

WAP Single Point Setup vs. Cisco Business Mesh Wireless

Objective

This article will explain some details about both Single Point Setup and Cisco Business mesh wireless configurations.

Introduction

A reliable wireless network can be essential to keep your business productive. Customers appreciate the convenience as well. As a business owner, you want to make it reliable to keep everyone happy.

Traditionally, most small businesses would use a Single Point Setup to configure and control the wireless network. Now Cisco offers hardware to create a mesh wireless network with the same administration features but is an integrated solution. It's great to have options! We hope this helps you with a decision that fits your needs.

	Single Point Setup*	Mesh Network
Cisco Wireless Hardware	Cisco WAP125, WAP150, WAP361, WAP571, WAP571E, and WAP581	Cisco Business Wireless Primary Capable APs: 140AC, 145AC, and 240AC Mesh Extenders: 141ACM, 142ACM, and 143ACM
Capabilities and Speeds	WAP125: 802.11ac/n connectivity with speeds up to 867 Mbps WAP150 and WAP361: 802.11ac connectivity with speeds up to 1.2 Gbps WAP571 and WAP571E: 802.11ac connectivity with speeds up to 1.9Gbps WAP581: 802.11ac Wave 2 connectivity with speeds up to 2.8 Gbps.	Cisco Business Access Points provide simultaneous dual radios and dual bands with 802.11ac Wave 2 MU-MIMO functionality. 140AC and 145AC: speeds up to 867 Mbps 240AC: speed up to 1733 Mbps and allows guest network authentication using Google and Facebook
Topology	Single Point Setup is a way to set up one main AP, have it add other APs in the network to the cluster, then have the	At least one primary AP needs to be wired to the network. Wireless nodes, consisting of mesh extenders, connect

main AP copy the wireless configurations to the rest of the APs in the cluster.

In this configuration, the WAP devices are on the same subnet of a network. One of the WAPs is in control of the cluster. Channel planning, reducing radio interference, increasing bandwidth and coverage for optimal network performance are all managed within the cluster. All WAPs are wired.

wirelessly to each other.

You can also set up a wired primary-capable AP to take over in case the Primary AP fails or is disconnected from the rest of the network.

Mesh extenders are easily moved.

New APs and mesh extenders can be added easily.

Hardware

You need to use the same model WAP in order to join a cluster.

You need at least one wired Primary AP (140AC, 145AC, or 240AC) but you can then use any other combination of models including mesh extenders (141ACM, 142ACM, or 143ACM)

Not an issue. It is recommended that there is about 20% overlap. Benefits from having multiple nodes for a device to use. Allows a device to have multiple points of access as movement occurs or if an AP should fail.

Space Considerations

Need to avoid cross-coverage of access points to avoid unnecessary interference.

Simple to set-up. The Primary AP and all subordinate APs can be setup and maintained with a mobile application. Mesh Wi-Fi networks don't create a separate network, so wherever you go in your house/office, the entire wireless network is available for connection.

Access and installation

Since everything is hard-wired, you may need to hire a professional to install.

All WAPs act like one, so all are considered fully managed.

Configure and manage a clustered wireless network as a single entity, and without having to configure and reconfigure the settings in each access point in the network separately. Multiple WAPs can be clustered in one wireless network, depending on the exact model of your

A mesh network is reliable and offers redundancy. When one node can no longer operate, the rest of the nodes can still communicate with each other, directly or through

Behavior

WAP.

Each additional WAP installed on the network strengthens the wireless signal in areas that have weak or no signal. The WAP acts as a transmitter and receiver of WLAN radio signals, providing a larger wireless range as well as the ability to support more clients on a network.

For more information, check out the following articles:

- [Configure a Cluster on a Wireless Access Point \(WAP\) through Single Point Setup](#)
- [Configure Single Point Setup on a Wireless Access Point](#)
- [Configure the Single Point Setup on the WAP581](#)
- [Tips for Single Point Setup on a WAP581](#)
- [Troubleshooting a Cisco WAP Network](#)

one or more intermediate nodes.

There is a Primary AP. The other APs are considered subordinate.

Mesh infrastructure carries data over large distances by splitting the distance into a series of short hops. Intermediate nodes can boost the signal in areas that have weak or little wireless signal.

Mesh extends cooperatively pass data from point A to point B by making forwarding decisions based on their knowledge of the network.

Mesh networks, by design, create multiple routes between their nodes. This means that if one network node fails, data moving across a network will have another path it can use.

For more information, check out the following articles:

- [Welcome to Cisco Business Wireless Mesh Networking](#)
- [Frequently Asked Questions \(FAQ\) for a Cisco Business Wireless Network](#)
- [Best Practices for a Cisco Business Wireless Mesh Network](#)
- [Cisco Business Wireless: Mobile App vs Web UI Features](#)
- [Troubleshooting a Cisco Business Wireless Mesh](#)

Related
Articles

Network

* Single Point Setup requires that all WAPs under control must be of the same model.

Conclusion

In this article, you were shown an overview of some basic comparisons between a traditional wireless setup and the new Cisco Business mesh wireless options. Enjoy whatever you choose!