

# Cisco SD-Bonjour Application for APIC-EM Release Notes, Release 1.3.3.x

---

**First Published:** 2017-03-16

## Introduction

The Cisco Software Defined Networking (Cisco SDN) controller, Cisco Application Policy Infrastructure Controller Enterprise Module (Cisco APIC-EM) introduces the new Cisco Software Defined - Bonjour application (Cisco SD-Bonjour App), which provides an enterprise class solution in the network. This end-to-end solution is made possible with Cisco SD-Bonjour App on APIC-EM, next-generation Cisco Catalyst switching platforms, and supporting features from Cisco Wireless LAN Controller (Cisco WLC) platforms. The solution offers intuitive and centralized policy-management and monitoring functions with a highly scalable distributed architecture for large scale Apple Bonjour deployments.

Cisco SD-Bonjour App enables policy-based Apple Bonjour discovery and distribution across a user-defined network. In this distributed architecture, the next-generation Cisco Catalyst Series Switches perform Service Discovery Gateway (SDG) agent functions.



**Note**

---

Cisco SD-Bonjour App, currently in its Beta phase, is available for proof-of-concept use and trials. The application is supported with Cisco APIC-EM release 1.3.3.x and later.

---

## About Cisco SD-Bonjour App

Cisco SD-Bonjour App provides controller functions in the network. It enables discovery and distribution of policy-based Apple Bonjour services, independent of network boundaries.

Here APIC-EM, with its ability for central management, provides network administrators a global view of Apple Bonjour services, advertisement sources, wide area network statistics, top-talkers, and much more, while Cisco SD-Bonjour App, as a controller, establishes a communication channel with Cisco Catalyst Series Switches (The switches are configured to act as Service Discovery Gateway (SDG) agents for the distributed Bonjour functions).

Based on user-defined policies, Cisco SD-Bonjour App dynamically receives and maintains Bonjour entries from SDG agents, in its local cache and database. The App then globally distributes the Bonjour service and reachability information to other SDG agents without being limited by network boundaries.

Communication between Cisco SD-Bonjour App and SDG agents is light-weight, unicast, and operates over reliable TCP transport, enabling communication on any network medium operating at variable speeds.

## About Wide Area Service Discovery Gateway

The SD-Bonjour solution architecture is based on distributed and hierarchical Bonjour service-learning and distribution.

The next-generation Cisco Catalyst Series Switches provide a Service Discovery Gateway (SDG) agent function (therefore called SDG agents) that supports local area SDG, and wide area SDG.

With local area SDG, the SDG agents provide the advertised services (Apple TV, printer etc., connected to the switch) to Cisco SD-Bonjour App. Cisco SD-Bonjour App, in its turn, forwards information to other SDG Agents when requested. This way the other SDG agents learn about the services available on wired and wireless networks.

With wide area SDG, which is made possible by Cisco SD-Bonjour App, a laptop can for instance access Bonjour services across the entire network (services connected to other SDG Agents). To discover Bonjour services beyond its single Layer 2 boundary, the SDG agent consults the Cisco SD-Bonjour App and receives policy-based remote Bonjour service entries to be distributed in the local network. The Multicast DNS (mDNS) boundary remains limited to the SDG agent and does not get extended over the IP network. Network communication between the Cisco SD-Bonjour App and the agent is simple TCP/IP based and does not extend the Multicast DNS (mDNS) Layer 2 boundary over enterprise core or WAN networks, thus protecting network bandwidth and reliability. The Cisco WLC must be configured with wireless multicast to allow mDNS packets between wired and wireless networks. It must also be configured to support link-local bridging capabilities to enable network location based service discovery.

## Separation of the Cisco SD-Bonjour App from APIC-EM Releases

Cisco APIC-EM and Cisco SD-Bonjour App software releases are independent but tightly integrated — providing optimal scale and performance for an application.

- Cisco SD-Bonjour App is decoupled from the APIC-EM release schedules, and from the APIC-EM software installation and upgrade processes.
- The Cisco SD-Bonjour App release numbering is independent of APIC-EM release numbering.
- We recommend that you review the compatibility information and the system requirements before initiating an upgrade procedure.

## System Requirements

### Hardware and Software Requirements

The SD-Bonjour App is supported on two version of APIC-EM physical Appliance. It is not supported on APIC-EM Virtual Appliance. For more information, see the [Cisco Application Policy Infrastructure Controller - Enterprise Module Data Sheet](#).

## Supported Cisco APIC-EM Platforms and Software Releases

### Minimum Hardware and Software Requirements

**Table 1: Cisco SD-Bonjour Hardware and Software Support Matrix**

Supported Hardware	Supported Software Version
Cisco APIC-EM Appliance	Release 1.3.3.126
Cisco SD-Bonjour Application	Release 1.3.3.6064
Cisco Catalyst 3650 and 3850 Series Switches	Cisco IOS XE Release 3.7.5
Cisco Catalyst 4500E Series Switches	Cisco IOS XE Release 3.8.3
Cisco Catalyst 4500-X Series Switches	Cisco IOS XE Release 3.8.3
Cisco Catalyst 6800 Series Switches	Cisco IOS Release 15.4(1)SY1
Cisco Catalyst 6880-X Series Switches	Cisco IOS Release 15.4(1)SY1
Cisco Catalyst 6840 Series Switches	Cisco IOS Release 15.4(1)SY1
Cisco 5520 and 8540 Wireless LAN Controllers	Cisco Wireless Release 8.x.x

### Minimum License Requirements

**Table 2: Cisco SD-Bonjour Software License**

Supported Hardware	Supported Software Version
Cisco APIC-EM Appliance	Release 1.3.3.126
Cisco SD-Bonjour Application	Beta License
Cisco Catalyst 3650 and 3850 Series Switches	IP Services
Cisco Catalyst 4500E Series Switches	Enterprise Services
Cisco Catalyst 4500-X Series Switches	Enterprise Services
Cisco Catalyst 6800 Series Switches	IP Services
Cisco Catalyst 6880-X Series Switches	IP Services
Cisco Catalyst 6840 Series Switches	IP Services

## Caveats

Caveats describe unexpected behavior in a release. Caveats listed as open in a prior release are carried forward to the next release as either open or resolved.

To view the details of a caveat, click on the Identifier.

### Open Caveats in Release 1.3.3.x

The following are the open caveats in this release.

Identifier	Headline
<a href="#">CSCvb86453</a>	<p>When you have a large number (&gt;250) of policies, harvesting and then growing Sd_Bonjour app instance may take more than the normal time to display all service instances as active.</p> <p><b>Workaround:</b></p> <p>There is no workaround at this time.</p>
<a href="#">CSCva91069</a>	<p>When using the Cisco SD-Bonjour App, a session timeout does not log out the user. The user can potentially see stale data, but cannot create or update the service-filter.</p> <p><b>Workaround:</b></p> <p>Moving between applications triggers session timeout.</p>
<a href="#">CSCvb59153</a>	<p>Duplicate service names are not checked when importing configuration from CSV Files.</p> <p>In addition, the IP subnet format is not checked (<a href="#">CSCvc01794</a>), and the import failure does not display an appropriate error message (<a href="#">CSCvb85254</a>)</p> <p><b>Workaround:</b></p> <p>There is no workaround at this time.</p>
<a href="#">CSCvb86862</a>	<p>Sometimes, the service-filter count displayed in the Configuration page for a sub-domain may be incorrect.</p> <p><b>Workaround:</b></p> <p>Refresh the page.</p>
<a href="#">CSCva86167</a>	<p>When entering an IPv6 subnet, an abbreviated format is not allowed.</p> <p><b>Workaround:</b></p> <p>There is no workaround at this time.</p>

Identifier	Headline
<a href="#">CSCvc44256</a>	Deleting a domain sometimes requires clicking the 'DELETE THE DOMAIN' button multiple times.  <b>Workaround:</b> There is no workaround at this time.
<a href="#">CSCvb70264</a>	In the Configuration page, when you delete a service filter from the "List of Service Filters from ..." window, the config page does not refresh automatically; it still shows the old service-filter count (the "Delete this service Filter" button is now redundant in the Configuration page, and should not be used)  <b>Workaround:</b> Move between pages to refresh.
<a href="#">CSCvc02316</a>	In the Monitor page, if you enable filter and search for a comma, the Loader graphic continues to run indefinitely.  <b>Workaround:</b> There is no workaround at this time. You can move to another page to stop the loader graphic.

## Using the Bug Search Tool

Use the Bug Search tool to search for a specific bug or to search for all bugs in this release.

- 
- Step 1** Go to <http://tools.cisco.com/bugsearch>.
- Step 2** At the Log In screen, enter your registered Cisco.com username and password; then, click **Log In**. The Bug Search page opens.
- Note** If you do not have a Cisco.com username and password, you can register for them at <http://tools.cisco.com/RPF/register/register.do>.
- Step 3** To search for a specific bug, enter the bug ID in the Search For field and press **Return**.
- Step 4** To search for bugs in the current release:
- In the Search For field, enter APIC-EM and press **Return**. (Leave the other fields empty.)
  - When the search results are displayed, use the filter tools to find the types of bugs you are looking for. You can search for bugs by modified date, status, severity, and so forth.
- Note** To export the results to a spreadsheet, click the **Export Results to Excel** link.
- 

## Limitations and Restrictions

- Cisco SD-Bonjour App is not supported on APIC-EM Virtual Appliance Machine.

- A maximum 200 SDG agents are supported.
- A maximum of 100,000 Apple Bonjour services are supported.
- APIC-EM in High Availability cluster mode must be deployed with 3 hosts in a single domain.
- A maximum of two Cisco SD-Bonjour App instances are supported.
- The App policy configuration can be imported once during initial setup. After the domain is created, any additional policy must be manually configured.
- The current beta version of the Cisco SD-Bonjour App has limited error detection and correction capabilities during the CSV import process.
- The service-type cannot be modified.
- Refer to [Release Notes for Cisco Application Policy Infrastructure Controller Enterprise Module, Release 1.3.3.x](#) for recommended browser and versions.
- If the default value (24 hours) of the packet log timer is changed, then the new timer is effective only after the duration of the existing configured has passed.

## Service and Support

### Related Documentation

The following publications are available for the Cisco APIC-EM:

#### Cisco APIC-EM Controller Documentation

For this type of information...	See this document...
Release information, including new features, system requirements, and open and resolved caveats.	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Release Notes</i>
Installation and configuration of the controller, including post-installation tasks.	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Installation Guide</i>
Introduction to the Cisco APIC-EM GUI and its applications.	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Quick Start Guide</i> <sup>1</sup>
Configuration of user accounts, RBAC scope, security certificates, authentication and password policies, and global discovery settings. Monitoring and managing Cisco APIC-EM services. Backup and restore. Cisco APIC-EM APIs.	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Administrator Guide</i>

For this type of information...	See this document...
Troubleshooting the controller, including the installation, services, and passwords. Developer console. How to contact the Cisco Technical Assistance Center (TAC).	<i>Cisco Application Infrastructure Controller Enterprise Module Troubleshooting Guide</i>
Tasks to perform before updating the controller to the latest version. Software update instructions. Tasks to perform after an update.	<i>Cisco Application Infrastructure Controller Enterprise Module Upgrade Guide</i>

<sup>1</sup> Available from the APIC-EM controller **System Info** window.

### Cisco Network Visibility Application Documentation

For this type of information...	See this document...
Release information, including open and resolved caveats for the Cisco Network Visibility application.	<i>Cisco Network Visibility Application for APIC-EM Release Notes</i>
Supported platforms and software releases.	<i>Cisco Network Visibility Application for APIC-EM Supported Platforms</i>
Installation of the application. (This application is installed as part of the Cisco APIC-EM controller software.)	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Installation Guide</i>
Network discovery, device and host management, topology maps.	<i>Cisco Network Visibility Application for APIC-EM User Guide</i>

### Cisco EasyQoS Application Documentation

For this type of information...	See this document...
Release information, including open and resolved caveats for the Cisco EasyQoS application.	<i>Cisco EasyQoS Application for APIC-EM Release Notes</i>
Supported platforms and software releases.	<i>Cisco EasyQoS Application for APIC-EM Supported Platforms</i>
Installation of the application. (This application is installed as part of the Cisco APIC-EM controller software.)	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Installation Guide</i>

For this type of information...	See this document...
Configuration of quality of service policies on the network devices in your network.	<i>Cisco EasyQoS Application for APIC-EM User Guide</i>

### Cisco Path Trace Application Documentation

For this type of information...	See this document...
Release information, including open and resolved caveats for the Path Trace application.	<i>Cisco Path Trace Application for APIC-EM Release Notes</i>
Supported platforms and software releases.	<i>Cisco Path Trace Application for APIC-EM Supported Platforms</i>
Installation of the application. (This application is installed as part of the Cisco APIC-EM controller software.)	<i>Cisco Application Policy Infrastructure Controller Enterprise Module Installation Guide</i>
Procedures for performing path traces and information about how to understand the path trace results.	<i>Cisco Path Trace Application for APIC-EM User Guide</i>

### Cisco IWAN Application Documentation

For this type of information...	See this document...
Release information, including open and resolved caveats for the Cisco IWAN application.	<i>Cisco IWAN Application on APIC-EM Release Notes</i>
Using the Cisco IWAN application.	<i>Cisco IWAN Application on APIC-EM User Guide</i>

### Cisco Network Plug and Play Application Documentation

For this type of information...	See this document...
Release information, including open and resolved caveats for the Cisco Plug and Play application. Supported Cisco devices for Cisco Network Plug and Play.	<i>Release Notes for Cisco Network Plug and Play</i>
Configuration of devices using Cisco Network Plug and Play.	<i>Configuration Guide for Cisco Network Plug and Play on Cisco APIC-EM</i> <i>Cisco Open Plug-n-Play Agent Configuration Guide</i>



For this type of information...	See this document...
<p>Cisco Network Plug and Play solution overview.</p> <p>Main workflows used with the Cisco Network Plug and Play solution.</p> <p>Deployment of the Cisco Network Plug and Play solution.</p> <p>Tasks for using proxies with the Cisco Network Plug and Play solution.</p> <p>Configuration of a DHCP server for APIC-EM controller auto-discovery.</p> <p>Troubleshooting procedures for the Cisco Network Plug and Play solution.</p>	<p><i>Solution Guide for Cisco Network Plug and Play</i></p>
<p>Information about using the Cisco Plug and Play Mobile App.</p>	<p><i>Mobile Application User Guide for Cisco Network Plug and Play</i> (also accessible in the app through Help)</p>

### Cisco APIC-EM Developer Documentation

The [Cisco APIC-EM developer website](#) is located on the [Cisco DevNet](#) website.

For this type of information...	See this document...
<p>API functions, parameters, and responses.</p>	<p><a href="#">APIC-EM API Reference Guide</a></p>
<p>Tutorial introduction to controller GUI, DevNet sandboxes and APIC-EM NB REST API.</p>	<p><a href="#">Getting Started with Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM)</a></p>
<p>Hands-on coding experience calling APIC-EM NB REST API from Python.</p>	<p><a href="#">APIC-EM Learning Labs</a></p>

### Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at:

<http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>

Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation as an RSS feed and delivers content directly to your desktop using a reader application. The RSS feeds are a free service.

## Notices

### Trademarks

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <http://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

