Cisco Mobility Express Solution

Contents

General Information

Q. What is the Cisco® Mobility Express Solution?

A. Mobility Express integrates wireless LAN (WLAN) controller functions into the Cisco Aironet® 3800, 2800, 1850 and 1830 Series Access Points. As such, Mobility Express is the latest in a series of Cisco efforts to turn WLAN controllers into a software function that any network component can host. Cisco controller capabilities also can be housed in standalone appliances (Cisco Wireless LAN Controllers, or WLCs), Cisco switches, Cisco routers, a private cloud, and a public cloud.

Simple by design, Mobility Express is ideal for small to medium-size deployments serving up to 25 access points and 500 clients. It brings the best practices and quality of Cisco's large- and medium-scale solutions to smaller-scale implementations without additional cost or complexity.

Q. Why did Cisco build the Mobility Express solution?

A. Historically, Cisco's autonomous access point solution (with no controller capabilities) targeted small deployments, and our wireless controller appliances addressed the requirements of midsize and large organizations. In recent times, the needs of smaller customers have evolved to match those of larger customers. Based on customer and partner feedback, Cisco determined that an enhanced mode of the autonomous access point made competitive sense for smaller deployments. Mobility Express is that solution.

Q. What are the top use cases for Mobility Express?

A. The solution is aimed primarily at:

- Sites with up to 150 users where IT has limited span of control or reach
- Sites with up to 150 users looking to refresh from 802.11a/b/g/n to 802.11ac
- Sites with autonomous-mode implementations looking to refresh from 802.11a/b/g/n to 802.11ac
- Companies or sites looking to implement segmented guest access on their Wi-Fi networks
- Organizations that need to quickly set up temporary Wi-Fi connectivity for events

Q. What differentiates Mobility Express from competitive solutions?

A. There are several differentiators:

- Simplicity, including default "best practices" settings ported from 10+ years of large- and medium-scale implementation experience
- Advanced radio resource management capabilities
- An advanced smartphone application, called Cisco Wireless, with easy-to-use dashboard views and drill-down capabilities
- Mobility Express is the value leader for gigabit Wi-Fi and 802.11ac Wave 2 multiuser multiple-input multiple-output (MU-MIMO) capabilities.

Access Point Compatibility and Management

Q. Which access points can host the Mobility Express WLAN controller function?

A. Currently, the Cisco Aironet 3800, 2800, 1850 and 1830 Series Access Points, which are 802.11ac Wave 2-capable, host Mobility Express. As a statement of direction, future 802.11ac Wave 2 access points from Cisco will also be able to host Mobility Express.

Q. What Cisco access points can Mobility Express manage?

A. The Mobility Express solution can manage Cisco Aironet 3800, 2800, 1850 and 1830 access points, as well as the 1600, 2600, 3600, 1700, 2700, and 3700 access points. Please see the [Mobility Express Release Notes](#) for a full list of compatible access points.

Q. Can the 3800, 2800, 1850 and 1830 access points function as WLAN controllers and access points at the same time?

A. Yes, both can function concurrently as an access point, servicing clients, while also hosting the Mobility Express controller function.

Q. How many access points and clients can Mobility Express manage effectively?

A. The function has been tested in the 3800, 2800, 1850 and 1830 access points supporting 25 access points under management and 500 concurrent clients. At the same time, the feature was able to use its wireless intrusion prevention capabilities to detect 1000 "rogue" (unauthorized) Wi-Fi devices.

Q. What are the management options for Mobility Express?

A. Mobility Express can be managed by:

- Cisco Mobility Express Web User Interface
- Cisco Wireless mobile application (available at the Apple App Store and Google Play Store free of charge)
- Cisco Prime™ Infrastructure, Release 3.0.1 or newer
- Cisco command-line interface (CLI) through console cable, SSH, or Telnet

Modes and Product Comparisons

Q. What is the difference between the Cisco Mobility Express Solution and Cisco Mobility Express Bundle?

A. The primary differences are in form factor and scalability support:

- **Mobility Express** is software-based (appliance-less) and scales to support up to 25 access points and 500 client devices.
- **Mobility Express** Bundle includes a Cisco 2504 Wireless Controller (a hardware appliance). It scales up to 75 access points and 1500 client devices.

Q. How does Mobility Express compare with autonomous software available on other Cisco Aironet access points?

A. Autonomous mode on access points runs the Cisco IOS® Software operating system. It supports an unlimited scale, and no license is required. In Mobility Express mode, controller functions are made available on the wireless AireOS operating system. It supports up to 25 access points per Mobility Express instance deployed, and no license is required. Mobility Express brings several advantages over the autonomous software. Among them:

- Simplified access point image management
- Radio resource management
- Layer 2 mobility with key caching
- Simple-by-design web-based user interface with best-practice settings enabled by default

Q. How does Mobility Express compare with centralized mode on Cisco WLAN controllers?

A. Centralized mode puts Cisco AireOS-based wireless controller functionality in an appliance onsite or in a data center. It supports up to 6000 access points, and licensing is required. Mobility Express also uses AireOS-based controller functions, supporting up to 25 access points per instance with no license required.

Q. What controller-based modes will Mobility Express support?

A. Access points managed by the Mobility Express solution will operate in Centralized Control Plane and Distributed Data Plane modes, similar to the Cisco FlexConnect™ mode in AireOS.

Q. What is the difference between Mobility Express and Cisco FlexConnect mode?

A. Mobility Express is similar to Cisco FlexConnect. But client data is bridged locally at the access point, whereas Cisco FlexConnect relies on a remote, appliance-based controller function, usually in a data center. Cisco FlexConnect allows you to choose between local and centralized traffic forwarding and offers far greater scale in the number of access points supported (up to 6000 per appliance, compared with Mobility Express's 25 per software instance) and an advanced tunneling capability. Cisco FlexConnect requires licensing, while Mobility Express does not. Both approaches use controller functionality based on the Cisco AireOS operating system.

Q. What is the difference between Mobility Express and Converged Access mode?

A. Converged Access mode locates the WLAN controller function in a Cisco Catalyst® 3000 or 4000 Series Switch running the Cisco IOS-XE operating system and delivering Layer 3 mobility. This mode supports up to 100 access points per switch stack, and a license is required. Mobility Express, by contrast, runs directly in an access point, offers Layer 2 mobility, and supports up to 25 access points per software instance with no license required. Its wireless control functions are based on the Cisco AireOS operating system.

Q. What is the difference between Mobility Express and Cisco Meraki® wireless controller functionality?

A. Meraki is a mode that puts the wireless controller function in the cloud as a service, while Mobility Express embeds it in local access points. The Meraki wireless cloud service can scale to support an unlimited number of access points and clients, while each instance of Mobility Express supports up to 25 access points and 500 clients. A subscription to the Meraki cloud service is required; no license is required to use Mobility Express.

Setup and Feature/Function Support

Q. How do I set up Mobility Express?

A. A Cisco Aironet 3800, 2800, 1850 or 1830 Series Access Point with Mobility Express software will automatically launch the WLAN Express Wizard. From there, connect wirelessly to **CiscoAirProvision** SSID, using the password "**password**" and browse from your laptop to Mobility Express **192.168.1.1.** The wizard will walk you through three easy steps to configure your controller, an employee network, and optionally a guest network. Once the configuration is confirmed, the master access point will push the configuration to all connected access points. The WLAN Express Wizard also enables you to automatically configure a full set of Cisco best practices to improve your wireless network operations. We plan to add an import/export configuration capability to Mobility Express in future software releases.

Q. What type of roaming does Mobility Express support?

A. Mobility Express supports Layer 2 roaming without mobility groups.

Q. Is there an Advanced View in the GUI similar to the view in Cisco Unified Wireless Network (CUWN) 8.1?

A. The Mobility Express user interface is simple by design and does not have an Advanced View like the one in CUWN 8.1.

Q. Does Mobility Express support high availability?

A. Mobility Express has a built-in redundancy mechanism to self-select a master access point or to select a new master in case of a failure.

Q. Does Mobility Express support guest access?

A. Mobility Express supports guest access with open access or internal web authentication.

Q. Does Mobility Express support Cisco High Density Experience (HDX)?

A. HDX, which helps improve network performance in crowded WLAN environments, is a feature of the access point, not the Mobility Express software. Mobility Express does not support HDX when managing access points that do not support HDX.

Q. How do I upgrade the software for Mobility Express and connected access points?

A. Cisco upgrades your Mobility Express software in the same way that we upgrade software in our WLAN controllers (appliances), using Trivial File Transfer Protocol (TFTP). Future releases will introduce automatic download from Cisco.com. Mobility Express centrally manages the software images for the access points connected to the master access point.

Q. Do I still need a site survey to deploy the Cisco Aironet 3800, 2800, 1850 or 1830 Series Access Points with Mobility Express?

A. Cisco's RF planner can assist with providing a "passive" site survey to help improve the effectiveness of the installation.

Q. Can I use Cisco's new wireless app (Cisco Wireless) to configure and manage a Mobility Express instance?

A. Yes. The Cisco Wireless mobile app is compatible with Mobility Express and is available for download at no cost from the Google Play Store and Apple App Store.

Q. Which browsers does the Mobility Express user interface support?

A. The solution supports the following browsers and applications:

- For Microsoft Windows: Internet Explorer, Google Chrome, Mozilla Firefox
- For Apple: Safari, Google Chrome, Mozilla Firefox
- For mobile devices, we recommend using the Cisco Wireless mobile application

Q. Is Mobility Express compatible with Cisco Connected Mobile Experiences (CMX), the Cisco Mobility Services Engine (MSE), Cisco Prime Infrastructure, Cisco Identity Services Engine (ISE), and Cisco Network Assistant (CNA)?

A. Mobility Express is compatible with the following:

- Cisco Prime Infrastructure release 3.0.1 or newer
- Cisco CMX 10.2 or newer with Presence Analytics
- Cisco ISE 1.4 or newer with 802.1Xx authentication
- CNA - Not compatible

Q. If my needs should change, can I transition from Mobility Express to an appliance-based WLAN controller deployment in the future to scale up the number of wireless access points and clients I can support?

A. Yes, you can simply point your Mobility Express-enabled access points to the WLAN controller IP address as the primary controller. This is independent of modes. The WLAN controller will push the right software image and respective configuration to your access points.

Q. If I need to downsize my wireless environment to a handful of access points, can I convert my existing appliance-based wireless controller deployment to Mobility Express?

A. Yes, as long as your deployment has access points capable of hosting Mobility Express, such as the 3800, 2800, 1850 or 1830 Series.

Q. Is Cisco Smart Net Total Care™ available for Mobility Express?

A. Yes. Smart Net Total Care is offered for the Cisco Aironet 3800, 2800, 1850 and 1830 Series when used as a host to Mobility Express or as a lightweight access point.

Availability and Ordering

Q. When will Mobility Express be generally available?

A. The solution is scheduled to ship in September 2015. Global availability is dependent on individual countries' approvals of the Cisco Aironet 3800, 2800, 1850 and 1830 Series Access Points, which are the host devices for Mobility Express. To verify approval that corresponds to a particular country or the regulatory domain used in a specific country, visit http://www.cisco.com/go/aironet/compliance.

Q. What are the ordering product IDs and the list prices?

A. Please see Table 1 for ordering product IDs (SKUs) for both the 3800, 2800, 1850 and 1830 Series with Mobility Express.

Table 1. Ordering Specifics for Cisco Access Points with Mobility Express

SKU	Description	Software Options
AIR-AP3802I-x-K9: Dual-band, controller-based 802.11a/b/g/n/ac	Cisco Aironet 3800i Access Point: Indoor environments, with internal antennas	Mobility Express + AP Image (default) or AP image only
AIR-AP3802I-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, configurable	Cisco Aironet 3800i Access Point Configurable: Indoor environments, with internal antennas	
AIR-AP3802e-x-K9: Dual-band controller-based 802.11a/b/g/n/ac	Cisco Aironet 3800e Access Point: Indoor, challenging environments, with external antennas	
AIR-AP3802E-x-K9C: Dual-band controller-based 802.11a/g/n/ac, configurable	Cisco Aironet 3800e Access Point Configurable: Indoor, challenging environments, with external antennas	
AIR-AP3802p-x-K9: Dual-band controller-based 802.11a/b/g/n/ac	Cisco Aironet 3800p Access Point: Indoor, challenging environments, with external antennas	
AIR-AP3802p-x-K9C: Dual-band controller-based 802.11a/g/n/ac, configurable	Cisco Aironet 3800p Access Point Configurable: Indoor, challenging environments, with external antennas	
AIR-AP2802I-x-K9: Dual-band, controller-based 802.11a/g/n/ac	Cisco Aironet 2800i Access Point: Indoor environments, with internal antennas	
AIR-AP2802I-x-K9C: Dual-band, controller-based 802.11a/g/n/ac, configurable	Cisco Aironet 2800i Access Point Configurable: Indoor environments, with internal antennas	
AIR-AP2802E-x-K9: Dual-band controller-based 802.11a/g/n/ac	Cisco Aironet 2800e Access Point: Indoor, challenging environments, with external antennas	
AIR-AP2802E-x-K9C: Dual-band controller-based 802.11a/g/n/ac, configurable	Cisco Aironet 2800e Access Point Configurable: Indoor, challenging environments, with external antennas	
AIR-AP1852I-UXK9C	Single Unit; Univ Domain; Internal Antenna Model (Configurable)	
AIRAP1852I-UXK910C	10-unit Eco-pack; Univ Domain; Internal Antenna Model (Configurable)	

SKU	Description	Software Options
AIRAP1852I-BK910C AIRAP1852I-EK910C	10-unit Eco-pack; -B or -E Domain; Internal Antenna Model (Configurable)	
AIR-AP1852E-UXK9C	Single Unit; Univ Domain; External Antenna Model (Configurable)	
AIRAP1852E-UXK910C	10-unit Eco-pack; Univ Domain; External Antenna Model (Configurable)	
AIRAP1852E-BK910C AIRAP1852E-EK910C	10-unit Eco-pack; -B or -E Domain; External Antenna Model (Configurable)	
AIR-AP1832I-UXK9C	Single Unit; Univ Domain; Internal Antenna Model (Configurable)	
AIR-AP1832I-x-K9C	Single Unit; x Reg Domain; Internal Antenna Model (Configurable)	
AIRAP1832I-UXK910C	10-unit Eco-pack; Univ Domain; Internal Antenna Model (Configurable)	
AIRAP1832I-BK910C AIRAP1832I-EK910C	10-unit Eco-pack; -B or -E Domain; Internal Antenna Model (Configurable)	

Note: x = regulatory domain. Please visit http://www.cisco.com/go/aironet/compliance for details.

Q. What are the licensing requirements for Mobility Express?

A. Mobility Express does not require any licenses for access points.

Q. Where can I get more information?

A. Please visit http://www.cisco.com/go/mobilityexpress.