Cisco Multi-Site Orchestrator Release Notes, Release 3.3(1)

Contents

This document describes the features, issues, and deployment guidelines for Cisco Multi-Site Orchestrator software.

Cisco Multi-Site is an architecture that allows you to interconnect separate Cisco APIC, Cloud APIC, and DCNM domains (fabrics) each representing a different region. This helps ensure multitenant Layer 2 and Layer 3 network connectivity across sites and extends the policy domain end-to-end across the entire system.

Cisco Multi-Site Orchestrator is the intersite policy manager. It provides single-pane management that enables you to monitor the health of all the interconnected sites. It also allows you to centrally define the intersite configurations and policies that can then be pushed to the different Cisco APIC, Cloud APIC, or DCNM fabrics, which in term deploy them in those fabrics. This provides a high degree of control over when and where to deploy the configurations.

For more information, see the “Related Content” section of this document.

Note: The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

Date	Description
November 20, 2021	Additional open issue CSCvy97158.
August 16, 2021	Additional open issues CSCvy94170, CSCvy99012, CSCvz20362, CSCvz32604, CSCvy61486.
August 9, 2021	Additional open issues CSCvy98518, CSCvy63967, CSCvy95575.
June 4, 2021	Release 3.3(1e) became available

New Software Features

This release adds the following new features:

Feature	Description
Multi-Site Orchestrator integration with virtual and cloud Nexus Dashboard form factors	Multi-Site Orchestrator can now be deployed as an application on Nexus Dashboard clusters that are deployed in ESX or KVM virtual machines and AWS or Azure clouds. For additional information including the migration procedure from existing MSO deployments to Release 3.3 in Nexus Dashboard, see Cisco Multi-Site Deployment Guide.
Cloud Site Management for Nexus Dashboard Deployments	Multi-Site Orchestrator service deployed in Nexus Dashboard can now manage AWS and Azure cloud sites. For additional information, see Cisco Multi-Site Deployment Guide.
Underlay Configuration for Intersite Connectivity	Intersite connectivity between on-prem and cloud sites or multiple cloud sites can now be configured directly from the Multi-Site Orchestrator. In addition, the Infra Configuration page displays underlay and overlay status, configuration deployment status, and the traffic statistics for easy view into intersite infra health.

Feature	Description
	For additional information, see Cisco Multi-Site Deployment Guide.
Cloud Connectivity without IPSec	Intersite connectivity between two cloud sites of the same type (AWS-to-AWS or Azure-to-Azure) can now be established using private IPs and without IPSec. For additional information, see Cisco Multi-Site Deployment Guide.
Schema Visualizer Enhancements	Additional enhancements to the Schema visualizer functionality for viewing relationships between networking objects and the ability to zoom in and out for For additional information, see Cisco Multi-Site Configuration Guide for ACI Fabrics or Cisco Multi-Site Configuration Guide for DCNM Fabrics.
Object Description Fields in UI	Additional "Description" field is now provided for all Multi-Site Orchestrator objects. For additional information, see Cisco Multi-Site Configuration Guide for ACI Fabrics or Cisco Multi-Site Configuration Guide for DCNM Fabrics.
Tech Support Log Enhancements	Tech support logs, audit logs, and syslogs have been updated with better structure for ease of readability and parsing. For additional information, see Cisco Multi-Site Configuration Guide for ACI Fabrics or Cisco Multi-Site Configuration Guide for DCNM Fabrics.
Patch API Enhancements	The PATCH API has been updated to allow objects that previously had to be referenced by index to be referenced by their unique identifiers as well. For additional information, see Cisco Multi-Site REST API Configuration Guide.
Support for Standalone APIC Sites	Multi-Site Orchestrator can manage ACI sites, which are managed by standalone APIC (APIC that is not directly connected to the fabric). For on-boarding, managing, and configuration purposes, these sites behave in the same way as typical on-premises ACI sites managed by APIC.

New Hardware Features

There is no new hardware supported in this release.

The complete list of supported hardware is available in the Cisco Multi-Site Hardware Requirements Guide.

Changes in Behavior

If you are upgrading to this release, you will see the following changes in behavior:

- For all new deployments, you must install the Multi-Site Orchestrator application in Nexus Dashboard.

  This release supports physical, virtual, and cloud Nexus Dashboard clusters.

  Note that the cloud Nexus Dashboard clusters support Cisco APIC and Cisco Cloud APIC site on-boarding only, so you will need to deploy one of the other form factors if you want to use Multi-Site Orchestrator application to manage Cisco DCNM sites.

- If you are upgrading your existing deployment from a release prior to Release 3.2(1), you must deploy a new Nexus Dashboard cluster and migrate your existing configuration.

  The procedure is described in detail in Cisco Multi-Site Deployment Guide.

- If you deploy in a virtual or cloud Nexus Dashboard cluster version 2.0.2h, downgrading to releases prior to Release 3.3(1) is not supported.
- If you deploy in a physical Nexus Dashboard cluster version 2.0.1 or 2.0.2, downgrading to releases prior to Release 3.2(1) is not supported.
- If you are migrating from an earlier release to Release 3.3(1) or later, you may need to resolve any configuration drifts in the object properties that are newly managed by MSO where the default values picked by MSO differ from the custom values set directly in the fabrics' controllers.

  Any time Multi-Site Orchestrator adds support for managing object properties that previously had to be managed directly in the APIC, it sets those properties to some default values for existing objects in MSO Schemas but does not push them to sites.

  To resolve the configuration drifts, you will need to re-import these objects and their properties from the fabrics' Controllers and then re-deploy the templates as described in the Cisco Multi-Site Deployment Guide.
- Site management and on-boarding have moved to a centralized location in the Nexus Dashboard GUI.

  When migrating from a release prior to Release 3.2(1), you will need to on-board the sites using the Nexus Dashboard GUI before restoring existing configuration. The procedure is described in detail in Cisco Multi-Site Deployment Guide.
- User management and authentication have moved to a centralized location in the Nexus Dashboard GUI.

  Existing local users defined in Multi-Site Orchestrator will be transferred to the Nexus Dashboard during configuration import.

  For existing remote authentication users, you will need to add the remote authentication server to the Nexus Dashboard as described in the Nexus Dashboard User Guide.
- Starting with Release 3.3(1), the following API changes have been implemented:

  PATCH API no longer returns the complete object that was modified, in contrast to prior releases where a complete object (such as schema) was returned by the API.

  Because Site Management and User Management have moved to a central location on Nexus Dashboard, the following API changes have been implemented to the corresponding Multi-Site Orchestrator APIs:

  - User Management API v2 is introduced for querying the new user structures with original API changing to read-only mode (only GET operations are allowed, PUT/POST are removed).

    The issue which caused the User Management API v1 to incorrectly return v2 structures in Release 3.2 has been resolved and the v1 API now returns the correct structure similar to Release 3.1.
  - Site Management API v2 is introduced that allows setting a site to 'managed' or 'unmanaged' in MSO. Previous Site Management APIs are changed to read-only mode (GET operation only). Site onboarding moved to the Nexus Dashboard APIs.

  You can no longer remove DHCP Relay and DHCP Option policies until they have been removed from all associated BDs.

Open Issues

This section lists the open issues. Click the bug ID to access the Bug Search Tool and see additional information about the bug. The " Exists In" column of the table specifies the 3.3(1) releases in which the bug exists. A bug might also exist in releases other than the 3.3(1) releases.

Bug ID	Description	Exists in
CSCvo84218	When service graphs or devices are created on Cloud APIC by using the API and custom names are specified for AbsTermNodeProv and AbsTermNodeCons, a brownfield import to the Multi-Site Orchestrator will fail.	3.3(1e) and later
CSCvo20029	Contract is not created between shadow EPG and on-premises EPG when shared service is configured between Tenants.	3.3(1e) and later
CSCvn98355	Inter-site shared service between VRF instances across different tenants will not work, unless the tenant is stretched explicitly to the cloud site with the correct provider credentials. That is, there will be no implicit tenant stretch by Multi-Site Orchestrator.	3.3(1e) and later
CSCvs99052	Deployment window may show more policies been modified than the actual config changed by the user in the Schema.	3.3(1e) and later
CSCvt06351	Deployment window may not show all the service graph related config values that have been modified.	3.3(1e) and later
CSCvt00663	Deployment window may not show all the cloud related config values that have been modified.	3.3(1e) and later
CSCvt41911	After brownfield import, the BD subnets are present in site local and not in the common template config	3.3(1e) and later
CSCvt44081	In shared services use case, if one VRF has preferred group enabled EPGs and another VRF has vzAny contracts, traffic drop is seen.	3.3(1e) and later
CSCvt02480	The REST API call " /api/v1/execute/schema/5e43523f1100007b012b0fcd/template/Template_11?undeploy=all" can fail if the template being deployed has a large object count	3.3(1e) and later
CSCvt15312	Shared service traffic drops from external EPG to EPG in case of EPG provider and L3Out vzAny consumer	3.3(1e) and later
CSCvt11713	Intersite L3Out traffic is impacted because of missing import RT for VPN routes	3.3(1e) and later
CSCvv67993	MSO will not update or delete VRF vzAny configuration which was directly created on APIC even though the VRF is managed by MSO.	3.3(1e) and later
CSCvw31631	When deploying fabric connectivity between on-premises and cloud sites, you may get a validation error stating that l3extSubnet/cloudTemplateBgpEvpn is already attached.	3.3(1e) and later
CSCvw10432	Two cloud sites (with Private IP for CSRs) with the same InfraVNETPool on both sites can be added to MSO without any infraVNETPool validation.	3.3(1e) and later
CSCvw57672	API POST/GET/PUT/DEL requests to MSO will be accepted, but system might return an internal_server_error with code 500 and message as " The token is expired since 2020-11-23T12:41:15Z?.	3.3(1e) and later
CSCvy31532	After a site is re-registered, MSO may have connectivity issues with APIC or CAPIC	3.3(1e) and later

Bug ID	Description	Exists in
CSCvy36810	Multiple Peering connections created for 2 set of cloud sites.	3.3(1e) and later
CSCvy34302	Traffic between onPrem and cloud is affected.	3.3(1e) and later
CSCvy35207	Inconsistent behavior and errors may be seen if cAPIC is downgraded from 5.2 to pre5.2 version in MSO 3.3. Inconsistent behavior and errors may be seen if MSO is downgraded from 3.3 to pre3.3 with cloud deployments and configuration.	3.3(1e) and later
CSCvy21756	AWS site is not shown with correct cloud site type and other details on the Connectivity View of Sites.	3.3(1e) and later
CSCvx88132	Random MSO APIs will return 500 errors for about 20 minutes, while the system is slowly detecting the node outage a relocating services.	3.3(1e) and later
CSCvy98518	MSO removes L3Out-BD association from sites after deleting even an unrelated L3Out in other templates	3.3(1e) and later
CSCvy63967	Open a schema which has around 800 objects (in this case ~ 400 EPGs and ~ 400 BDs) Try to create a new EPG, and type the EPG name - takes 10 seconds after typing for the EPG name to show in text box.	3.3(1e) and later
CSCvx88132	Some EPGs not shown in Provider list in DHCP Relay Policy creation UI	3.3(1e) and later
CSCvy95575	AWS site is not shown with correct cloud site type and other details on the Connectivity View of Sites.	3.3(1e) and later
CSCvy99012	After migration, deploying a template led to deletion of static ports.	3.3(1e) and later
CSCvz20362	BD subnet flag is set to no-default-gateway after backup import from MSO 3.1 to 3.3 causing BD subnets to lose default gateway.	3.3(1e) and later
CSCvz32604	If Nexus Dashboard is behind a proxy, which relies on presence of a cookie in order to pass through traffic, then it's not possible to launch MSO from ND. Reason for this is that in index js file parameter credentials set to " omit" . As a result, at least 2 URIs are loading without cookies being sent /mso/api/v2/mypermissions /mso/api/v1/platform/systemConfig This causes proxy server not to forward through these requests and MSO to be stuck in loading.	3.3(1e) and later
CSCvy61486	Removing EPG objects created from MSO for one site can unexpectedly remove the application profile on the remote site.	3.3(1e) and later
CSCvy97158	Shadow EPG/BDs are not removed when the contract is removed.	3.3(1e) and later

Resolved Issues

This section lists the resolved issues. Click the bug ID to access the Bug Search tool and see additional information about the issue. The "Fixed In" column of the table specifies whether the bug was resolved in the base release or a patch release.

Bug ID	Description	Fixed in
CSCvw77151	You may see an error during deployment of the Policy(Vrf/Network) saying "profile does not exists" or unexpected update on the Vrf/Network.	3.3(1e)
CSCvw83190	Config drift for BD or VRF after backup restore or upgrade.	3.3(1e)
CSCvw86814	When importing brownfield DCNM sites to be managed by MSO, the Networks may remain in the “pending” state.	3.3(1e)
CSCvv75133	In a shared services scenario, stale shadow BD/EPG entries are not cleared on the APIC when Preferred Group and regular contract is removed.	3.3(1e)
CSCvw85584	User will not be able to deploy the template and error message mentioned in the bug will be shown.	3.3(1e)
CSCvv95445	If you are logged into Application Services Engine 1.1.3d UI and MSO UI in different browser tabs, the backup import functionality does not work. This is due to different authorization cookie used for SE and MSO API.	3.3(1e)
CSCvy02792	Physical domain mapping unexpectedly was removed from multiple EPG	3.3(1e)

Known Issues

This section lists known behaviors. Click the Bug ID to access the Bug Search Tool and see additional information about the issue.

Bug ID	Description
CSCvo82001	Unable to download Multi-Site Orchestrator report and debug logs when database and server logs are selected
CSCvo32313	Unicast traffic flow between Remote Leaf Site1 and Remote Leaf in Site2 may be enabled by default. This feature is not officially supported in this release.
CSCvn38255	After downgrading from 2.1(1), preferred group traffic continues to work. You must disable the preferred group feature before downgrading to an earlier release.
CSCvn90706	No validation is available for shared services scenarios
CSCvo59133	The upstream server may time out when enabling audit log streaming

Bug ID	Description
CSCvd59276	For Cisco Multi-Site , Fabric IDs Must be the Same for All Sites, or the Querier IP address Must be Higher on One Site. The Cisco APIC fabric querier functions have a distributed architecture, where each leaf switch acts as a querier, and packets are flooded. A copy is also replicated to the fabric port. There is an Access Control List (ACL) configured on each TOR to drop this query packet coming from the fabric port. If the source MAC address is the fabric MAC address, unique per fabric, then the MAC address is derived from the fabric-id. The fabric ID is configured by users during initial bring up of a pod site. In the Cisco Multi-Site Stretched BD with Layer 2 Broadcast Extension use case, the query packets from each TOR get to the other sites and should be dropped. If the fabric-id is configured differently on the sites, it is not possible to drop them. To avoid this, configure the fabric IDs the same on each site, or the querier IP address on one of the sites should be higher than on the other sites.
CSCvd61787	STP and " Flood in Encapsulation" Option are not Supported with Cisco Multi-Site. In Cisco Multi-Site topologies, regardless of whether EPGs are stretched between sites or localized, STP packets do not reach remote sites. Similarly, the " Flood in Encapsulation" option is not supported across sites. In both cases, packets are encapsulated using an FD VNID (fab-encap) of the access VLAN on the ingress TOR. It is a known issue that there is no capability to translate these IDs on the remote sites.
CSCvi61260	If an infra L3Out that is being managed by Cisco Multi-Site is modified locally in a Cisco APIC, Cisco Multi-Site might delete the objects not managed by Cisco Multi-Site in an L3Out.
CSCvq07769	" Phone Number" field is required in all releases prior to Release 2.2(1). Users with no phone number specified in Release 2.2(1) or later will not be able to log in to the GUI when Orchestrator is downgraded to an earlier release.
CSCvu71584	Routes are not programmed on CSR and the contract config is not pushed to the Cloud site.
CSCvw47022	Shadow of cloud VRF may be unexpectedly created or deleted on the on-premises site.
CSCvt47568	Let's say APIC has EPGs with some contract relationships. If this EPG and the relationships are imported into MSO and then the relationship was removed and deployed to APIC, MSO doesn't delete the contract relationship on the APIC.

Compatibility

This release supports the hardware listed in the Cisco Multi-Site Hardware Requirements Guide.

This release supports Multi-Site Orchestrator deployments in Cisco Nexus Dashboard only. The VMware ESX (.ova) and Cisco Application Services Engine form factors have been deprecated.

If you are deploying Multi-Site Orchestrator in cloud (AWS or Azure) Nexus Dashboard, only Cisco APIC and Cisco Cloud APIC sites can be managed. Virtual (VMware ESX) and physical Nexus Dashboard clusters support Cisco APIC, Cisco Cloud APIC, and Cisco DCNM fabrics.

When managing Cloud APIC sites, this Multi-Site Orchestrator release supports Cisco Cloud APIC, Release 5.2(1) or later only.

When managing on-premises fabrics, this Multi-Site Orchestrator release supports any on-premises Cisco APIC release that can be on-boarded to the Nexus Dashboard. For more information, see the Interoperability Support section in the "Infrastructure Management" chapter of the Cisco Multi-Site Deployment Guide.

Scalability

For Multi-Site Orchestrator verified scalability limits, see the Cisco Multi-Site Verified Scalability Guide.

For Cisco ACI fabrics verified scalability limits, see Cisco ACI Verified Scalability Guides.

For Cisco DCNM fabrics verified scalability limits, see Cisco DCNM Verified Scalability Guides.

Related Content

For DCNM fabrics, see the Cisco Data Center Manager (DCNM) page for a complete list of all Multi-Site documentation for DCNM fabrics.

For ACI fabrics, see the Cisco Application Policy Infrastructure Controller (APIC) page for a complete list of all Multi-Site documentation for ACI fabrics. On that page, you can use the "Choose a topic" and "Choose a document type" fields to narrow down the displayed documentation list and find a desired document.

The documentation includes installation, upgrade, configuration, programming, and troubleshooting guides, technical references, release notes, and knowledge base (KB) articles, and videos. KB articles provide information about a specific use cases or topics. The following tables describe the core Multi-Site documentation.

Document	Description
Cisco Multi-Site Orchestrator Release Notes	Provides release information for the Cisco Multi-Site Orchestrator product.
Cisco Multi-Site Hardware Requirements Guide	Provides the hardware requirements and compatibility.
Cisco Multi-Site Deployment Guide	Describes how to install Cisco Multi-Site Orchestrator and perform day-0 operations.
Cisco Multi-Site Configuration Guide for ACI Fabrics	Describes Cisco Multi-Site configuration options and procedures for fabrics managed by Cisco APIC.
Cisco Multi-Site Use Cases for Cloud APIC	A series of documents that describe Cisco Multi-Site configuration options and procedures for fabrics managed by Cisco Cloud APIC.
Cisco Multi-Site Configuration Guide for DCNM Fabrics	Describes Cisco Multi-Site configuration options and procedures for fabrics managed by Cisco DCNM.
Cisco Multi-Site REST API Configuration Guide	Describes how to use Cisco Multi-Site Orchestrator API.

Document	Description
Cisco Multi-Site Verified Scalability	Contains the maximum verified scalability limits for this release of Cisco Multi-Site Orchestrator.
Cisco ACI Verified Scalability	Contains the maximum verified scalability limits for Cisco ACI fabrics.
Cisco DCNM Verified Scalability	Contains the maximum verified scalability limits for Cisco DCNM fabrics.
Cisco ACI YouTube channel	Contains videos that demonstrate how to perform specific tasks in the Cisco Multi-Site.

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, send your comments to mailto:apic-docfeedback@cisco.com. We appreciate your feedback.

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