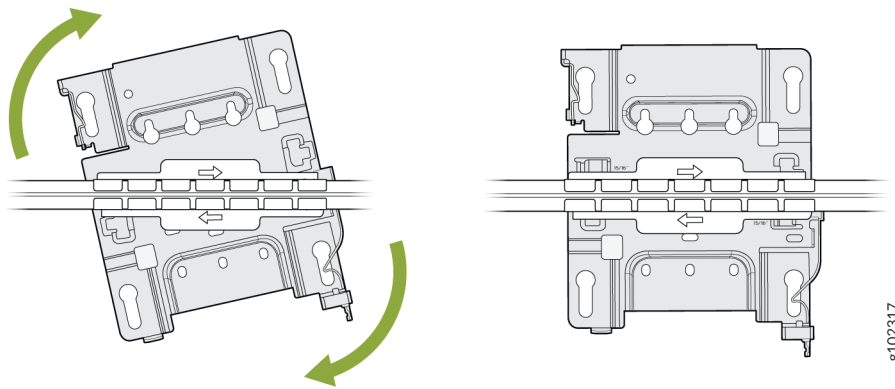


**Figure 19: Attach the ADPR-ADP-CR9 Adapter to a Recessed 9/16-Inch Channel Rail**



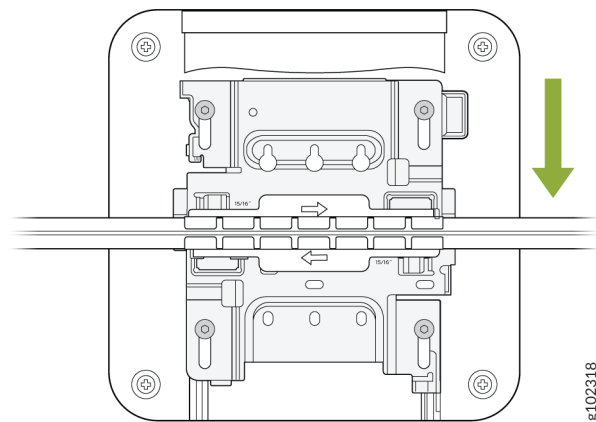
2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

**Figure 20: Attach the APBR-U Mounting Bracket to the ADPR-ADP-CR9 Adapter**



3. Position the AP such that the keyholes of the mounting bracket engage with the shoulder screws on the AP. Slide and lock the AP in place.

**Figure 21: Attach the AP to a Recessed 9/16-in. T-Bar or Channel Rail**



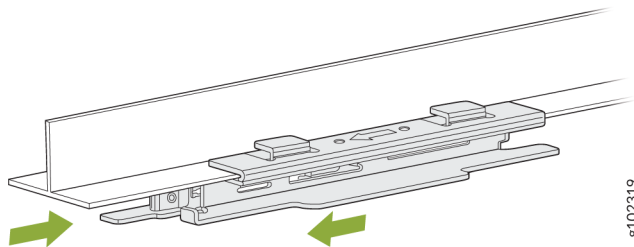
**Video:**

## Mount an Access Point on a 1.5-Inch T-Bar

To mount an access point (AP) on a 1.5-in. ceiling T-bar, you'll need the ADPR-ADP-WS15 adapter. You need to order the adapter separately.

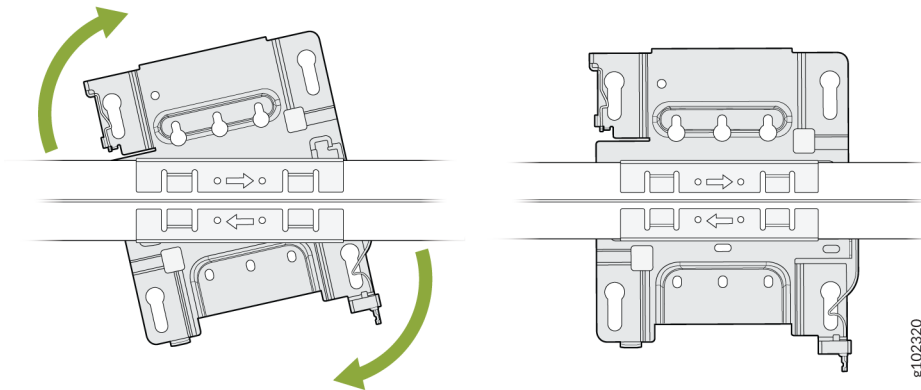
1. Attach the ADPR-ADP-WS15 adapter to the T-bar.

**Figure 22: Attach the ADPR-ADP-WS15 Adapter to a 1.5-Inch T-Bar**



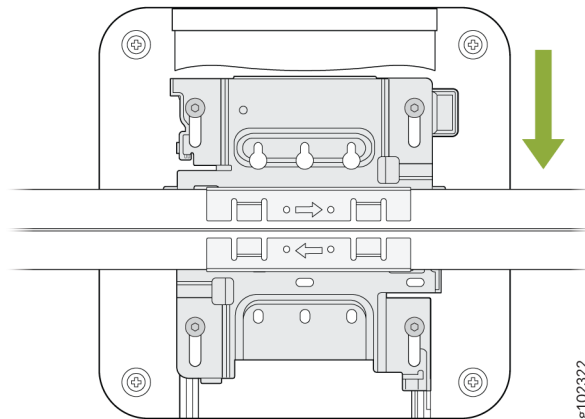
2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

**Figure 23: Attach the APBR-U Mounting Bracket to the ADPR-ADP-WS15 Adapter**



3. Position the AP such that the keyholes of the mounting bracket engage with the shoulder screws on the AP. Slide and lock the AP in place.

**Figure 24: Attach the AP to a 1.5-Inch T-Bar**

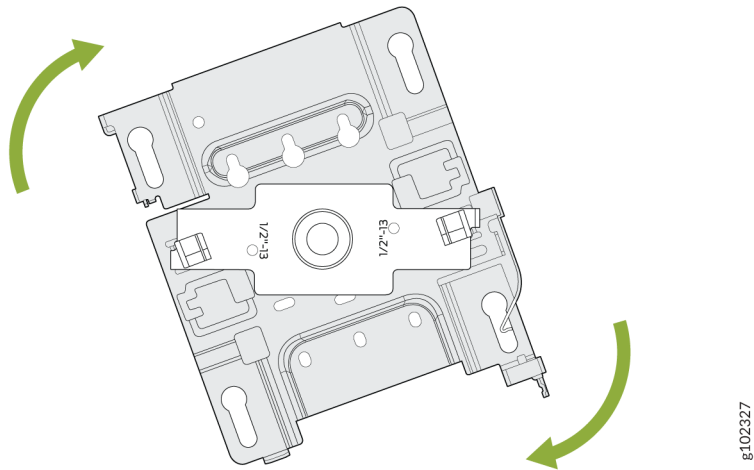


## Mount an Access Point on a 1/2-Inch Threaded Rod

To mount an access point (AP) on a 1/2-in. threaded rod, you'll need to use the APBR-ADP-T12 bracket adapter and the universal mounting bracket APBR-U.

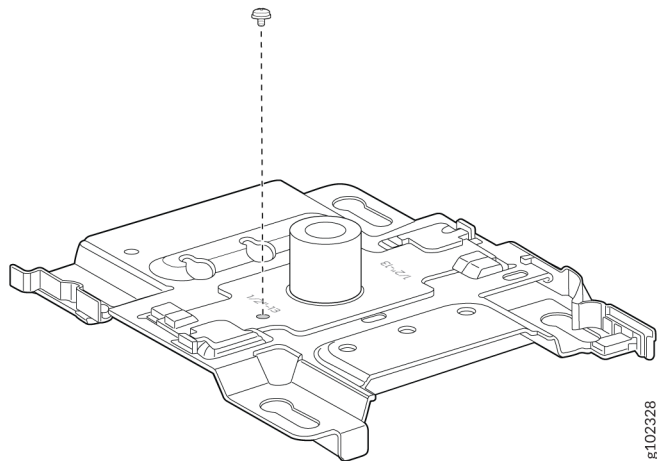
1. Attach the APBR-ADP-T12 bracket adapter to the APBR-U mounting bracket. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

**Figure 25: Attach the APBR-ADP-T12 Bracket Adapter to the APBR-U Mounting Bracket**



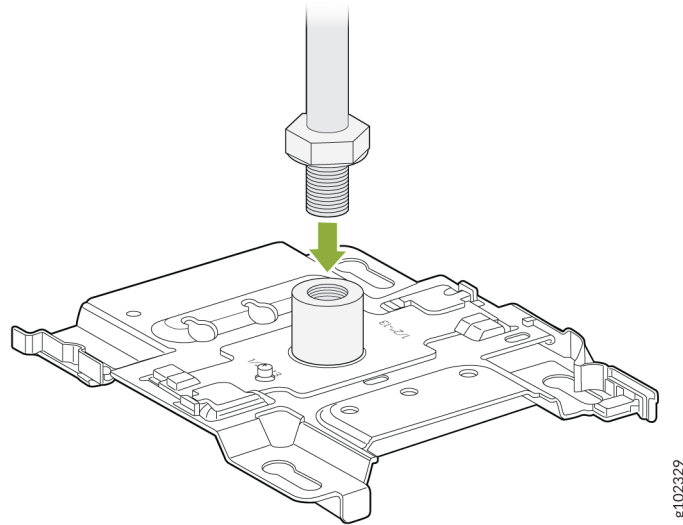
2. Secure the adapter to the bracket using a screw.

**Figure 26: Secure the APBR-ADP-T12 Bracket Adapter to the APBR-U Mounting Bracket**

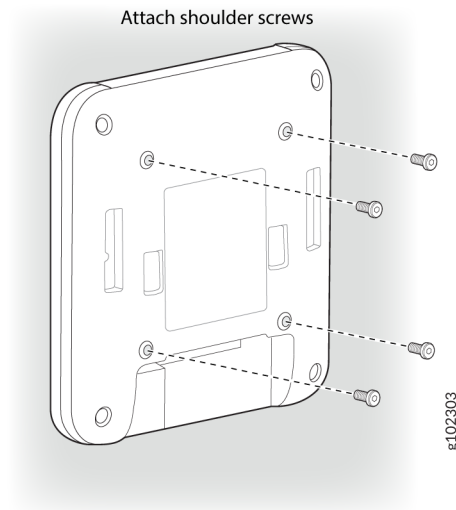


3. Attach the bracket assembly (bracket and adapter) to the 1/2-in. threaded rod by using the lock washer and nut provided

Figure 27: Attach the APBR-ADP-T12 and APBR-U Bracket Assembly to the ½-Inch Threaded Rod

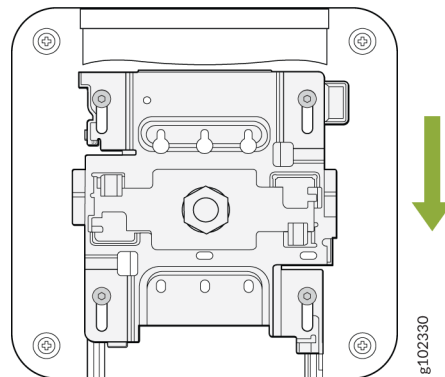


4. Attach four shoulder screws to the AP if the AP did not ship with the shoulder screws attached.



5. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 28: Mount the AP on a 1/2-in. Threaded Rod**

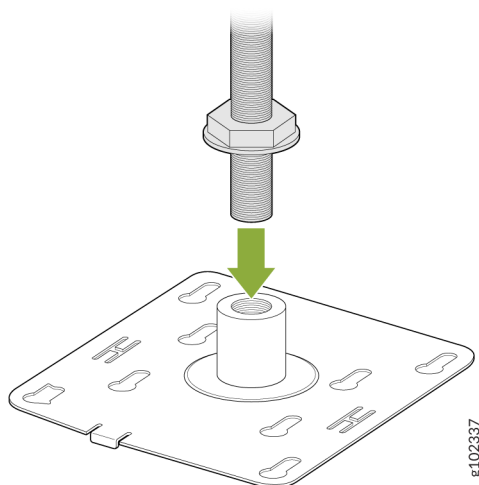


## Mount an AP32, AP33, AP41, or AP43 Access Point on a 5/8-Inch Threaded Rod

To mount an AP32, AP33, AP41, or AP43 on a 5/8-in. threaded rod, you'll need to use the APBR-T58 mounting bracket that you'll need to order separately.

1. Attach the APBR-T58 bracket to the threaded rod by using the lock washer and nut provided.

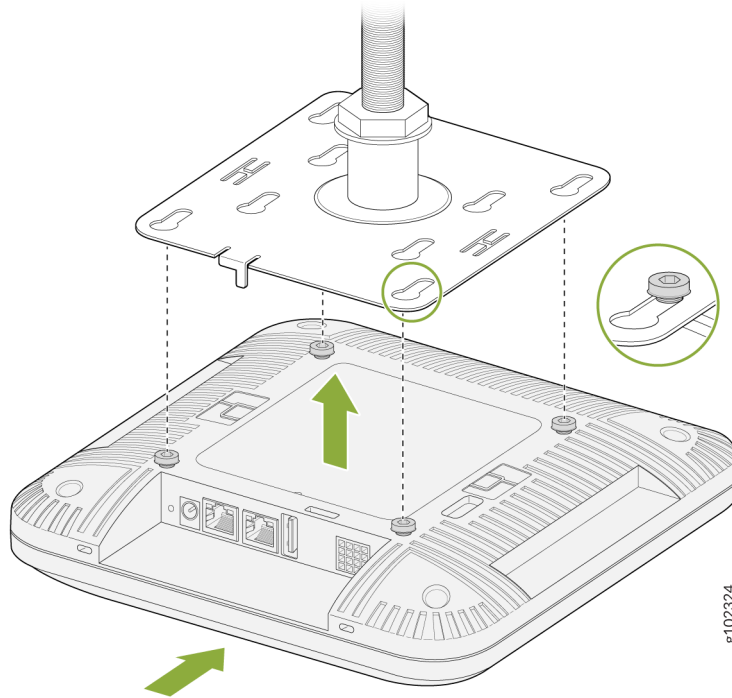
**Figure 29: Attach the APBR-T58 Bracket to a 5/8-in. Threaded Rod**



2. Attach four shoulder screws to the AP if the AP did not ship with the shoulder screws attached.

3. Position the AP such that the shoulder screws on the AP align with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 30: Mount an AP32, AP33, AP41, or AP43 on a 5/8-in. Threaded Rod**



**Video:**

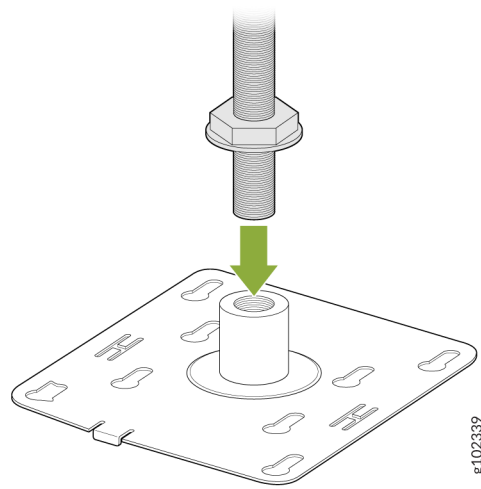
## Mount an AP32, AP33, AP41, or AP43 Access Point on a 16-mm Threaded Rod

To mount an AP32, AP33, AP41, or AP43 on a 16-mm threaded rod, you'll need the APBR-M16 bracket that you'll need to order separately.

1. Attach the APBR-M16 bracket to the threaded rod by using the lock washer and nut provided.

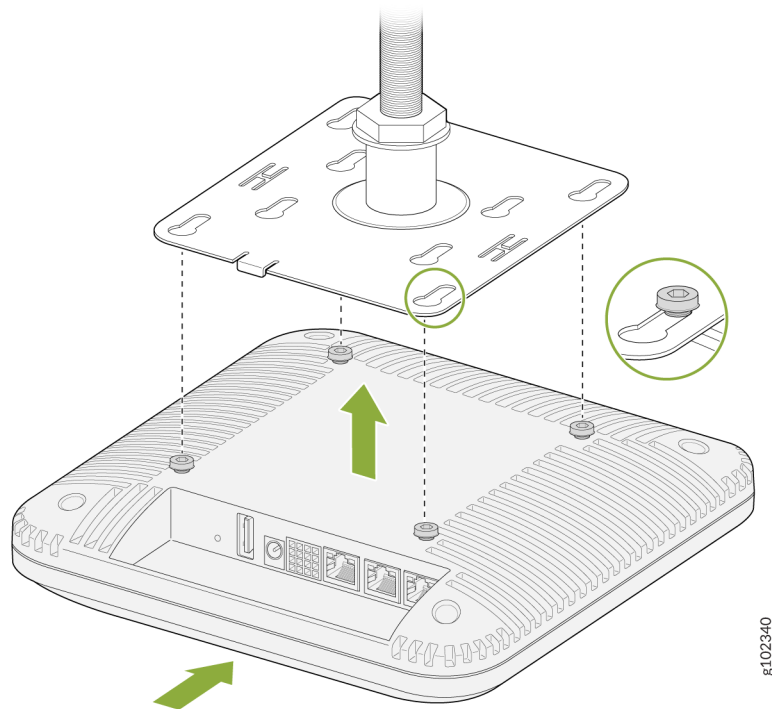


**Figure 31: Attach the APBR-T58 Bracket to a 16-mm Threaded Rod**



2. Install four shoulder screws on the AP if the AP did not ship with shoulder screws installed.
3. Position the AP such that the shoulder screws on the AP engage with the keyholes of the mounting bracket. Slide and lock the AP in place.

**Figure 32: Mount the AP32, AP33, AP41, or AP43 on a 16-mm Threaded Rod**



# Connect an AP32 to the Network and Power It On

When you power on an AP and connect it to the network, the AP is automatically onboarded to the Juniper Mist cloud. The AP onboarding process involves the following steps:

- When you power on an AP, the AP obtains an IP address from the DHCP server on the untagged VLAN.
- The AP performs a Domain Name System (DNS) lookup to resolve the Juniper Mist cloud URL. See [Firewall Configuration](#) for the specific cloud URLs.
- The AP establishes an HTTPS session with the Juniper Mist cloud for management.
- The Mist cloud then provisions the AP by pushing the required configuration once the AP is assigned to a site.

To ensure that your AP has access to the Juniper Mist cloud, ensure that the required ports on your Internet firewall are open. See [Firewall Configuration](#).

To connect the AP to the network:

1. Connect an Ethernet cable from a switch to the **Eth0+PoE** port on the AP.

To provide full wireless functionality, the AP32 requests 19.5 W. However, the AP32 can run on 802.3af (PoE) power with reduced functionality as described below:

- The 5-GHz radio operates in 2x2 mode instead of 4x4 mode.
- The Eth0+PoE port operates at a maximum speed of 1 Gbps.
- The Eth1 port is disabled.

**NOTE:** If you are setting up the AP in a home setup where you have a modem and a wireless router, do not connect the AP directly to your modem. Connect the **Eth0+PoE** port on the AP to one of the LAN ports on the wireless router. The router provides DHCP services, which enables wired and wireless devices on your local LAN to get IP addresses and connect to the Juniper Mist cloud. An AP connected to a modem port connects to the Juniper Mist cloud but does not provide any services.

The same guideline applies if you have a modem/router combo. Connect the **Eth0+PoE** port on the AP to one of the LAN ports.

If the switch or router that you connect to the AP does not support PoE, use an 802.3at or 802.3bt power injector.

- Connect an Ethernet cable from the switch to the **data in** port on the power injector.

- Connect an Ethernet cable from the **data out** port on the power injector to the **Eth0+PoE** port on the AP.

2. Wait for a few minutes for the AP to boot completely.

When the AP connects to the Juniper Mist portal, the LED on the AP turns green, which indicates that the AP is connected and onboarded to the Juniper Mist cloud.

After you've onboarded the AP, you can configure the AP according to your network requirements. See the [Juniper Mist Wireless Configuration Guide](#).

A few things to keep in mind about your AP:

- When an AP boots for the first time, it sends a Dynamic Host Configuration Protocol (DHCP) request on the trunk port or native VLAN. You can reconfigure the AP to assign it to a different VLAN after you've onboarded the AP (that is, the AP state shows as Connected in the Juniper Mist portal. Ensure that you reassign the AP to a valid VLAN because, on rebooting, the AP sends DHCP requests only on that VLAN. If you connect the AP to a port on which the VLAN doesn't exist, Mist displays a **No IP address found** error.
- We recommend that you avoid using a static IP address on an AP. The AP uses the configured static information whenever it reboots, and you cannot reconfigure the AP until it connects to the network. If you need to correct the IP address, you'll need to reset the AP to the factory-default configuration.

If you must use a static IP address, we recommend that you use a DHCP IP address during the initial setup. Before assigning a static IP address, ensure that:

- You've reserved the static IP address for the AP.
- The switch port can reach the static IP address.

## Rename a Juniper Access Point in the Mist Portal

You can rename the APs on your network to easily identify the APs. Use the Juniper Mist portal to automate the naming of APs by using variable fields in the name format. You can optionally include the site name, MAC address of the AP, and an incremental counter value in the name. Mist automatically updates these values when you add or rename an AP.

You can rename multiple APs at a time. To rename APs in the Mist portal:

1. Navigate to the **Access Points** page on the Mist portal.
2. Select the APs that you want to rename.
3. Click **Rename** in the **More** menu in the top-right corner.

The screenshot shows the Mist web interface with the 'Access Points' page selected. A dropdown menu is open for the 'demo AP x' row, showing options: 'Assign to Site', 'Rename' (highlighted), 'Release', 'Clear Profile Overrides', and 'Batch Edit'. The table below lists the access points:

Status	Name	MAC Address	Version	Uptime	IP Address	2.4G Clients	5G Clients	Site
Disconnected	demo AP x	5c:5b:35:0e:02:b2	0.3.15151	0		0	0	Live D
Disconnected	LD_Front Entrance	5c:5b:35:0e:46:96	0.3.15151	0		0	0	Live D
Connected	LD-Server Room	5c:5b:35:0e:2c:8d	0.3.15151	29d 23h 56m	192.168.8.24	1	1	Live D
Connected	LD_Back Office	5c:5b:35:0e:45:92	0.3.15151	29d 23h 54m	192.168.8.25	15	0	Live D
Connected	5c:5b:35:0f:30:c3	5c:5b:35:0f:30:c3	0.3.15151	3d 14h 37m	192.168.148.11	0	0	Live D
Connected	LD-AP03-ABOVE-RAJ	5c:5b:35:0e:06:6d	0.3.15164	19d 16h 44m	192.168.8.15	0	0	Live D

#### 4. Enter a name on the **Rename Access Points** page.

You can use variable options to automatically name APs. If you include the counter ([ctr] ) option, multiple APs are assigned names sequentially. You can also enter the starting value for the counter. The default counter value is 1. For example, consider that you need to rename three APs and you enter the name format as **primary-ap{ctr}** and a counter value as 2. Mist assigns the names as: primary-ap2, primary-ap3, and primary-ap4.

The screenshot shows the 'Rename Access Points' dialog box. The text input field contains 'test'. Below the input field, the following format options are listed:

- [site] site name
- [site.4] last (1-9) characters of site name
- [mac] MAC address
- [mac.3] last (2-3) bytes of MAC address
- [ctr] incrementing counter
- [ctr.3] counter with (2-6) fixed digits

The 'Rename APs' button is highlighted.

**NOTE:** You must include the [mac] or [ctr] field in the name format when renaming multiple APs at a time.

5. Click **Rename APs**.

## Assign an Access Point to a Site

Access Points (APs) that you've not assigned to any site display the status as **Unassigned** on the Inventory page in the Mist portal. An AP in the **Unassigned** state doesn't indicate that it is free to be claimed in a different organization. It means that the current organization still claims the AP, but you've not assigned the AP to any site.

To assign an AP to a site in your organization:

1. From the left menu of the Mist portal, select **Organization > Inventory**.
2. Click **Access Points**.
3. Select one or more APs that you want to assign, and then select **More > Assign to Site**.
4. In the Assign Access Points dialog box, select the site to which you want to assign the APs, and click **Assign to Site**.

Mist assigns the APs to the site you selected.

## Release an Access Point from an Organization

If you want to use an access point (AP) in any other organization, you must first release the AP from the current organization. Before you release an AP, we recommend that you note down the MAC address of the AP and the claim code (using the API).

To release an AP from an organization:

1. From the left menu of the Mist portal, select **Organization > Inventory**.
2. Click **Access Points**.
3. Select one or more APs that you want to release, and then select **More > Release**.

Mist releases the APs, and you can now use those APs in other organizations.

# Upgrade the Firmware on a Juniper Access Point

## IN THIS SECTION

- [Check for AP Firmware Updates | 41](#)
- [Upgrade the Firmware on an AP Manually | 42](#)

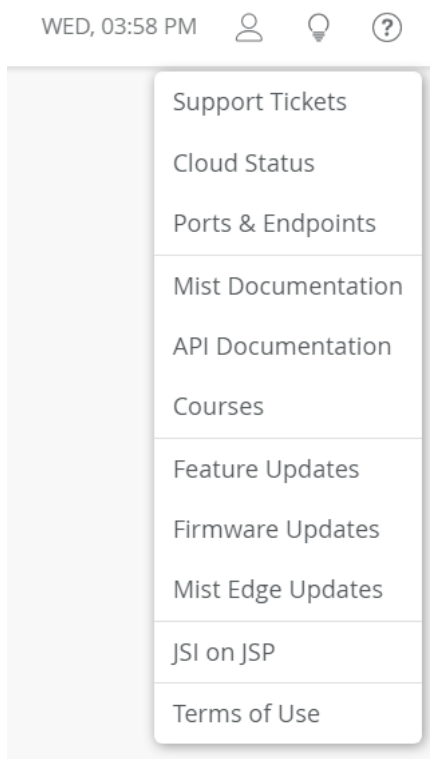
You can upgrade the firmware on an access point (AP) either manually or automatically. With the automatic upgrade method, you can only upgrade the firmware, whereas you can use the manual process to upgrade or downgrade the firmware. This topic covers the manual upgrade process that you can use to upgrade the AP firmware. For information about the automatic upgrade process, see [Enable Automatic Firmware Upgrades](#).

## Check for AP Firmware Updates

You can check for current firmware versions supported on AP models, features supported in a firmware version, and resolved issues. To view details about AP firmware:

1. Log in to the Mist portal using your credentials.
2. Click the ? (question-mark) icon in the top-right corner.  
A drop-down menu appears.
3. Select **Firmware Updates** from the drop-down menu to see the currently supported firmware version for your AP.

You can also see the release notes for the AP firmware.



## Upgrade the Firmware on an AP Manually

You can select either a single AP or multiple APs for firmware upgrades.

**NOTE:** With the manual upgrade process, you can upgrade or downgrade the firmware on your AP. With the automatic upgrade process, you can only upgrade the firmware; you cannot downgrade the firmware.

To manually upgrade the AP firmware:

1. From the left menu of the Mist portal, select **Access Points**.
2. Select the APs that you want to update.
3. Click the **Upgrade APs** button in the top-right corner of the **Access Points** page.  
The **Upgrade APs Firmware** page appears.
4. Select the firmware version to install.
5. Click **Start Upgrade**.

**NOTE:** If you try to manually upgrade a disconnected AP, the upgrade process starts only when the AP reconnects to the Juniper Mist cloud.

## Reset an Access Point to the Factory-Default Configuration

You can reset your access point (AP) to the factory-default configuration using the Reset button. You might need to do this when:

- The current configuration on your AP fails and the AP cannot connect to the Juniper Mist cloud.
- The AP is unresponsive.

When you reset an AP, all existing configuration is removed. You must ensure that your AP receives a valid IP address from the DHCP server after resetting so that the AP can connect to the Mist cloud.

Before you reset your AP:

1. In the left menu of the Juniper Mist portal, select **Organization > Access Points**.

The **Access Points** page appears.

2. Click the AP name on the **Access Points** page.

The **AP Details** page appears.

3. Set **IP Address** to **DHCP**.

4. Click **Save**.

To reset your AP to the factory-default configuration:

1. Power off the AP.
2. Using a thin, pointed object, such as a pin, press and hold the Reset button. At the same time, power on the AP.

The LED on the AP blinks red for 3 seconds. This LED behavior indicates that the AP is starting to boot.

- 
-



3. Keep the Reset button pressed.

After a pause, the LED gradually turns solid red, and then starts to blink red again. This LED behavior indicates that the AP is reverting to the factory-default configuration.



4. Release the Reset button when the LED starts blinking with the pattern *green-off-yellow-off*.



This LED behavior indicates that the AP has started to boot.

5. When the AP completes booting, the LED starts blinking green and yellow.



This LED behavior indicates that the AP is trying to connect to the Juniper Mist cloud.

The AP resets to the factory-default configuration. Here is a sample video that shows how to reset an AP.



Video:

# 4

CHAPTER

## Troubleshoot

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[Troubleshoot a Juniper Access Point](#) | 46

[Contact Customer Support](#) | 71

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# Troubleshoot a Juniper Access Point

## IN THIS SECTION

- [Status LED Blink Patterns | 46](#)
- [Troubleshoot AP Claiming Issues | 57](#)
- [Troubleshoot Access Point Disconnection Issues | 58](#)

Read this topic to learn how you can troubleshoot issues on your access point (AP) without opening a support ticket. You can use the status LED on your AP to determine some of the issues—for example, connectivity issues.

Here are some basic steps that you can perform to troubleshoot the AP:

- Check the LED blinking pattern to identify possible errors. See ["Status LED Blink Patterns" on page 46](#).
- Check whether the AP is receiving power from the switch.
- Check whether the connected switch can learn the MAC address of the AP.
- Check whether the AP works correctly by using a different cable and different switch port.
- Verify that the required ports are open on the firewall. See [Firewall Configuration](#).

For issues related to claiming an AP, see ["Troubleshoot AP Claiming Issues" on page 57](#).

For issues related to AP disconnection, see ["Troubleshoot Access Point Disconnection Issues" on page 58](#).

If you are still unable to resolve the issue, raise a support ticket. See [Create a Support Ticket](#) for instructions on how to raise a support ticket.

## Status LED Blink Patterns

A Juniper Access Point (AP) has one multicolor status LED that indicates various states as described in [No Link Title](#).

Table 4: LED Blink Patterns for AP States

LED Color	Blink Patterns	AP Status
	Blinking red for 3 seconds	The AP is starting to boot.
	Blinking green-off-yellow-off for 12 seconds	The AP is booting.
	Blinking green and yellow for 30–40 seconds	The AP is connecting to the Juniper Mist cloud.
	White steadily on	The AP is connected to the cloud.
	Green steadily on	The AP is configured by the Juniper Mist cloud.
	Blue steadily on	There is at least one wireless client connected to the AP.
	Blinking orange	The AP is upgrading.
	Blinking green and purple	The status LED blinks green and purple when the user clicks the <b>Locate</b> button in the Access Point details page.
	Red steadily on	The AP has failed.
	Gradually progresses to red	The user is holding down the Reset button.
	White gradually fades to off	The AP is going to reset the configuration to the factory default.

Table 4: LED Blink Patterns for AP States *(Continued)*

LED Color	Blink Patterns	AP Status
—	Green gradually fades to off	The AP is receiving insufficient power.

You can also use the Status LED for troubleshooting your AP. The following tables list the LED behavior corresponding to different types of errors.

Table 5: LED Blink Patterns for Network Connectivity Errors

LEDs	Blink Pattern	Error	Description
• •	2 yellow	<b>No ethernet link</b>	The AP does not have an Ethernet link.  This error is usually seen if you did not connect the AP to a switch when using a power injector.
• • •	3 yellow	<b>No IP Address</b>	There is no IP address in the static configuration or through the DHCP lease.
• • •	4 yellow	<b>No default gateway</b>	Neither the static configuration nor the DHCP lease has a default gateway.
• • • • •	5 yellow	<b>Default gateway unreachable</b>	The AP does not receive an ARP response from the default gateway.

Table 5: LED Blink Patterns for Network Connectivity Errors *(Continued)*



LEDs	Blink Pattern	Error	Description
	6 yellow	<b>No DNS</b>	Neither the static configuration nor the DHCP lease has a DNS server.
	7 yellow	<b>No DNS response</b>	The AP did not receive a response to the DNS lookup. The AP receives the DNS server information through DHCP but the AP is unable to reach the Mist cloud.
	8 yellow	<b>Empty DNS response</b>	The AP received an empty DNS response with no address records.
	9 yellow	<b>Duplicate IP Address</b>	The AP has detected a duplicate IP address on the LAN (ARP probes).

Table 6: LED Blink Patterns for Cloud Connectivity Errors

LEDs	Blink Pattern	Error	Description
	1 yellow, pause, 2 yellow	<b>Cloud unreachable</b>	TCP SYN fails and the AP cannot ping endpoint terminator.
	1 yellow, pause, 3 yellow	<b>No cloud response</b>	The AP did not receive a response from the cloud.
	1 yellow, pause, 4 yellow	<b>Cloud cert time check failed</b>	Neither the static configuration nor the DHCP lease has a default gateway.
	1 yellow, pause, 5 yellow	<b>Cloud cert invalid</b>	The cloud provided an invalid certificate during authentication.
	1 yellow, pause, 6 yellow	<b>Mutual auth failed</b>	Mutual authentication between the AP and the Juniper Mist cloud failed.

Table 6: LED Blink Patterns for Cloud Connectivity Errors *(Continued)*


LEDs	Blink Pattern	Error	Description
	1 yellow, pause, 7 yellow	<b>Config fetch failed</b>	The Juniper Mist cloud is unable to push the configuration to the AP.
	1 yellow, pause, 8 yellow	<b>Invalid configuration</b>	The Juniper Mist cloud provided an invalid configuration.
	1 yellow, pause, 9 yellow	<b>Boot config save failed</b>	The AP was unable to save or delete the boot configuration.



Table 7: LED Blink Patterns for Layer 2 Tunneling Protocol (L2TP) Management Errors

LEDs	Blink Pattern	Error	Description
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>○</li> <li>•</li> </ul>	2 yellow, pause, 1 yellow	<b>L2TP mgmt tunnel peer unreachable</b>	The start control connection request (SCCRQ) failed and the L2TP management server is unreachable.
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>○</li> <li>•</li> <li>•</li> <li>•</li> </ul>	2 yellow, pause, 3 yellow	<b>No response from L2TP mgmt tunnel peer</b>	The L2TP management server is reachable but it does not send a response to SCCRQ.
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>○</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>	2 yellow, pause, 4 yellow	<b>L2TP mgmt tunnel config rejected</b>	The L2TP management server credentials failed. The SCCRQ returns a StopCCN message instead of start control connection reply (SCCRP).
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>○</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>	2 yellow, pause, 5 yellow	<b>L2TP mgmt tunnel stopped</b>	The L2TP management server sent a StopCCN and terminated the tunnel.

Table 7: LED Blink Patterns for Layer 2 Tunneling Protocol (L2TP) Management Errors *(Continued)*



LEDs	Blink Pattern	Error	Description
	2 yellow, pause, 6 yellow	<b>L2TP mgmt session config rejected</b>	The L2TP management server sent a CDN in response to ICRQ.
	2 yellow, pause, 7 yellow	<b>L2TP mgmt session shutdown</b>	The L2TP management server sent a CDN and terminated the session.

Table 8: LED Blink Patterns for L2TP Connectivity Errors



LEDs	Blink Pattern	Error	Description
	3 yellow, pause, 1 yellow	<b>L2TP DHCP no response</b>	The AP did not receive a response to the DHCP discover message over the L2TP tunnel.
	3 yellow, pause, 2 yellow	<b>L2TP default gateway missing</b>	The DHCP offer message does not have a default gateway.

Table 8: LED Blink Patterns for L2TP Connectivity Errors *(Continued)*



LEDs	Blink Pattern	Error	Description
	3 yellow, pause, 4 yellow	<b>L2TP default gateway unreachable</b>	The default gateway does not send an ARP response.
	3 yellow, pause, 5 yellow	<b>L2TP mgmt DNS missing</b>	The DHCP offer message does not contain any DNS servers.

Table 9: LED Blink Patterns for Boot Configuration Errors



LEDs	Blink Pattern	Error	Description
	4 yellow, pause, 1 yellow	<b>Boot config unreadable</b>	The boot configuration file is unreadable.
	4 yellow, pause, 2 yellow	<b>Boot config invalid</b>	The boot configuration is invalid.

Table 9: LED Blink Patterns for Boot Configuration Errors *(Continued)*


LEDs	Blink Pattern	Error	Description
	4 yellow, pause, 3 yellow	<b>Boot config failed</b>	The boot configuration failed and the AP has lost connection to the cloud.

Table 10: LED Blink Patterns for Firmware and Other Errors



LEDs	Blink Pattern	Error	Description
	5 yellow, pause, 1 yellow	<b>Firmware corrupt</b>	The firmware image is corrupted.
	5 yellow, pause, 2 yellow	<b>Unexpected failure</b>	An API failed unexpectedly.

Table 11: LED Blink Patterns for Proxy Server Errors






LEDs	Blink Pattern	Error	Description
	6 yellow, pause, 1 yellow	<b>Proxy config invalid</b>	The proxy configuration is invalid.
	6 yellow, pause, 2 yellow	<b>Empty DNS response to proxy host lookup</b>	The AP received an empty DNS response with no A (address) records for the proxy host.
	6 yellow, pause, 3 yellow	<b>Proxy is unreachable</b>	The proxy server is unreachable.

Table 11: LED Blink Patterns for Proxy Server Errors (*Continued*)

LEDs	Blink Pattern	Error	Description
	6 yellow, pause, 4 yellow	<b>No proxy server response</b>	The proxy server is reachable but the AP is unable to connect to the proxy TCP port.
	6 yellow, pause, 5 yellow	<b>Proxy Authentication Required</b>	Proxy authentication is required (code 407).



Video:

## Troubleshoot AP Claiming Issues

When claiming your AP, you might see the error AP belongs to another organization.

If you see this error message, check whether any of the other organizations has claimed the AP. You need to release the AP from the previous organization before claiming it in the current one.

If none of the organizations have claimed the AP, contact Juniper support and submit a request to release the AP. Provide the following information in the request form:

- A snapshot of the AP

- The MAC address of the AP
- Details of the purchase order for the AP

The support team will release the AP after verifying the details.

## Troubleshoot Access Point Disconnection Issues

Table 12 on page 58 lists the LED behavior when issues cause an access point (AP) to disconnect from the network.

Table 12: Troubleshoot AP Disconnection Issues

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
◦	Off	The AP is not receiving power.	<ol style="list-style-type: none"><li>1. Check whether the switch port connected to the AP learns the MAC address of the AP.</li><li>2. Check the power logs on the AP to verify that PoE is enabled on the switch port.</li><li>3. Check whether the switch is supplying power to the AP. Change the cable and the switch port to see whether the AP powers on.</li><li>4. If you have a working AP, swap it with the faulty AP. Check whether the issue persists.</li></ol> <p><b>NOTE:</b> If your APs are already installed and you cannot swap any AP, skip this step.</p>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>	Blinking green and yellow for more than 30 seconds	The AP is trying to connect to the Juniper Mist™ cloud but is unable to connect.	<ol style="list-style-type: none"> <li>1. Verify that the relevant ports are open on the firewall. See <a href="#">Firewall Configuration</a>.</li> <li>2. Connect a laptop to the same switch port as the AP. Open <a href="https://ep-terminator.mistsys.net/about">https://ep-terminator.mistsys.net/about</a> and see if it resolves the host.  Your output should look like this:   <pre>{   "version": "0.3.4476",   "git-commit":     "0db544d97d09c21dd2ea0778c1f6d03465861c9d",   "build-time":     "2020-03-16_23:45:06_U     TC",   "go-runtime":     "go1.14",   "env": "production",   "procname": "ep-     terminator/ðŸŒŠ/     provider=aws/     env=production/     host=ep-     terminator-172-31-16-1     7-762f638f-     production.mistsys.net     /pid=12226/     user=terminator",   "start-time":     "2020-03-19T01:32:54Z"   ,</pre> </li> </ol>



Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<pre>"uptime": 707675.367648 }</pre> <p><b>3.</b> Check the firewall logs to see whether any policy is blocking the <a href="https://ep-terminator.mistsys.net/about">https://ep-terminator.mistsys.net/about</a> URL.</p>
<ul style="list-style-type: none"> <li>•</li> <li>•</li> </ul>	Blinking yellow two times	The switch or AP is experiencing a Layer 2 issue.	<p><b>1.</b> Run a cable test to verify that the cable connected to the AP is working correctly.</p> <p><b>2.</b> Check whether the switch port connected to the AP learns the MAC address of the AP.</p> <p><b>3.</b> Check for any eth0 errors on the switch port.</p> <p><b>4.</b> Change the cable and switch port and verify that the AP powers on.</p> <p><b>5.</b> If you have a working AP, swap it with the faulty AP. Check whether the issue persists.</p> <p><b>NOTE:</b> If your APs are already installed and you cannot swap any AP, skip this step.</p>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>	Blinking yellow three times	The AP is unable to obtain an IP address.	<p>The AP can obtain an IP address either through DHCP or through a static configuration.</p> <p>Troubleshooting steps for DHCP:</p> <ol style="list-style-type: none"> <li>1. Check whether the switch port configuration has the required parameters (such as native VLAN and VLAN ID) configured.</li> <li>2. Check the DHCP server logs to verify that leases are available in the DHCP pool.</li> <li>3. Connect a laptop to the switch port to which the AP was connected. Verify that the laptop is able to obtain an IP address from the VLAN management pool. <ul style="list-style-type: none"> <li>• If the laptop is unable to obtain an IP address, contact the DHCP team to fix the DHCP pool. You can port-mirror the switch port to identify which step in the</li> </ul> </li> </ol>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<p>DHCP Discover, Offer, Request, Acknowledgment (DORA) process is failing.</p> <ul style="list-style-type: none"> <li>If your laptop is able to obtain an IP address whereas the AP is unable to obtain an IP address, contact the Juniper support team</li> </ul> <p>Troubleshooting steps for static configuration:</p> <p>If the AP was connected to the Juniper Mist cloud earlier, check the static configuration on the Juniper Mist portal. If the static configuration is incorrect, then the AP will not be able to connect to the Juniper Mist cloud. To correct the static configuration:</p> <ol style="list-style-type: none"> <li>Power off the AP by shutting down the PoE on the switch connected to the AP. Alternatively, you can remove the physical cable that provides power to the AP.</li> <li>Correct the configuration on the switch port.</li> </ol>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<p>3. Reset the AP to the factory-default configuration. See <a href="#">"Reset an Access Point to the Factory-Default Configuration"</a> on page 43.</p> <p>4. Power on the AP.</p>

Table 12: Troubleshoot AP Disconnection Issues (*Continued*)

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>	Blinking yellow four times	No default gateway IP address found in the DHCP lease or static configuration.	<ol style="list-style-type: none"> <li>1. Check the DHCP pool configuration to see whether the default gateway is configured.</li> <li>2. If you've configured a static IP address for the AP, check whether the default gateway is configured correctly.  If the default gateway is not configured correctly, follow these steps: <ol style="list-style-type: none"> <li>a. Power off the AP by shutting down the PoE on the switch port to which the AP is connected. Alternatively, you can remove the physical cable that provides power to the AP.</li> <li>b. Correct the configuration on the switch port.</li> <li>c. Reset the AP to the factory-default configuration. See <a href="#">"Reset an Access Point to the Factory-Default Configuration"</a> on page 43.</li> </ol> </li> </ol>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<p>d. Power on the AP.</p> <p>3. Perform port mirroring for the switch port and obtain the packet capture. In the DHCP offer packet from the server, check whether the <b>default gateway</b> field displays an IP address.</p> <ul style="list-style-type: none"> <li>• If the <b>default gateway</b> field does not display an IP address, contact your DHCP server team to fix the configuration on the DHCP server.</li> <li>• If the <b>default gateway</b> field displays an IP address, contact Juniper Mist support to troubleshoot the issue.</li> </ul>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
• • • • •	Blinking yellow five times	The default gateway IP address is configured but the AP is unable to connect to the default gateway.	<ol style="list-style-type: none"> <li>1. Verify that the default gateway IP address is set correctly in all the configurations on the switch port (VLAN, native VLAN) and the DHCP pool configuration.</li> <li>2. If you've configured a static IP address for the AP, check whether the default gateway is configured correctly.  If the default gateway is not configured correctly, follow these steps: <ol style="list-style-type: none"> <li>a. Power off the AP by shutting down the PoE on the switch port to which the AP is connected. Alternatively, you can remove the physical cable that provides power to the AP.</li> <li>b. Correct the configuration on the switch port.</li> <li>c. Reset the AP to the factory-default configuration. See <a href="#">"Reset an Access</a></li> </ol> </li> </ol>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<p><a href="#">Point to the Factory-Default Configuration" on page 43.</a></p> <p><b>d.</b> Power on the AP.</p> <p>If the configuration is correct and the LED still blinks yellow five times, follow these steps:</p> <p><b>a.</b> Connect a laptop on the same VLAN, network, or switch port to which the AP was connected.</p> <p><b>b.</b> Ping the default gateway. Use the <code>ipconfig /all</code> command to get the default gateway information.</p> <p>If the ping fails, contact your network administrator to check for issues on the wired side.</p> <p>If the ping succeeds but the AP still fails to connect, contact Juniper Mist support.</p>



Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>	Blinking yellow six times	No DNS IP address found in the DHCP lease or static configuration.	<ol style="list-style-type: none"> <li>1. Check the DHCP pool configuration to see whether the DNS server is configured.</li> <li>2. If you've configured a static IP address for the AP, check whether the DNS server is configured correctly.</li> </ol> <p>If the DNS server is not configured correctly, follow these steps:</p> <ol style="list-style-type: none"> <li>a. Power off the AP by shutting down the PoE on the switch port to which the AP is connected. Alternatively, you can remove the physical cable that provides power to the AP.</li> <li>b. Correct the configuration on the switch port.</li> <li>c. Reset the AP to the factory-default configuration. See <a href="#">"Reset an Access Point to the Factory-Default Configuration"</a> on page 43.</li> </ol>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			<p>d. Power on the AP.</p> <p>3. Perform port mirroring for the switch port and obtain the packet capture. In the DHCP offer packet from the server, check whether the <b>dns server</b> field displays an IP address.</p> <ul style="list-style-type: none"> <li>• If the <b>dns server</b> field does not display an IP address, contact your DNS server team to fix the configuration on the DNS server.</li> <li>• If the <b>dns server</b> field displays an IP address, contact Juniper Mist support to troubleshoot the issue.</li> </ul>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>	Blinking yellow seven times	The DNS server does not respond to a DNS lookup. The AP receives the DNS server through DHCP but it cannot reach or ping the Juniper Mist™ cloud. When the AP gets an IP address from the DHCP server, the AP tries to reach <a href="#">ep-terminator.mistsys.net</a> . If the DNS server is unable to resolve this URL, the AP cannot connect to the cloud.	<ul style="list-style-type: none"> <li>• Connect a laptop on the same VLAN or network, and try to resolve the URL <code>ep-terminator.mistsys.net</code> to an IP address by executing the <code>nslookup</code> command at the command prompt.   <pre>C:\Users \username&gt;nslookup ep-terminator.mistsys.net Server: dns.google Address: 8.8.8.8 Non-authoritative answer: Name: ep-term- production-1584483204-1989267174.us- west-1.elb.amazonaws.com Addresses: 52.9.76.55 13.57.102.113 Aliases: ep-terminator.mistsys.net</pre> </li> <li>• If the <code>nslookup</code> command cannot resolve the URL, explicitly add the URL to your DNS server.</li> <li>• If the issue is still not resolved, check the firewall and proxy logs</li> </ul>

Table 12: Troubleshoot AP Disconnection Issues *(Continued)*

LED Color	Blink Pattern	Issue	Steps to Troubleshoot
			to see whether the traffic for the URL is getting dropped. You can also take a packet capture to analyze further.

If you're unable to resolve the issue after following the steps listed in the table, contact Juniper support or open a support ticket. See ["Contact Customer Support" on page 71](#).

Provide the following details to customer support:

- What is the exact LED blink pattern that you see on the AP? You can also share a short video of the blinking pattern.
- Are you getting the MAC address of the AP on your switch port?
- Is the AP receiving power from the switch?
- Is the AP getting an IP address and is the AP pinging on the Layer 3 gateway of your network?
- What are the troubleshooting steps that you followed?
- Are there any additional logs that can help identify the root cause of the issue?

## Contact Customer Support

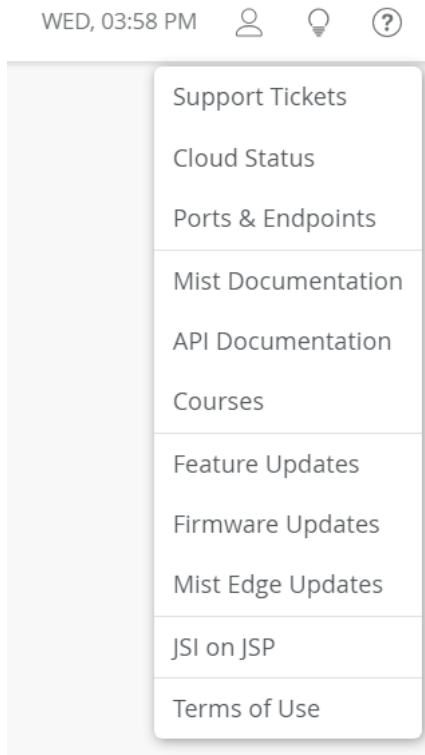
If your access point (AP) is not working correctly, you can create a support ticket on the Juniper Mist portal. The Juniper Mist Support team will contact you to help resolve your problem. If needed, you can request a Return Material Authorization (RMA).

Before you begin, ensure that you have the following information:

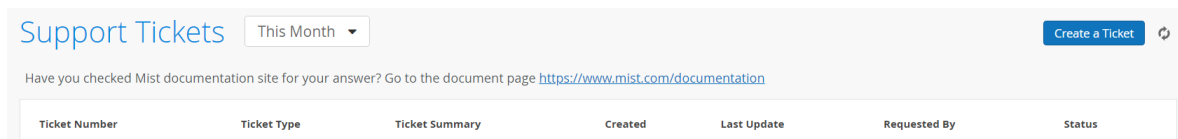
- The MAC address of the faulty AP
- The exact LED blink pattern seen on the AP (or a short video of the blinking pattern)
- The system logs from the AP

To create a support ticket:

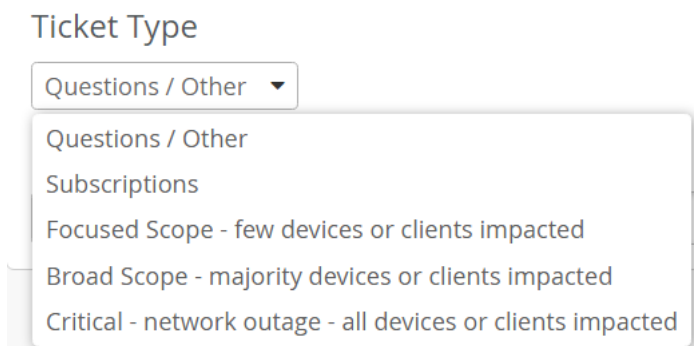
1. Click the ? (question mark) icon in the top-right corner of the Juniper Mist portal.
2. Select **Support Tickets** from the drop-down menu.



3. Click **Create a Ticket** in the top-right corner of the **Support Tickets** page.



4. Select the appropriate ticket type depending on the severity of your problem.



**NOTE:** Selecting **Questions/Other** will open a search box and redirect you to available documentation and resources related to your issue. If you cannot resolve your issue by using the suggested resources, click **I still need to create a ticket**.

5. Enter a ticket summary, and select the sites, devices, or clients that are impacted.

If you are requesting an RMA, select the impacted device.

< Support Tickets : [New Ticket](#)

Ticket Summary is required

Ticket Type  
Focused Scope - few devices or clients impacted ▼

Ticket Summary

Impacted Sites Add Site

Impacted Devices Add Device

Impacted Clients Add Client

Description

Time of Issue  
Sun, Aug 13 - 9:46 PM

6. Enter a description to explain the issue in detail.

Provide the following information:

- The MAC address of the device
- The exact LED blink pattern seen on the device
- The system logs from the device

**NOTE:** To share device logs:

- a. Navigate to the **Access Points** page in the Juniper Mist portal. Click the impacted device.
- b. Select **Utilities** > **Send AP Log to Mist** in the top right corner of the device page.

It takes at least 30 seconds to 1 minute to send the logs. Do not reboot your device in that interval.

7. (Optional) You can provide any additional information that may help to resolve the issue, such as:

- Is the device visible on the connected switch?
- Is the device receiving power from the switch?
- Is the device receiving an IP address?
- Is the device pinging on the Layer 3 (L3) gateway of your network?
- Have you already followed any troubleshooting steps?

8. Click **Submit**.