



FlexConnect Feature Matrix

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Introduction

This document provides the feature matrix for the FlexConnect feature on the Wireless LAN Controller. This feature matrix applies to Cisco Unified Wireless Network release 7.0.116.0 and above.

Prior to 7.2, FlexConnect was called Hybrid REAP (HREAP). It is now called FlexConnect.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- [Control and Provisioning of Wireless Access Points \(CAPWAP\) protocol.](#)



- The configuration of lightweight APs and Cisco WLCs.

Components Used

This feature matrix outlines the features that work with Cisco Unified Wireless Network release 7.0.98.0 and above.

Conventions

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

FlexConnect

FlexConnect is a wireless solution for branch office and remote office deployments. It enables you to configure and control access points in a branch or remote office from the corporate office through a wide area network (WAN) link without the deployment of a controller in each office. The FlexConnect access points can switch client data traffic locally and perform client authentication locally. When they are connected to the controller, they can also send traffic back to the controller. FlexConnect is only supported on these components:

- 1130AG, 1140, 1240AG, 1250, AP801, 3500I, 3500E, 3600, 1040, and AP 1260 access points
- Cisco Flex 7500, Cisco 5500, 4400, and 2500 Series Controllers
- Catalyst 3750G Integrated Wireless LAN Controller Switch
- Cisco WiSM and WiSM2
- Controller Network Module for Integrated Services Routers

The next section outlines the FlexConnect Feature Matrix.

FlexConnect Feature Matrix

Legacy and New Features in 7.0.116.0 and above

Security - Client

Depending on the modes and states, security support on the FlexConnect varies. This table summarizes the security features supported.

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Open/Static WEP	Yes	Yes	Yes
WPA-PSK	Yes	Yes	Yes
802.1x (WPA/WPA2)	Yes	Yes	Yes

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
MAC Authentication	Yes	Yes	No
CCKM Fast Roaming	Yes	Yes	Yes, for connected clients. No, for new clients.

Security - Infrastructure

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Data DTLS	Yes	N/A	N/A
Local EAP (LEAP/EAP-FAST)	Yes in 7.0.116	Yes in 7.0.116	Yes
Backup Radius	Yes in 7.0.116	Yes in 7.0.116	Yes
MIC	Yes	Yes	N/A

Security

Depending on the modes and states, security support on the FlexConnect varies. This table summarizes the legacy and new security features supported with WLC version 7.0.116.0 and above.

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
awIPS	Yes	Yes	No
Rogue, IDS	Yes	Yes	No
MFP (Client, Infrastructure)	Yes	Yes	No
SSC	Yes	Yes	N/A
RLDP	May work depending on hops, WAN speed	May work depending on hops, WAN speed	No
OKC Fast roam	Yes	Yes	No ¹
FlexConnect Local Auth	N/A	Yes	Yes
AAA Override	Yes	Yes	Yes
ACL	Yes	Yes ²	Yes ²
P2P Blocking	Yes	Yes	Yes
Mesh LSC Support	N/A	N/A	N/A
ISE 1.1	Yes	Yes (7.2.110.0)	No
PCI Compliance for Neighbor Pkts	Yes	Yes	No
Russia DTLS Support	Yes	N/A	No
wIPS ELM	Yes	Yes	No

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Limit Clients per WLAN	Yes	Yes ³	No
Limit Clients per Radio	Yes	Yes	Yes
Client Exclusion Policy	Yes	Yes ³	No

- 1 - Yes for clients that have assoc at connected mode
- 2 - FlexConnect ACLs should be used
- 3 - Limits/exclusion done by WLC so client will be deauth after a successful Assoc Resp

Voice & Video

This table lists the legacy and new Voice & Video services supported with WLC version 7.0.116.0 and above with FlexConnect:

	WAN Up (Central switching) 100 ms RTT	WAN Up (Local Switching) 100 ms RTT	WAN Down (Standalone)
Voice	Yes with RTT 100 ms	Yes with RTT 100 ms	Yes with RTT 100 ms
		Yes with RTT 900 ms (with CCKM and OKC)	Yes with RTT 900 ms (with CCKM and OKC)
QoS Markings ²	Yes	Yes	Yes
UPSD	Yes	Yes	Yes
Voice Diagnostics	Yes	Yes	No
Voice metrics	Yes	Yes	No
TSPEC /CAC	Yes - non CCX	Yes - non CCX	No
	Yes - CCX ³	Yes - CCX ³	

- 2 - Includes both dscp/dot1p markings
- 3 - CAC on WLC, deauth on roaming failure

Services

This table lists the legacy and new services supported with WLC version 7.0.116.0 with FlexConnect.

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Internal Webauth	Yes	Yes	N/A
External Webauth	Yes (7.2.110.0)	Yes (7.2.110.0)	N/A
CleanAir (SI on 3500)	Yes	Yes	N/A
Multicast-Unicast (Videostream)	Yes	N/A	N/A

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Location	Yes with BW/Scale limitation	Yes with BW/Scale limitation	N/A
RRM	Yes	Yes	No
NG RRM – RF Static Grouping	Yes ¹	Yes ¹	No
SE Connect (Cleanair Update)	Yes	Yes	No ²
S60 Enhancement	Yes	Yes	No
Bonjour Gateway	Yes	No	No
mDNS AP	No	No	No
LSS	Yes	No	No
Origin based services	Yes	No	No
Priority MAC	Yes	No	No
Bonjour Browser	Yes	No	No

- 1 - Any RRM specific requirements apply (at least 4 APs for TPC)
- 2 - Yes for standalone after disconnecting from WLC but no for reboot

Infrastructure

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
Passive Clients	No	Yes	Yes
Syslog	Yes	Yes	Yes
CDP	Yes	Yes	Yes
Client Link	Yes	Yes	No
AP Image PreDownload	Yes	Yes	No
FlexConnect Smart AP Image Upgrade	Yes	Yes	Yes ¹
AP Regularity Domain Updates (Chile)	Yes	Yes	Yes
VLAN Pooling/Mcast Optim	Yes	N/A	N/A
Mesh – 24 backhaul	N/A	N/A	N/A
WGB Support	No	No	No
3rd party WGB Support	Yes	Yes	Yes
Web Auth Proxy	Yes	Yes	No

	WAN Up (Central switching)	WAN Up (Local Switching)	WAN Down (Standalone)
FlexConnect AP Group Increase	Yes	Yes	Yes
Client fault tolerance	N/A	Yes	N/A
DHCP Option 60	Yes	Yes	Yes
DFS/802.11h	Yes	Yes	Yes
AP Group VLANs	Yes	N/A	N/A

- 1 - Provided if Master AP is already upgraded and Slave APs are updated with their Master AP

Mobility / Roaming Scenarios

WLAN Configuration	Local Switching			Central Switching		
	CCKM	PMK (OKC)	Others	CCKM	PMK (OKC)	Others
Mobility Between Same Flex Group	Fast Roam ¹	Fast Roam ¹	Full Auth ¹	Fast Roam	Fast Roam	Full Auth
Mobility Between Different Flex Group	Full Auth ¹	Fast Roam ¹	Full Auth ¹	Full Auth	Fast Roam	Full Auth
Inter Controller Mobility	N/A	N/A	N/A	Full Auth	Fast Roam	Full Auth

- 1 - Provided WLAN is mapped to same VLAN (same subnet)

Cisco Support Community - Featured Conversations

[Cisco Support Community](#) is a forum for you to ask and answer questions, share suggestions, and collaborate with your peers.

Related Information

- [H-Reap Design and Deployment Guide](#)
- [Hybrid Remote Edge Access Point \(H-REAP\) Basic Troubleshooting](#)
- [Cisco Wireless LAN Controller Configuration Guide, Release 7.0](#)
- [Technical Support & Documentation - Cisco Systems](#)