JUNIPER NETWORKS | Engineering Simplicity

Juniper AP47 Access Point Deployment Guide

Published
2026-02-09

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

Juniper AP47 Access Point Deployment Guide

The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at https://support.juniper.net/support/eula/. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

Table of Contents

About This Guide | v

1 Overview

AP47 Access Point Overview | 2

AP47 Components and Specifications | 6

Ethernet Redundancy and Connecting the AP47 to the Network | 7

Power Options for the AP47 | 9

2 Installation

Attach External Antennas to the AP47 | 12

Mount the AP47 Access Point | 14

- Supported Mounting Brackets for AP47 | 15
- Universal Mounting Bracket (APBR-U) for Juniper Access Points | 16
- Mount an Access Point on a Single-Gang or 3.5-Inch or 4-Inch Round Junction Box | 17
- Mount an Access Point on a Double-Gang Junction Box | 19
- Mount an Access Point on an EU Junction Box | 20
- Mount an Access Point on a US 4-Inch Square Junction Box | 22
- Mount an Access Point on a 9/16-Inch or 15/16-Inch T-Bar | 23
- Mount an Access Point on a Recessed 15/16-Inch T-Bar | 24
- Mount an Access Point on a Recessed 9/16-Inch T-Bar or Channel Rail | 26
- Mount an Access Point on a 1.5-Inch T-Bar | 28
- Mount an Access Point on a 5/8-Inch Threaded Rod | 29
- Mount an Access Point on a 16-mm Threaded Rod | 31
- Mount an Access Point on a 1/2-Inch Threaded Rod | 34

Connect an AP47 to the Network and Power It On | 36

3 Troubleshoot

Troubleshooting Overview | 39

Contact Customer Support | 39

About This Guide

Use this guide to install, manage, and troubleshoot the Juniper® AP47 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.

For more details about the key features and deployment of the AP47, see Deploy Wi-Fi 7 with AP47.

CHAPTER 1

Overview

IN THIS CHAPTER

- AP47 Access Point Overview | **2**
- AP47 Components and Specifications | **6**
- Ethernet Redundancy and Connecting the AP47 to the Network | **7**
- Power Options for the AP47 | **9**

AP47 Access Point Overview

IN THIS SECTION

- AP47 Access Point Models | 2
- Key Features of AP47 Access Points | 4
- Benefits of AP47 Access Points | 5

The Juniper® AP47 High Performance Access Point is an indoor Wi-Fi 7 access point (AP) that provides virtual Bluetooth® Low Energy (vBLE) for enterprises that require increased channel width and capacity.

The AP47 has three IEEE 802.11be data radios, which deliver up to 4x4 multiple input, multiple output (MIMO) with four spatial streams. The AP47 also has a fourth 802.11be radio that is dedicated for scanning. The AP uses this radio for radio resource management (RRM), wireless security, and analytics.

The AP47 has a vBLE antenna array to enable location services such as asset visibility, wayfinding, and other services without battery-powered beacons. The AP47 includes two 802.15.4 capable radios, a built-in Global Navigation Satellite System/Global Positioning System (GNSS/GPS) radio, as well as Ultra-Wideband (UWB) capabilities.

The AP can operate simultaneously in the 2.4-GHz, 5-GHz, and 6-GHz bands. The AP is backward compatible with the 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax wireless standards.

AP47 Access Point Models

Table 1: AP47 Access Point Models

Model	Antenna
AP47	Internal omnidirectional
AP47D	Internal directional (60x60)
AP47E	External

Figure 1: Front and Rear View of AP47 and AP47D

Figure 2: Rear View of AP47E

Key Features of AP47 Access Points

- Wi-Fi 7 support—The AP47 supports Wi-Fi 7, which allows for higher throughput and lower interference. Wi-Fi 7 can support 320 MHz wide radio channels in the 6GHz band and offers 4K QAM.
- Dual Ethernet—The AP47 can connect to two Ethernet inputs at the same time, allowing for PoE redundancy and hitless failover. These inputs can belong to the same switch or different switches.

> **NOTE**: Both Ethernet inputs must belong to the same VLAN.

- Tri-band radio—The AP47 supports the following modes of operation:
  - 2.4 GHz + 5 GHz + 6 GHz
  - 5 GHz (high) + 5 GHz (low) + 6 GHz
  - 5 GHz + 6 GHz (high) + 6 GHz (low)
- Advanced location services—The AP47 supports GPS and GNSS for high-precision positioning.

> **NOTE**: For best results, the AP should be located near the perimeter of the building, near windows, and away from elevators.

- Directional antenna—The AP47D has integrated directional antennas, which provide better signal control and allows you to increase AP density by creating smaller cells without loss in data rates. This reduces AP interference and co-channel contention.
- Flexible deployment scenarios—The AP47 model (with internal omnidirectional antenna) is used for general deployment. For higher AP density environments, the AP47D provides an alternative to using external antennas. The AP47E is suited for deployment in high AP density areas where the direction of the signal needs to be controlled using different types of antenna.

For details about the key features and deployment of the AP47, see Deploy Wi-Fi 7 with AP47.

Benefits of AP47 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.

- Improved user experience using AI—The AP uses Mist AI to enhance user experience in the Wi-Fi 7 spectrum by ensuring consistent service to multiple connected devices in moderate-density environments.

AP47 Components and Specifications

Figure 3: AP47 Components

Table 2: AP47 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
Eth0 + PoE	100/1000/2500/5000/10000 BASE-T RJ-45 port with MACsec that supports an 802.3bz PoE-powered device
Eth1 + PoE	100/1000/2500/5000/10000 BASE-T RJ-45 port that supports an 802.3bz PoE-powered device

Table 2: AP47 Components *(Continued)*

Component	Description
Antenna connectors (available only in AP47E models)	Three pluggable antenna connectors: 2.4/5/6 GHz (6 pin), 6 GHz + Scan (6 pin), and 5 GHz (4 pin)
Status LED	A multicolor status LED to indicate the status of the AP and to help troubleshoot issues. See Troubleshoot a Juniper Access Point.

For AP47 specifications, see the AP47 Datasheet.

Ethernet Redundancy and Connecting the AP47 to the Network

The two 10 Gbps Ethernet ports on the AP47 not only provide PoE redundancy but also support redundant Ethernet links to ensure continued operation during infrastructure outages or upgrades in mission critical environments. The AP47 supports single uplink, dual uplink, individual uplink and downlink, and dual downlink connectivity.

Single Uplink

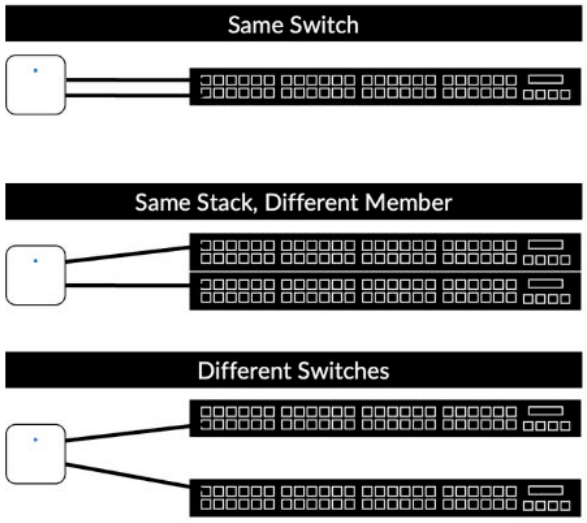
For single uplink we recommend that you connect Eth0 to the network uplink for simplicity and consistency. However, there is no restriction on using Eth1 to connect to the network uplink on an AP47.

If you enforce a MAC limit on your AP switch ports, such as when you tunnel traffic to a Mist Edge, you must configure the MAC limit to two or more.

Dual Uplink

If you leverage dual uplinks, here are a few good things to know:

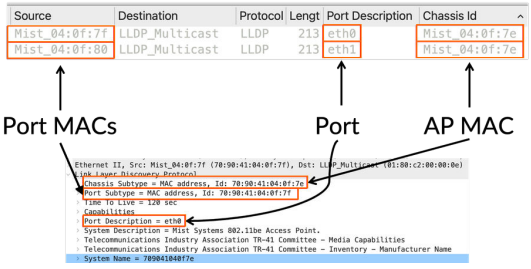
- Connecting the AP47 to the network requires no switch configuration. You can connect the AP to the same switch or different switches. Ensure the L2 VLAN is the same on both switch ports so clients don't need to obtain new IP addresses if a failover occurs.



- New AP47s arrive configured with dual uplinks in an active-standby configuration.
  - You can configure uplink, downlink and dual downlink (mesh relay) connectivity by manually configuring the port VLANs in the Mist portal.
- The AP47 employs passive failover detection based on link status and activity which results in three to five-second failover.
- The AP47 is capable of non-traffic impacting (hitless) PoE failover when you use dual 802.3bt power sources.
- If you use two 802.3at or mixed 802.3at and 802.3bt power sources, the AP47 combines the received power for full functionality. The AP may brownout or reboot in the event it needs to reduce functionality due to a single power source failure.

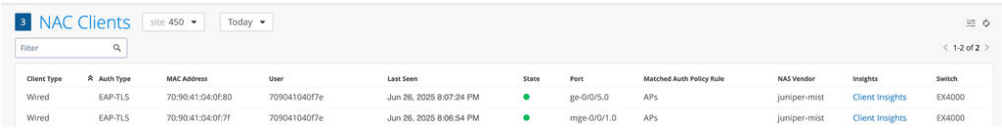
AP47 Ethernet MAC Addresses

AP47 LLDP PCAP



- The AP47 uses three MAC addresses for Ethernet, because it supports multiple uplinks. The MAC address for the AP wireless interface is known as the AP MAC address, then each Ethernet port MAC address is incremented by 1. For example:
  - AP MAC Address = 70:90:41:XX:XX:7E

  - AP Eth0 MAC Address = 70:90:41:XX:XX:7F
  - AP Eth1 MAC Address = 70:90:41:XX:XX:80
- The AP47 uses the AP MAC address for switch virtual interfaces (SVIs) and IP communication, such as DHCP, ARP, DNS, NTP, AP Management, L2TPv3, and RADIUS.
- The AP47 uses the unique Ethernet port MACs for link-local packets, such as LLDP and Dot1x Supplicant.
- Connected switches use the AP47's multiple MAC addresses primarily when you configure switch-side MAC-based policies. For example:
  - To perform MAC authentication bypass (MAB) authentication against the APs, add both the AP MAC address and the port MAC addresses to your switch's MAB database,
  - If you leverage LLDP, the Chassis ID is the AP MAC address.
  - If you enforce a MAC limit on your AP switch ports, such as when tunneling traffic to a Mist Edge, set the MAC limit to two or more: one for the Ethernet MAC and one for the AP MAC.
- If you leverage 802.1X authentication against the APs with dual uplinks, both ports authenticate to the network independently of each other. Thus, two separate auths appear in your RADIUS server.



Power Options for the AP47

The AP47 has dual 10 GbE multigigabit Ethernet ports, both of which support power over Ethernet (PoE) in.

The AP47 requires IEEE 802.3bt power for full functionality. It requires approximately 29 W of power for full Wi-Fi functionality. When powered by IEEE 802.3at power, the AP operates with reduced functionality. The three Wi-Fi radios operate at 2x2:2, or 4x4:4 with any two Wi-Fi radios enabled. The AP47 keeps the scanning radio, and the BLE, GPS, and UWB radios active at all times, regardless of the power source.

Either or both of the ports can be used to power the AP using PoE.

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

- Power over Ethernet (PoE) from an Ethernet switch.

  We recommend that you use an Ethernet cable with a maximum length of 100 m to connect the 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 on, 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 from a power injector

See PoE Requirements for Juniper Mist APs for the power requirements for an AP47.

2

CHAPTER

Installation

IN THIS CHAPTER

- Attach External Antennas to the AP47 | **12**
- Mount the AP47 Access Point | **14**
- Connect an AP47 to the Network and Power It On | **36**

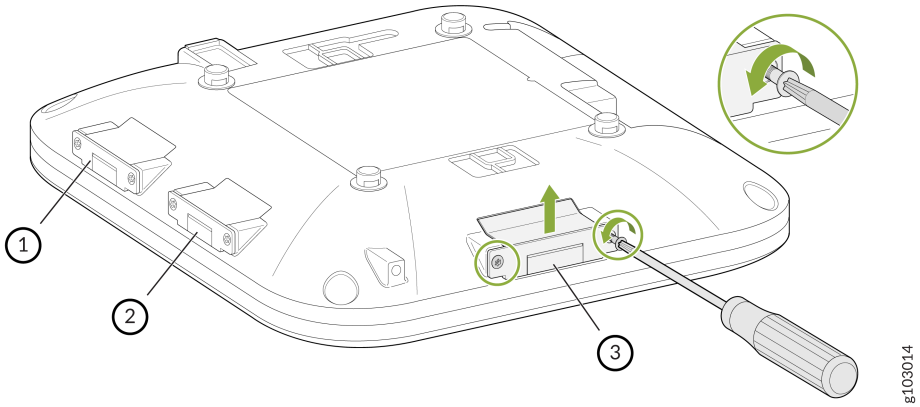
Attach External Antennas to the AP47

The AP47E model has three pluggable antenna ports, two 6-pin and one 4-pin.

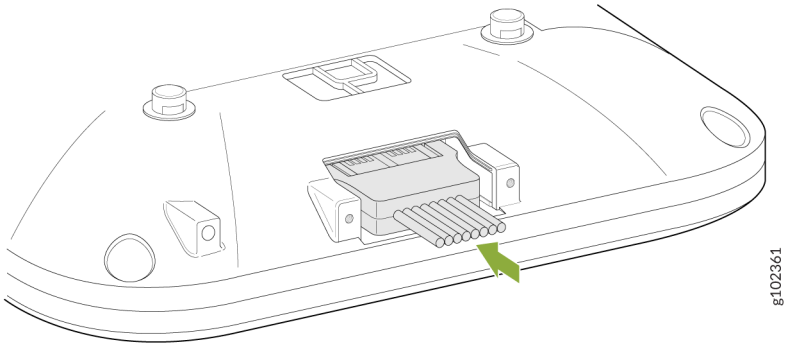
Figure 4: External Antenna Connectors on the AP47E

To attach the antennas:

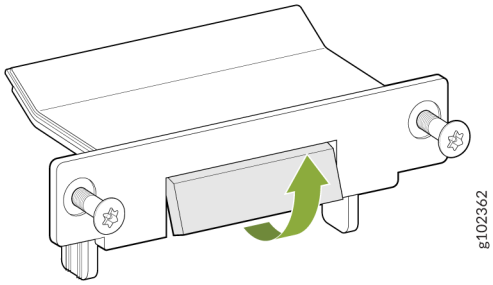
1. Use a T8 security torx bit to remove the screws that attach the antenna port cover to the AP. Remove the cover.



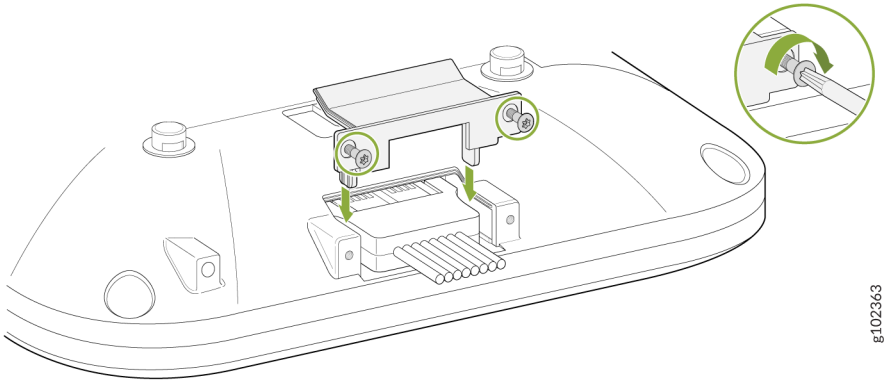
2. Connect the antennas.



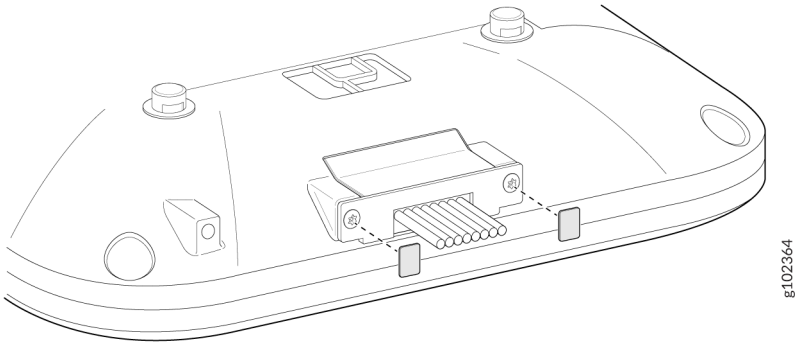
3. Bend the breakoff tab on the antenna port cover.



4. Attach the antenna port cover to the AP using the screws that you removed in Step 1. Use the T8 security torx bit to tighten the screws.



5. Place the provided lexan labels on the antenna port cover screws.



Mount the AP47 Access Point

IN THIS SECTION

- Supported Mounting Brackets for AP47 | **15**
- Universal Mounting Bracket (APBR-U) for Juniper Access Points | **16**
- Mount an Access Point on a Single-Gang or 3.5-Inch or 4-Inch Round Junction Box | **17**
- Mount an Access Point on a Double-Gang Junction Box | **19**
- Mount an Access Point on an EU Junction Box | **20**
- Mount an Access Point on a US 4-Inch Square Junction Box | **22**
- Mount an Access Point on a 9/16-Inch or 15/16-Inch T-Bar | **23**
- Mount an Access Point on a Recessed 15/16-Inch T-Bar | **24**
- Mount an Access Point on a Recessed 9/16-Inch T-Bar or Channel Rail | **26**
- Mount an Access Point on a 1.5-Inch T-Bar | **28**
- Mount an Access Point on a 5/8-Inch Threaded Rod | **29**
- Mount an Access Point on a 16-mm Threaded Rod | **31**
- Mount an Access Point on a 1/2-Inch Threaded Rod | **34**

This topic provides the various mounting options for the AP47. 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*.

Supported Mounting Brackets for AP47

Table 3 on page 15 lists the brackets available for the AP47.

Table 3: Mounting Brackets for AP47

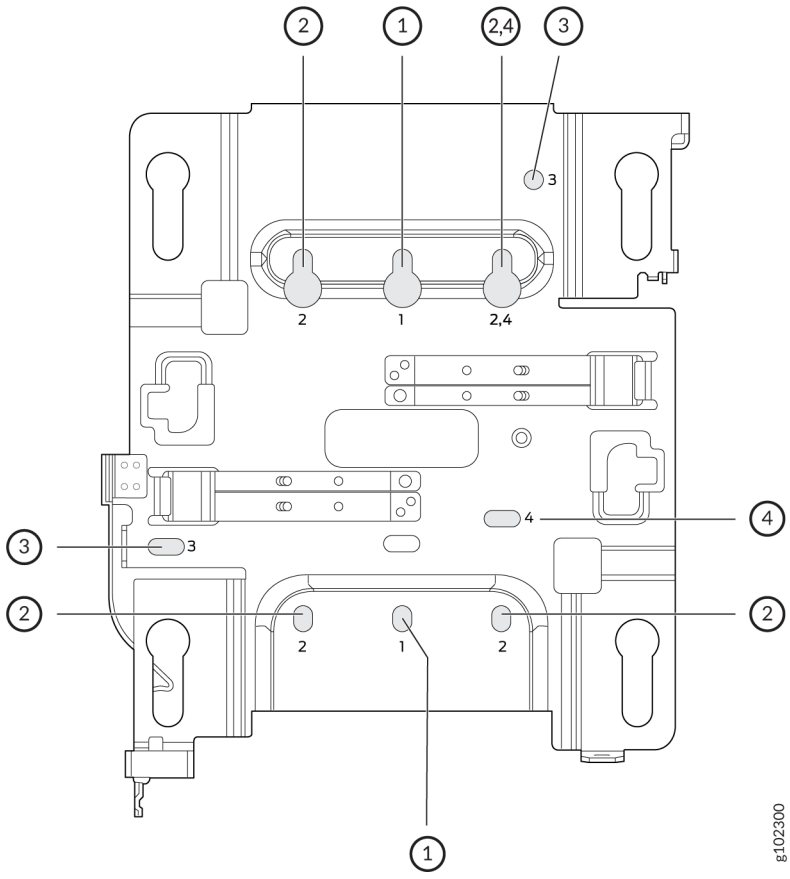
Part Number	Description
Mounting Bracket	
APBR-U	Universal bracket for t-bar and drywall mounting
Bracket Adapters	
APBR-ADP-T58	Bracket adapter for mounting the AP on a 5/8-in. threaded rod
APBR-ADP-M16	Bracket adapter for mounting the AP on a 16 mm threaded rod
APBR-ADP-T12	Bracket adapter for mounting the AP on a 1/2-in. threaded rod
APBR-ADP-CR9	Bracket adapter for mounting the AP on a recessed 9/16-in. T-bar or channel rail
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

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 5 on page 16 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 5: 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	• US single-gang junction box • 3.5 in. round junction box • 4 in. round junction box
2	• US double-gang junction box • Wall • Ceiling
3	• US 4-in. square junction box
4	• EU junction box

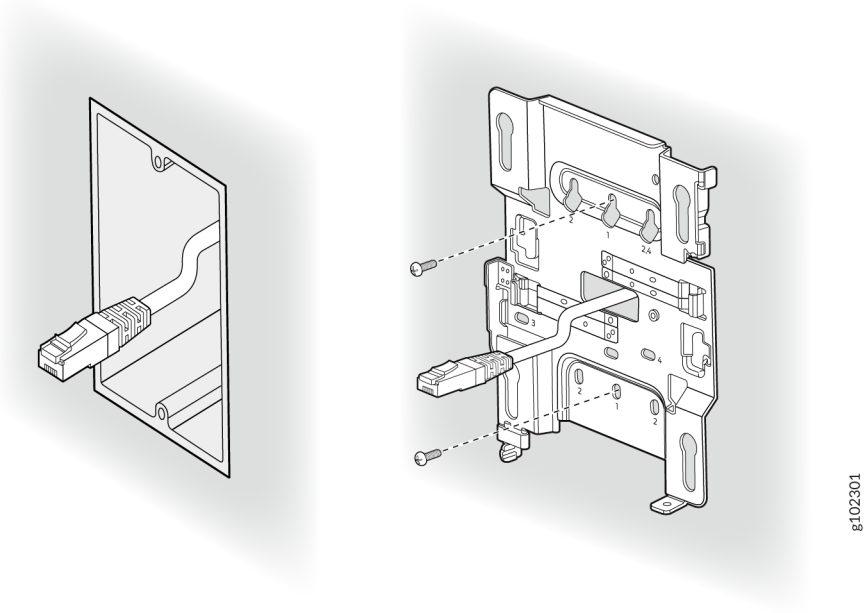
Video: Attach the APBR-U Universal Mounting Bracket to an AP

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). To mount an AP on a single-gang junction box:

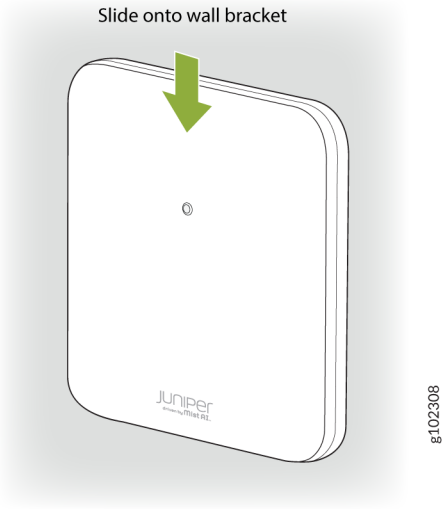
1. Attach the mounting bracket to the single-gang junction box by using two screws. Ensure that you insert the screws in the holes marked 1 as shown in Figure 6 on page 18.

Figure 6: 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 7: Mount the AP on the Single-Gang Junction Box



Video: Mounting an AP on a US Single-Gang Junction Box

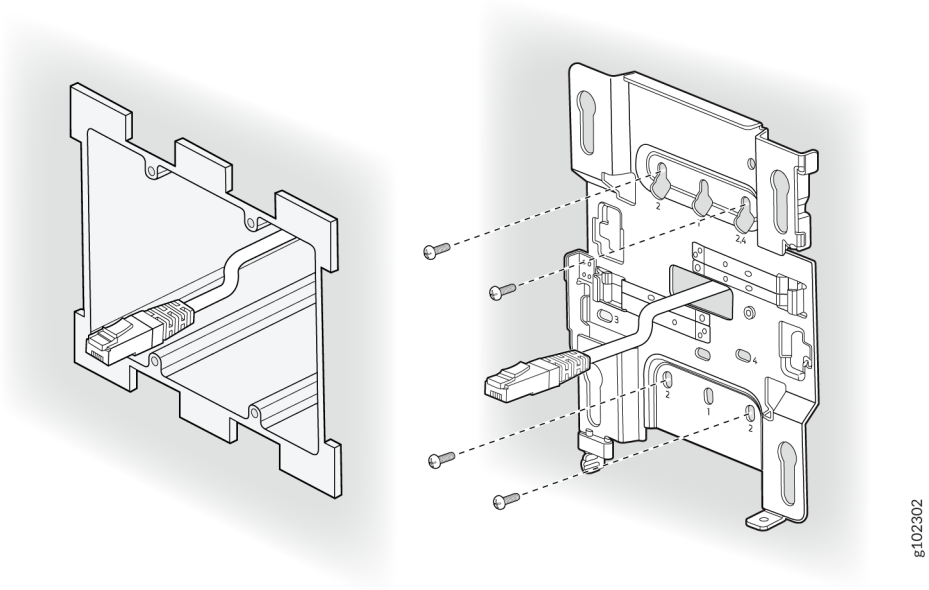
Video: Mounting an AP on a US 3.5-Inch or 4-inch Round Junction Box

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). To mount an AP on a double-gang junction box:

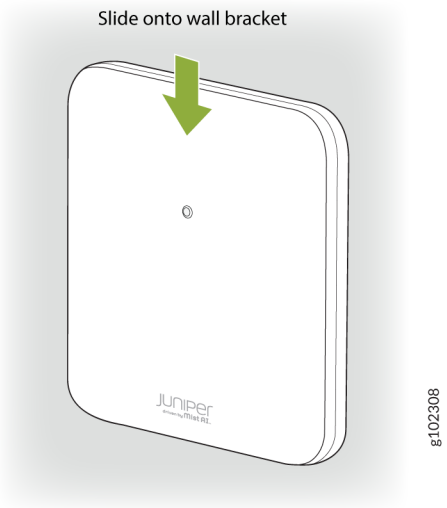
1. Attach the mounting bracket to the double-gang junction box by using four screws. Ensure that you insert the screws in the holes marked 2 as shown in Figure 8 on page 19.

Figure 8: 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 9: Mount the AP on the Double-Gang Junction Box



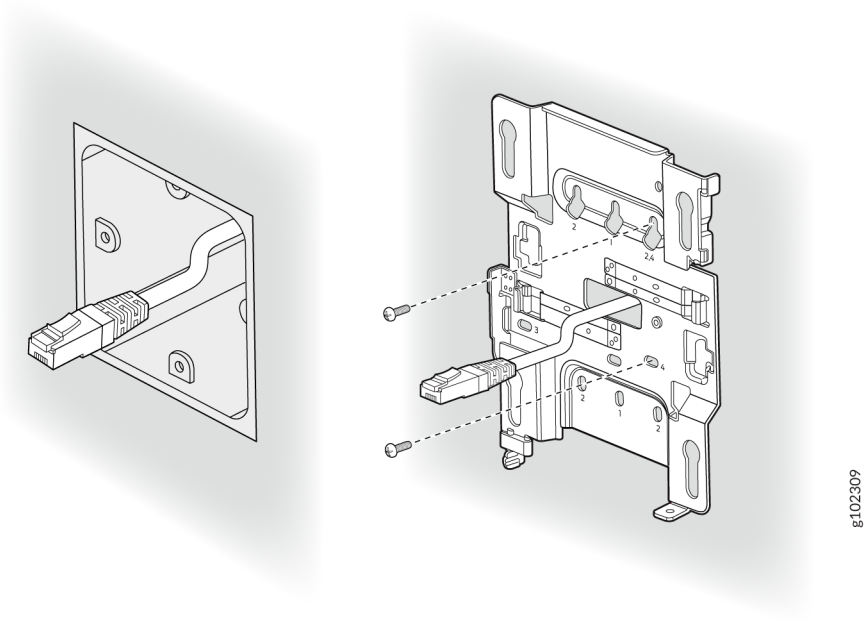
Video: Mounting an AP on a US Double-Gang Junction Box

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). To mount an AP on an EU junction box:

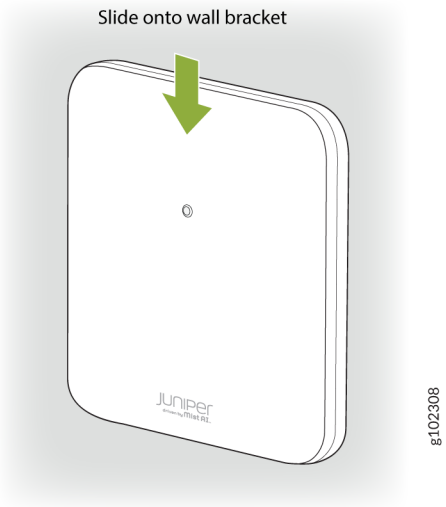
1. Attach the mounting bracket to the EU junction box by using two screws. Ensure that you insert the screws in the holes marked 4 as shown in Figure 10 on page 21.

Figure 10: 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 11: Mount an Access Point on an EU Junction Box

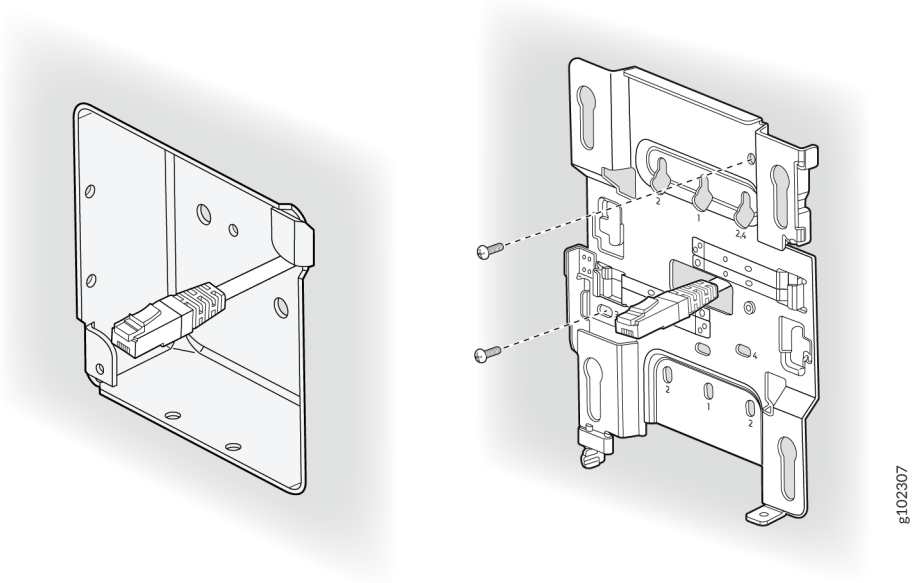


Mount an Access Point on a US 4-Inch Square Junction Box

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

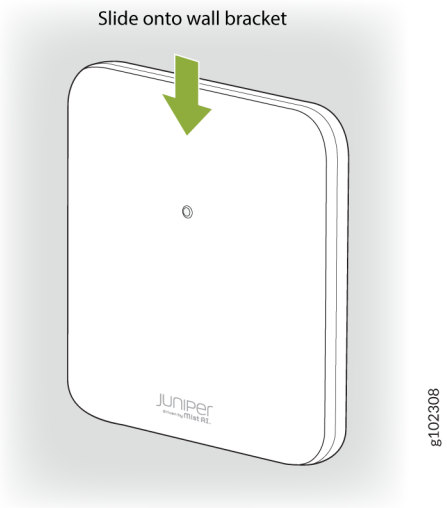
1. Attach the mounting bracket to the 4-in. square junction box by using two screws. Ensure that you insert the screws in the holes marked 3 as shown in Figure 12 on page 22.

Figure 12: 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 13: Mount the AP on a US 4-Inch Square Junction Box



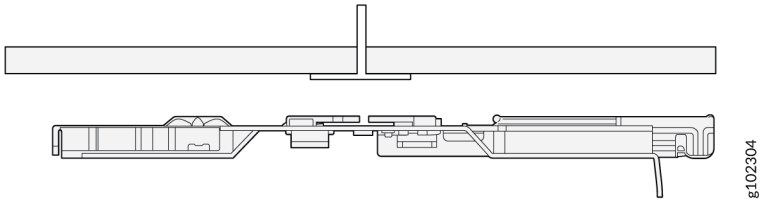
Video: Mounting an AP on a US 4-Inch Square Junction Box

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:

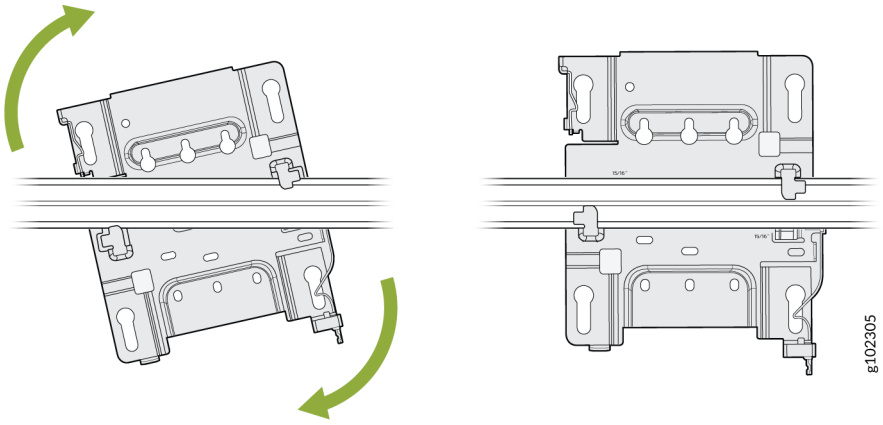
1. Attach the universal mounting bracket (APBR-U) to the T-bar.

Figure 14: Attach the Mounting Bracket (APBR-U) to a 9/16-in. or 15/16-in. T-Bar



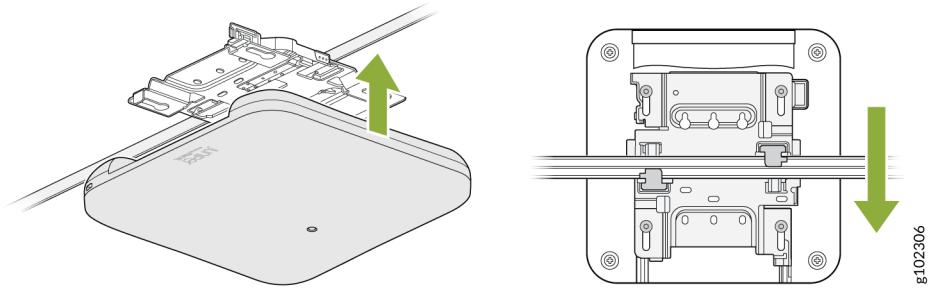
2. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

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



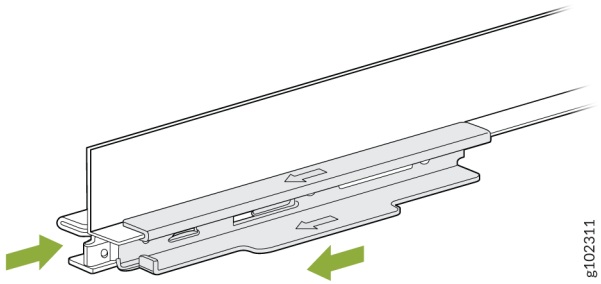
Video: Mount an AP on a 9/16ths-Inch or 15/16ths-Inch T-Bar

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.

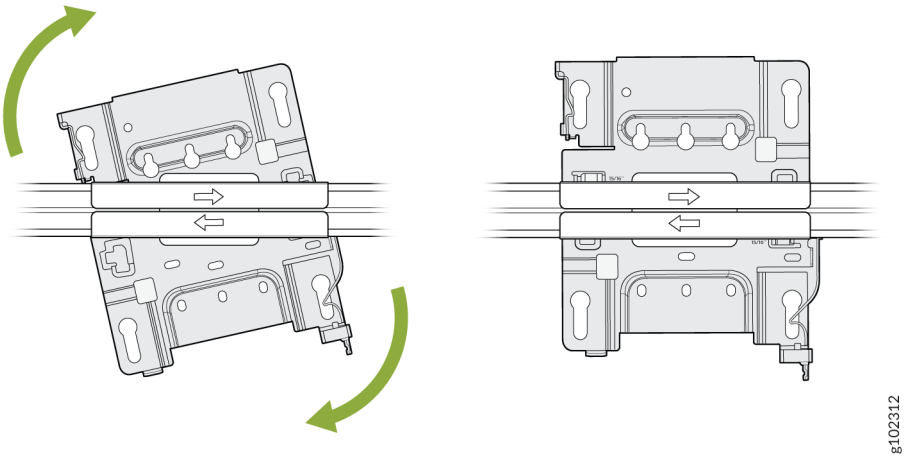
1. Attach the ADPR-ADP-RT15 adapter to the T-bar.

Figure 17: Attach the ADPR-ADP-RT15 Adapter to the T-Bar



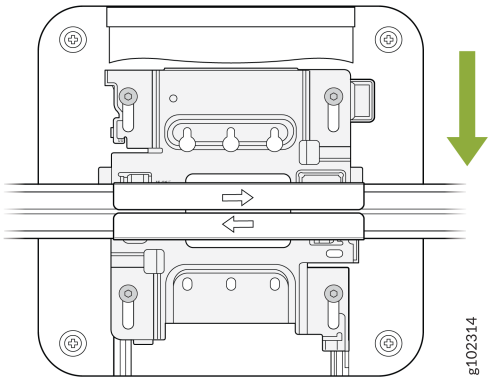
2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 18: 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 19: 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 20: Attach the ADPR-ADP-CR9 Adapter to a Recessed 9/16-Inch T-Bar

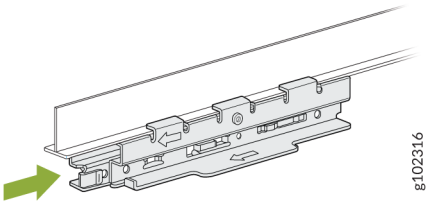
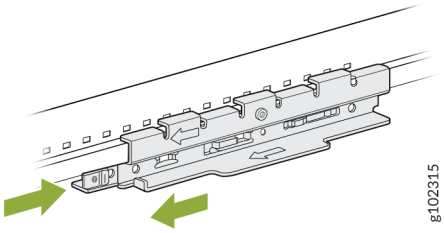
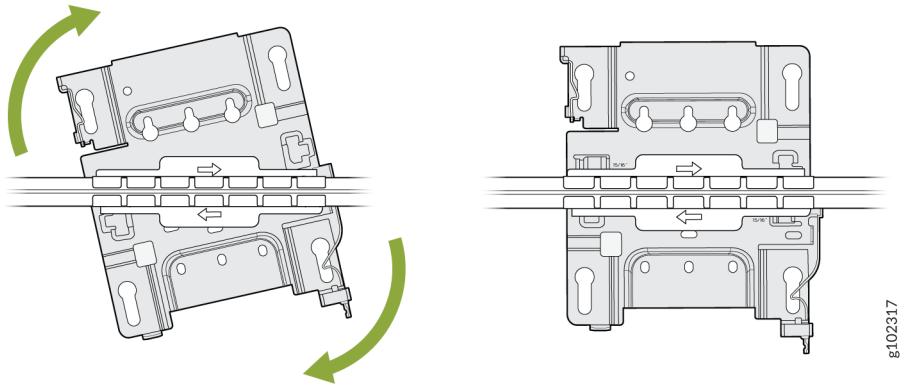


Figure 21: Attach the ADPR-ADP-CR9 Adapter to a Recessed 9/16-Inch Channel Rail



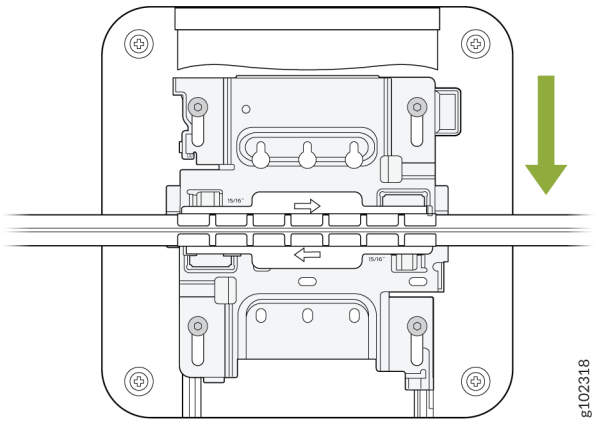
2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 22: 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 23: Attach the AP to a Recessed 9/16-in. T-Bar or Channel Rail



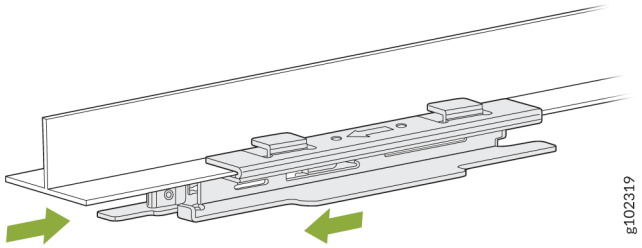
Video: Mount an AP on a Recessed Channel or T-Bar

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.

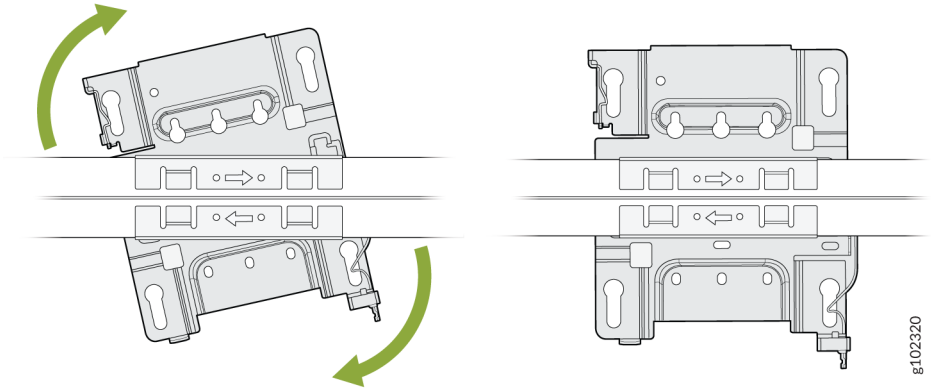
1. Attach the ADPR-ADP-WS15 adapter to the T-bar.

Figure 24: Attach the ADPR-ADP-WS15 Adapter to a 1.5-Inch T-Bar



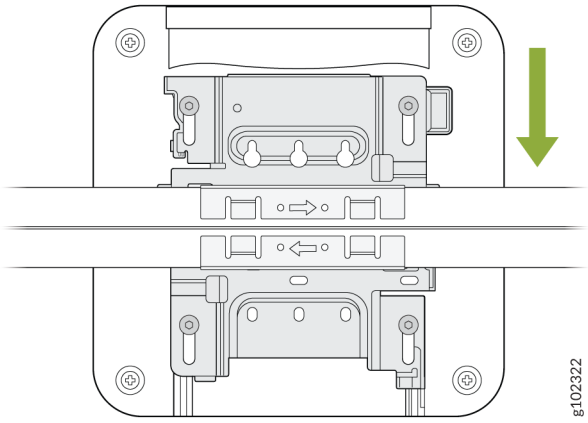
2. Attach the universal mounting bracket (APBR-U) to the adapter. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 25: 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 26: Attach the AP to a 1.5-Inch T-Bar



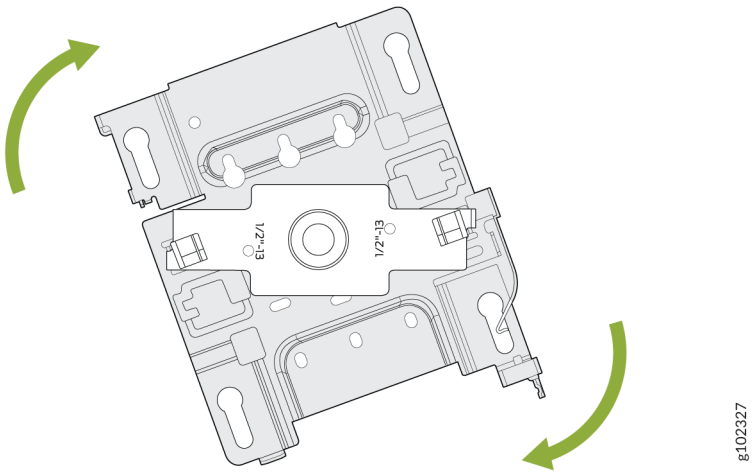
Mount an Access Point on a 5/8-Inch Threaded Rod

This topic is applicable to AP24, AP34, AP36, AP37, and AP47.

To mount an access point (AP) on a 5/8-in. threaded rod, you'll need to use the APBR-ADP-T58 bracket adapter and the universal mounting bracket APBR-U.

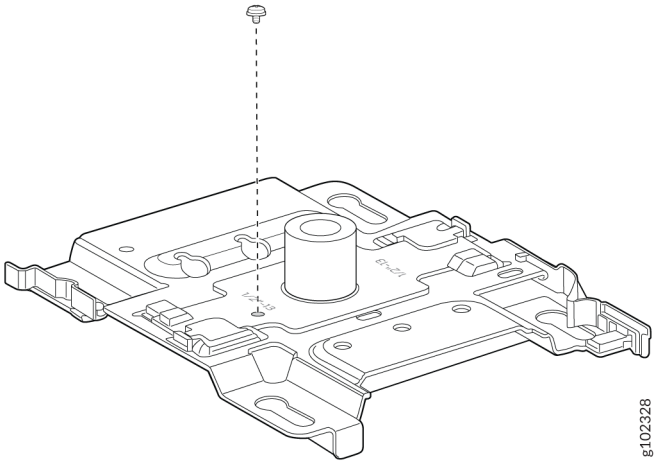
1. Attach the APBR-ADP-T58 bracket adapter to the APBR-U mounting bracket. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 27: Attach the APBR-ADP-T58 Bracket Adapter to the APBR-U Mounting Bracket



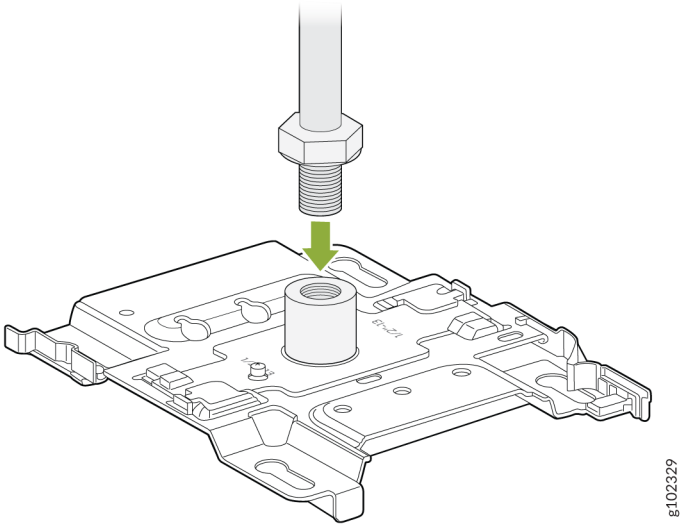
2. Secure the adapter to the bracket using a screw.

Figure 28: Secure the APBR-ADP-T58 Bracket Adapter to the APBR-U Mounting Bracket



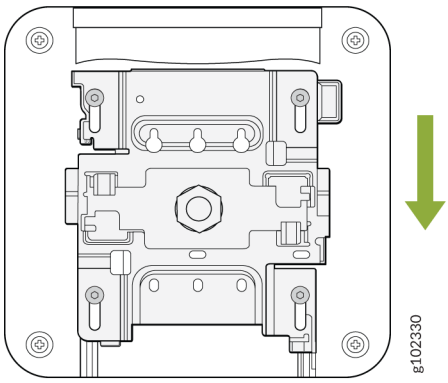
3. Attach the bracket assembly (bracket and adapter) to the 5/8-in. threaded rod by using the lock washer and nut provided

Figure 29: Attach the APBR-ADP-T58 and APBR-U Bracket Assembly to the 5/8-Inch Threaded Rod



4. 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 30: Mount the AP on a 5/8-in. Threaded Rod



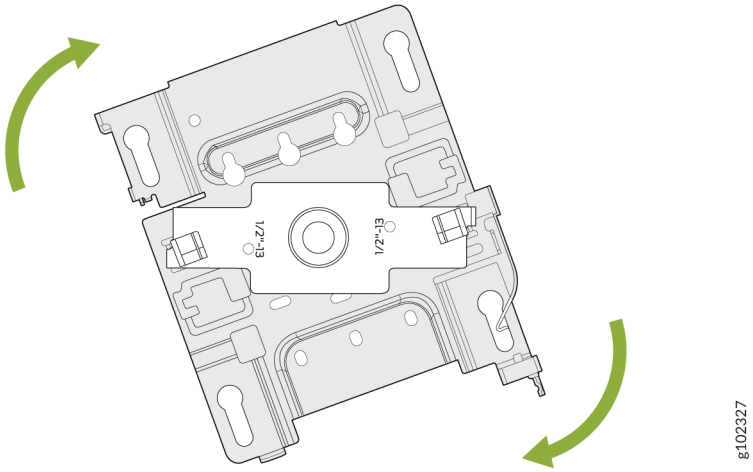
Mount an Access Point on a 16-mm Threaded Rod

This topic is applicable to AP24, AP34, AP36, AP37, and AP47.

To mount an access point (AP) on a 16-mm threaded rod, you'll need to use the APBR-ADP-M16 bracket adapter and the universal mounting bracket APBR-U.

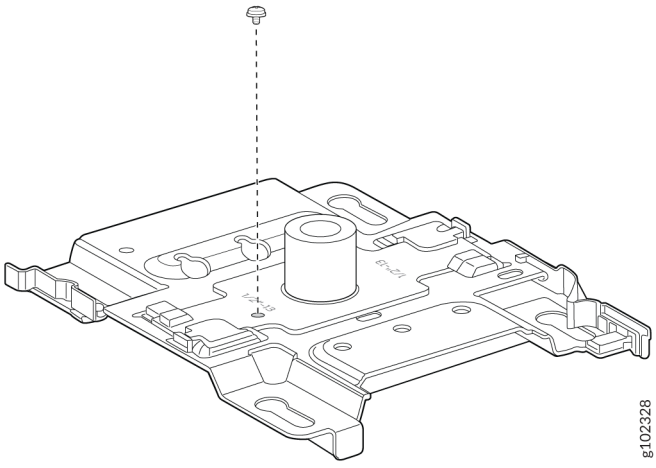
1. Attach the APBR-ADP-M16 bracket adapter to the APBR-U mounting bracket. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 31: Attach the APBR-ADP-M16 Bracket Adapter to the APBR-U Mounting Bracket



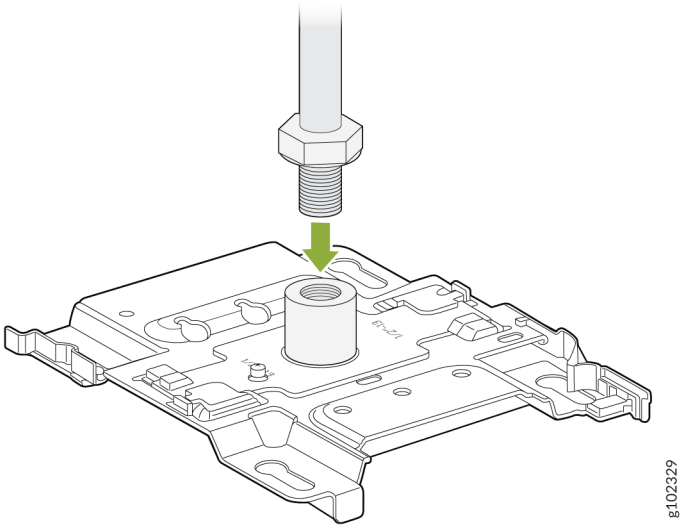
2. Secure the adapter to the bracket using a screw.

Figure 32: Secure the APBR-ADP-M16 Bracket Adapter to the APBR-U Mounting Bracket



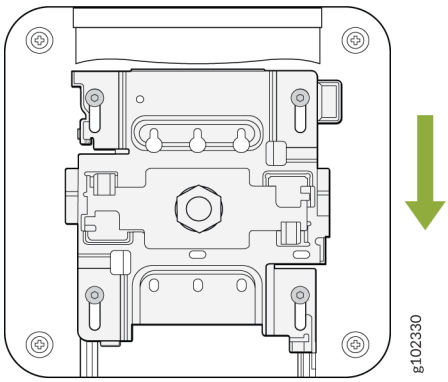
3. Attach the bracket assembly (bracket and adapter) to the 16-mm threaded rod by using the lock washer and nut provided

Figure 33: Attach the APBR-ADP-M16 and APBR-U Bracket Assembly to the ½-Inch Threaded Rod



4. 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 34: Mount the AP on a 16-mm Threaded Rod

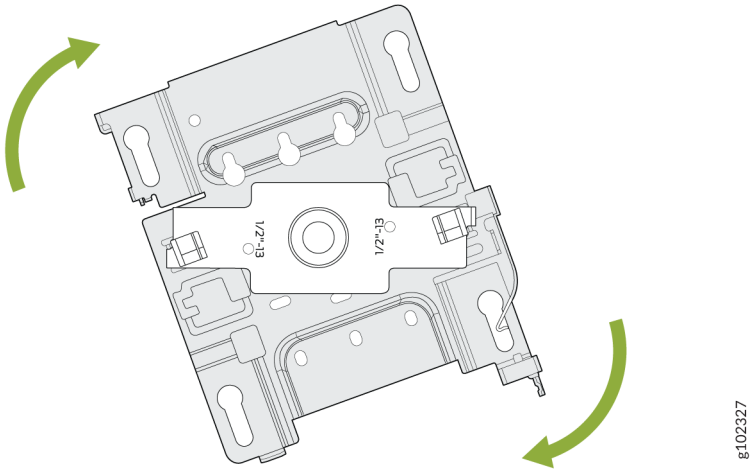


Mount an Access Point on a 1/2-Inch Threaded Rod

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.

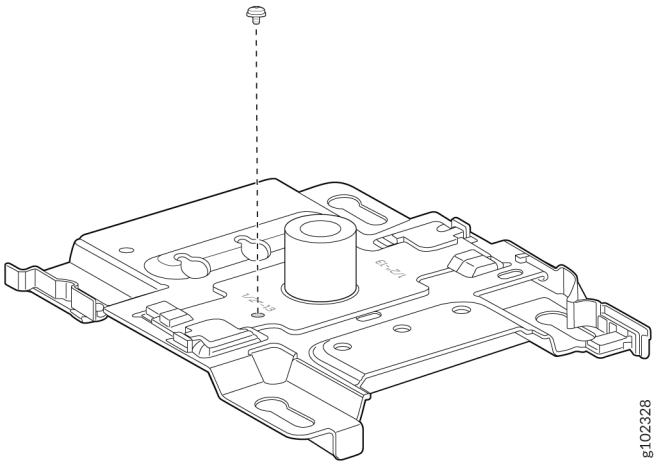
1. Attach the APBR-ADP-T12 bracket adapter to the APBR-U mounting bracket. Rotate the bracket until you hear a distinct click, which indicates that the bracket is locked in place.

Figure 35: Attach the APBR-ADP-T12 Bracket Adapter to the APBR-U Mounting Bracket



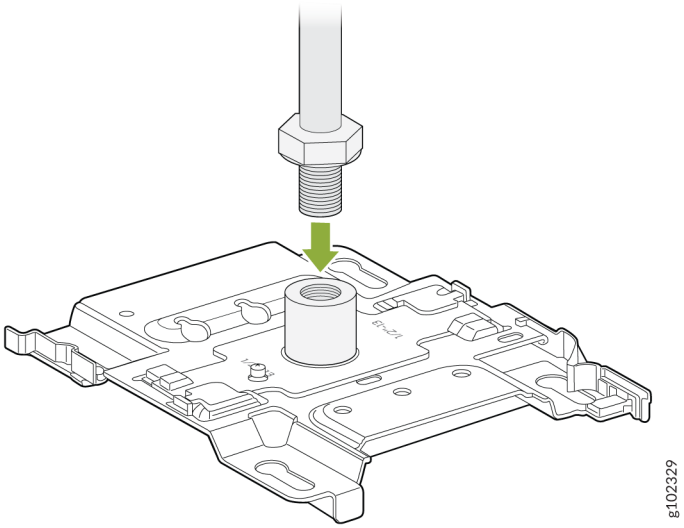
2. Secure the adapter to the bracket using a screw.

Figure 36: Secure the APBR-ADP-T12 Bracket Adapter to the APBR-U Mounting Bracket



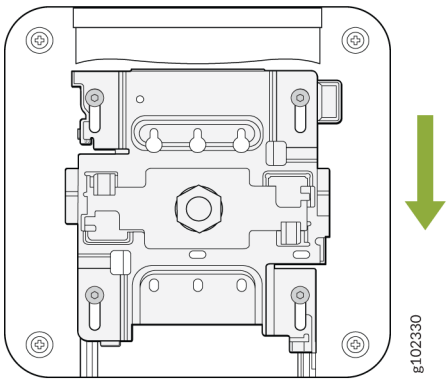
3. Attach the bracket assembly (bracket and adapter) to the ½-in. threaded rod by using the lock washer and nut provided

Figure 37: Attach the APBR-ADP-T12 and APBR-U Bracket Assembly to the ½-Inch Threaded Rod



4. 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 38: Mount the AP on a 1/2-in. Threaded Rod



Connect an AP47 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 Juniper Mist cloud provisions the AP by pushing the required configuration after 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.

   For information on power requirements, see PoE Requirements for Juniper Mist APs.

   > **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 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 a PoE injector to power the AP:

   - Connect an Ethernet cable from the switch to the **data in** port on the PoE injector.
   - Connect an Ethernet cable from the **data out** port on the PoE 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 and Location Services Guide to configure your AP.

NOTE: If the AP is unable to connect to the Juniper Mist cloud, you can use the status LED to troubleshoot. See *Troubleshoot a Juniper Access Point*.

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.

3

CHAPTER

Troubleshoot

IN THIS CHAPTER

- Troubleshooting Overview | 39
- Contact Customer Support | 39

Troubleshooting Overview

If your access point (AP) is not working correctly, follow these steps to troubleshoot the issue:

- See the **Marvis** > **Marvis Actions** dashboard to identify issues. See *Marvis Actions OverviewOverview of Juniper Mist Wi-Fi Assurance*.
- Use Marvis Query Language to monitor your network. See *Troubleshoot Using Marvis Query Language*.
- Check the blinking pattern of the status LED. See *AP Troubleshooting Overview*.

If you are unable to resolve the issue, you can create a support ticket on the Juniper Mist portal.

Contact Customer Support

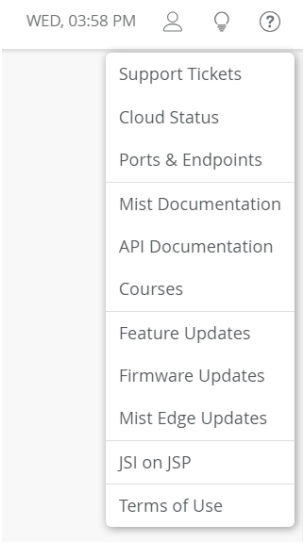
You can create a support ticket on the Juniper Mist portal. The Juniper Mist Support team will contact you to help resolve your problem. If needed, you can request a Return Material Authorization (RMA).

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

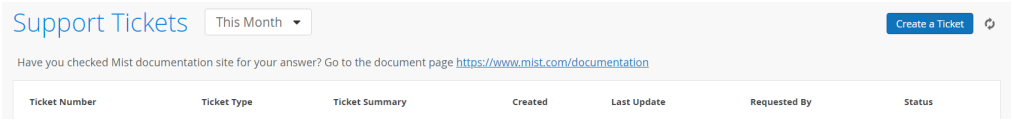
- The MAC address of the faulty AP
- The exact LED blink pattern seen on the AP (or a short video of the blinking pattern)
- The system logs from the AP

To create a support ticket:

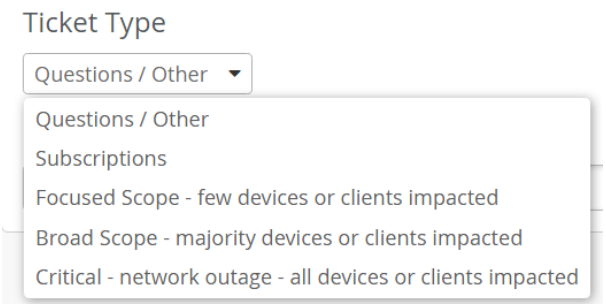
1. Click the **?** (question mark) icon in the top-right corner of the Juniper Mist portal.
2. Select **Support Tickets** from the drop-down menu.



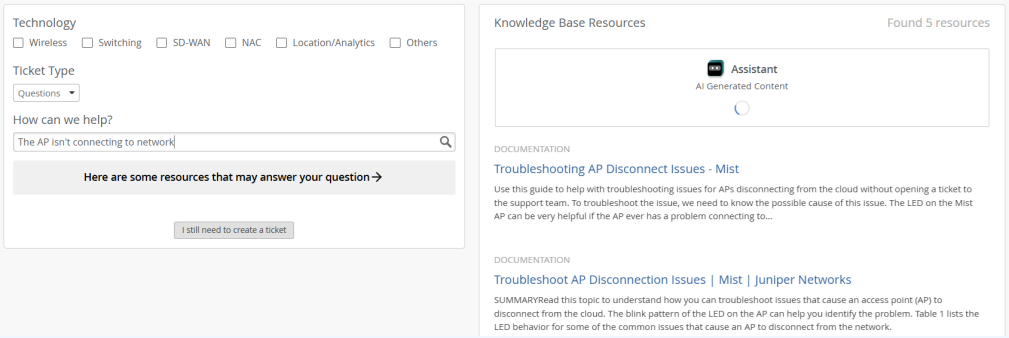
3. Click **Create a Ticket** in the top-right corner of the **Support Tickets** page.



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

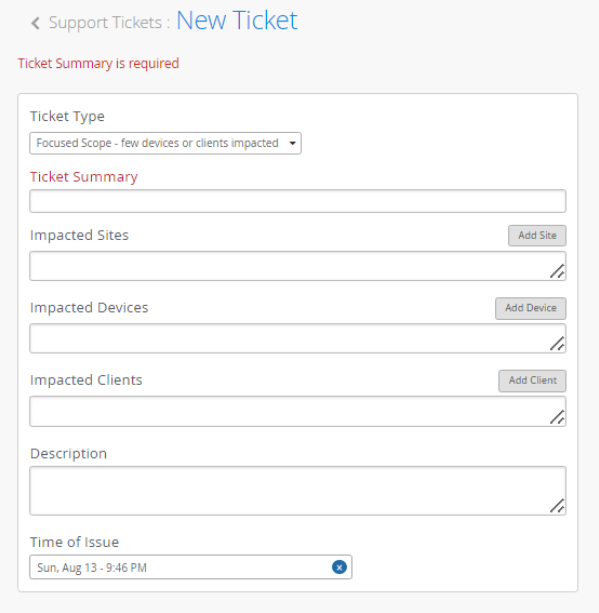


NOTE: Selecting **Questions/Other** will open a search box and redirect you to available documentation and resources related to your issue. If you cannot resolve your issue by using the suggested resources, click **I still need to create a ticket**.



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.



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**.