Cisco IWAN Application on APIC-EM Release Notes, Release 1.4.2

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These release notes provide a summary of the components in Cisco Intelligent Wide Area Network Application (Cisco IWAN App), Release 1.4.2.

Cisco IWAN App (or the Cisco IWAN on APIC-EM) extends Software Defined Networking to the branch with an application-centric approach based on business policy and application rules. This provides IT centralized management with distributed enforcement across the network.

Cisco IWAN App automates and orchestrates Cisco IWAN deployments with an intuitive browser-based GUI. A new router can be provisioned in a matter of minutes without any knowledge of the Command Line Interface (CLI). Business priorities are translated into network policies based on Cisco best practices and validated designs. Cisco IWAN App dramatically reduces the time required for configuring advanced network services through the use of automation and simple, predefined workflows.

Cisco IWAN App offers a turnkey solution that allows IT to get out of the weeds of managing low-level semantics like VPN, QoS, optimization, ACL policies. Instead, IT can focus on the bigger picture, such as, aligning network resources with business priorities and delivering outstanding user experience that result in better business outcomes.

Cisco IWAN App includes the following features:

- Zero touch provisioning—Plug and play for remote devices without user intervention
- Simple workflows—Use case driven with step-by-step and site-to-site provisioning
- Business level policies—Rules drive network actions, abstraction of underlying policy configuration
- Network monitoring—Status, alerting of network issues

What's New in Cisco IWAN App Release 1.4.2

The following features are available in Cisco IWAN App Release 1.4.2.

Feature Name	Description
Enhanced Data Center Prefix Input	Mechanism to improve the process of selecting data center prefixes for a site.

Feature Name	Description
Expanded Support for Custom Configuration	Custom Configuration is a mechanism for executing CLI configuration commands on devices within the IWAN network, similarly to a batch file of commands. This release adds full, non-beta support for this feature, and includes default configurations that provide CLI-level support for various features.
Hub Site Geo Location	Ability to set the geographic location of a hub site.
Removing User-Defined QoS Bandwidth Service Profiles	Ability to delete user-defined QoS bandwidth user profiles that are not in use by any WAN connections.
Support for Cisco ISR 897 routers for branch sites	Support for the following Cisco ISR 897 routers for branch sites: • C897VA-M-K9 • C897VAG-LTE-GA-K9
Support for Live Action	Enables configuring the IWAN App to use Live Action for collecting performance data.

Separation of Cisco IWAN Application from APIC-EM Releases

Cisco IWAN app release 1.3.2 introduced a new approach to IWAN app releases. Beginning with this release:

- The IWAN app has been decoupled from the APIC-EM release schedule, and from the APIC-EM installation and upgrade processes.

- IWAN app release numbering is now independent of APIC-EM release numbering.

- Download the IWAN app separately from APIC-EM, then install or upgrade the app using the APIC-EM "App Management" page. See Cisco IWAN Application on Cisco APIC-EM User Guide, Release 1.4.2 for details about deployment.

Integral Part of APIC-EM

While the release schedule and installation are now handled separately from APIC-EM, Cisco IWAN App continues to be an integral part of APIC-EM and continues to appear in the APIC-EM GUI as before.

System requirements for the APIC-EM continue to apply to Cisco IWAN App.

See Cisco IWAN App Software Compatibility in Cisco IWAN App Release for information about the software compatible with Cisco IWAN App releases, including APIC-EM and Cisco Prime Infrastructure versions.

Supported Cisco Platforms and Software Releases

Cisco IWAN App supports the following Cisco router platforms and software releases.

Platform	Models	Software Release
Cisco 4000 Series Integrated Services Routers	4321 4331 4351 4431-X 4451-X	Cisco IOS XE 3.16.5aS[1] Cisco IOS XE Denali 16.3.3
Cisco ASR 1000 Series Aggregation Services Routers	ASR1001 ASR 1001-X ASR 1001-HX ASR 1002 ASR 1002-X ASR 1002-HX ASR 1004 ASR 1006 ASR 1006-X	Cisco IOS XE 3.16.5aS Cisco IOS XE Denali 16.3.3
Cisco CSR 1000v Series Routers	Cloud Services Router 1000V	Cisco IOS XE 3.16.5aS Cisco IOS XE Denali 16.3.3

Platform	Models	Software Release
Cisco Integrated Services Routers Generation 2 (ISR-G2) Series Routers	ISR 3945	Cisco IOS 15.6(3)M2
	ISR 3945-ISM	
	ISR 3945-E	
	ISR 3945E-ISM	
	ISR 3925	
	ISR 3925-ISM	
	ISR 3925E	
	ISR 3925E-ISM	
	ISR 2951	
	ISR 2951-ISM	
	ISR 2921	
	ISR 2921-ISM	
	ISR 2911	
	ISR 2911-ISM	
	ISR 2901	
	ISR 2901-ISM	
	ISR 1941	
	ISR 1941-ISM	
	ISR 1921	
	ISR 1921-ISM	
	ISR 892-FSP	
	ISR 897VA-M-K9	
	ISR 897VAG-LTE-GA-K9	
	ENCS 5400 (ISRv—supported on Cisco IOS XE Denali 16.3.3)	

[1] Link:https://software.cisco.com/download/special/release.html?config=684110644675436ad1349ee490ed79ff

Limitations and Restrictions

✎

Note   It is recommended that you upgrade to NBAR2 Advanced Protocol Pack 27.0.0 on your devices with the recommended latest Cisco IOS and Cisco IOS XE software releases.

When using EasyQoS and Cisco IWAN App on APIC-EM, you must adhere to the following:

- The network segments for each solution are disjoint. A device controlled by the IWAN solution cannot simultaneously be controlled by the EasyQoS solution. Application are of global scope across APIC-EM and as such, custom applications created in EasyQoS application may show up in the IWAN solution if applicable to the WAN solution.

- You must complete the following tasks on devices claimed by EasyQoS, to bring them in the IWAN workflow:

    ◦ QoS policy tags should be removed prior to being claimed

    ◦ The device must be cleaned of remaining EasyQoS policy or configuration and the device must brought to greenfield state.

Caveats

Open Caveats in Cisco IWAN App Release 1.4.2

Caveat ID Number	Headline
CSCvb95745	Unable to add a device that was deleted with the site that failed at business policy config phase
CSCvc46613	Spoke provision failure due to multiple users are defined and the not all of them are tried
CSCvd04725	Hub AR ACLs not removed when branch sites are deleted
CSCvc16668	SA: Alarm tab seen on the site with no alarms shown on UI
CSCvc07291	Service Assurance: Uncontrolled TC alarm not shown for sites with no policy for backup link
CSCvc36842	Service Assurance: No route is found at device is Misleading under child Alarm
CSCve19568	[SA]DMVPN alarm shows NBMA/peers are ping unreachable when they are reachable via ping
CSCve21086	[SA] Generic Alarm thrown for requirements not met due to incorrect MTU size
CSCvd83658	[SA] Wrong entry in hub alarm for eigrp saf entry--showing nonexistant SAF entry
CSCve17599	[SA] WAN interface discovery failure alarm recommended actions need more details

Caveat ID Number	Headline
CSCve03315	Custom Config: Repeated appearance of custom-template in form view
CSCve21281	UI must limit custom app URL length to 29 characters
CSCve21952	"Set Geo" field for transit pop disappears if click on deleting transit pop then cancelled

Resolved Caveats in Cisco IWAN App Release 1.4.2

Caveat ID Number	Headline
CSCvd22094	Custom apps were not pushed into Hub routers after upgrade from 1.3.2 to 1.4 + IWAN app bundle 413
CSCvd21483	Prime 3.1.5: Devices in Collection Failure state on Prime Inventory
CSCvd01622	Device inventory shows device in "Unknown" state after upgrade from 1.3.2 to 1.4
CSCvd01892	IWAN App 1.4.0 + Prime 3.1.5: Intermittent QoS Class Map Stats issue
CSCvd12920	IWAN App 1.4.0 + Prime 3.1.5: No historical data under pfr dashboard after 24 hrs
CSCvd12966	Inventory collection failing on Prime when SNMPv3 mode is changed on IWAN App post APIC-EM site sync
CSCvd02096	IWAN App 1.4.0 + Prime 3.1.5: False Compliance warning on spokes after Day-N BR addition
CSCvb24793	Spoke provision failed at Device addition to inventory FAILURE if WAN IP is changed during provision
CSCvd06887	Cannot discover device with global discovery, but device can be added through inventory app
CSCvc86828	Sync device failed while provisioning BF L3 SR3L site

System Requirements

The following sections describe the system requirements for Cisco IWAN App:

Hardware Requirements

Cisco IWAN App requires a server with the following capabilities/software:

- Server—64-bit x86
- CPU—6 (2.4GHz)
- RAM—32GB

Note: For a multi-host hardware deployment (two or three hosts), 32GB RAM is sufficient for each host.

- Storage—500 Gigabytes or preferably 1 Terabyte HDD
- Network Adapter—1x
- 200 MBps Disk I/O speed

Software Requirements

For Cisco IWAN on APIC-EM, the following software is required on the server:

- Browser
  - Chrome (version 50.0 or higher)
  - Mozilla Firefox (version 46.0 or higher)

Cisco IWAN App Software Compatibility in Cisco IWAN App Release

The following table describes compatible and recommended software versions for operation with the Cisco IWAN application, running on Cisco APIC-EM.

IWAN App	APIC-EM	Prime Infrastructure	Network Collector - LiveNX	OS on ASR1000 Series, ISR4000 Series, and CSR1000V Series Routers	OS on ISR-G2 Series Routers	Protocol Pack
1.4.2	1.4.2	3.1.6	LiveNX 6.1	Cisco IOS XE 3.16.5aS[2] Cisco IOS XE Denali 16.3.3	Cisco IOS Release 15.6(3)M2	27.0.0
1.4.x	1.4.x	3.1.5	N/A	Cisco IOS XE 3.16.5S Cisco IOS XE Denali 16.3.3	Cisco IOS Release 15.6(3)M1	27.0.0
1.3.2	1.3.2	3.1.4 Update 1	N/A	IOS XE 3.16.4bS (15.5(3)S4)	Cisco IOS Release 15.5(3)M4a	

[2] Link:https://software.cisco.com/download/special/release.html?config=684110644675436ad1349ee490ed79ff

> **Note** If you require a fix for CSCvc99738 and CSCvb66590, choose Cisco IOS XE 3.16.5aS and Cisco IOS release 15.5(3)M5a.

Firewall Requirements

If there is a firewall between the branch and the APIC-EM controller, please ensure that the following ports are open:

- Branch to the APIC-EM controller:
    - PKI—TCP 80
    - PNP—TCP 80, 443
    - NTP—UDP 123

- APIC-EM controller to branch:
    - SNMP—TCP and UDP ports: 161, 162
    - SSH—TCP 22

◦ ECHO—TCP 7

- Internet branch to hub routers:

    ◦ GRE and IPsec—UDP 500, 4500, IP—50

If there is a firewall between APIC-EM and Prime Infrastructure, ensure that port 443 is open for APIC-EM to access Prime Infrastructure API.

NetFlow Collectors

NetFlow collector provides Application Visibility. The supported NetFlow collectors for Cisco IWAN App are LiveNX and Cisco Prime. For information about compatible versions of Cisco Prime Infrastructure and other software, see Cisco IWAN App Software Compatibility in Cisco IWAN App Release, on page 7.

Supported Hub Devices — Required License

See Platforms and their Roles for details per model.

- ASR 1000 Series

    ◦ License—Image with licenses for Advanced IP Services or Advanced Enterprise Services

- ISR 4451 and 4431

    ◦ License—Appx and Security

The following is a sample configuration that shows how to enable IPsec license and accept the End User License Agreement (EULA) on Cisco ASR 1000 Series Aggregation Services Routers.

```
Router(config)# crypto ipsec profile TEST
Router(ipsec-profile)# exit
Router(config)# interface tunnel 123
Router(config-if)# tunnel protection ipsec profile TEST
```

Note The configuration must be removed after the EULA is accepted.

Supported Spoke Devices — Required License

See Platforms and their Roles for details per model.

- ASR 1000 Series

    ◦ License—Advanced IP Services or Advanced Enterprise Services

- CSR1000v Series

    ◦ License—AX throughput

- ISR 4000 Series

◦ License—Appx and Security

• ISR G2 Series

◦ License—Advanced IP Services (for ISR G2 892-FSP), Data, and Security

Platforms and their Roles

• ASR 1001—Hub, branch, or dedicated master controller

• ASR 1001-X—Hub, branch, or dedicated master controller

• ASR 1001-HX Router—Branch

• ASR 1002—Branch or dedicated master controller

• ASR 1002-X—Hub, branch, or dedicated master controller

• ASR 1002-HX Router—Hub and branch

• ASR1004—Hub or dedicated master controller

• ASR1006—Hub or dedicated master controller

• ASR1006-X—Hub or dedicated master controller

• CSR 1000v—Branch or dedicated master controller

• ISR 4321—Branch

• ISR 4331—Branch

• ISR 4351—Branch

• ISR 4431—Hub, branch, or dedicated master controller

• ISR 4451—Hub, branch, or dedicated master controller

• ISR 1921—Branch

• ISR 1921-ISM—Branch

• ISR G2 1941—Branch

• ISR 1941-ISM—Branch

• ISR 2901—Branch

• ISR 2901-ISM—Branch

• ISR 2911—Branch

• ISR 2911-ISM—Branch

• ISR G2 2921—Branch

• ISR 2921-ISM—Branch

• ISR G2 2951—Branch

• ISR G2 2951-ISM—Branch

- ISR G2 3925—Branch
- ISR G2 3925-E—Branch
- ISR G2 3925-ISM—Branch
- ISR 3925E-ISM—Branch
- ISR G2 3945—Branch
- ISR G2 3945-E—Branch
- ISR G2 3945-ISM—Branch
- ISR 3945E-ISM—Branch
- ISR G2 892-FSP—Branch
- ISR 897VA-M-K9—Branch
- ISR 897VAG-LET-GA-K9—Branch
- ISRv 5412—Branch
- ISRv 5408—Branch
- ISRv 5406—Branch

Related Documentation

Documentation	Description
Cisco IWAN Application on Cisco APIC-EM User Guide, Release 1.4.2	Information about the installation, deployment, configuration of Cisco IWAN on APIC-EM. Explains the Cisco IWAN GUI and how to manage connected devices and hosts within your network.
Cisco Application Policy Infrastructure Controller Enterprise Module Deployment Guide	Information about the underlying Cisco APIC-EM product including deployment steps, verification, and troubleshooting.
Cisco IWAN Technology Design Guides	Cisco IWAN designs are explained in the Cisco IWAN technology design guides.
Configuration Guide for Cisco Network Plug and Play on Cisco APIC-EM	Information about Cisco Network Plug and Play solution.
Cisco Prime Infrastructure Release Notes	Provides a list of all release notes for the Cisco Prime Infrastructure product.
Cisco Prime Infrastructure 3.1 Documentation	Links to deployment guides and other Cisco Prime Infrastructure documentation.

Documentation	Description
Solution Guide for Cisco Network Plug and Play	Overview of the Plug and Play solution, component descriptions, summary of major use cases, and basic deployment requirements, guidelines, limitations, prerequisites, and troubleshooting tips.
Release Notes for Cisco Network Plug and Play, Release 1.3x	Description of the features and caveats for Cisco Network Plug and Play.
Release Notes for Cisco Application Policy Infrastructure Controller Enterprise Module, Release 1.3.0.x	Description of the features and caveats for the Cisco Application Policy Infrastructure Controller Enterprise Module (Cisco APIC-EM).

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.

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