Release Notes for Cisco OpenStack Integration for Nexus Dashboard 4.1

Contents

Introduction

This document provides important information regarding the Cisco OpenStack Integration for Nexus Dashboard 4.1. This integration enables OpenStack workflows to configure fabric networking through the Nexus Dashboard Fabric Controller component of Nexus Dashboard. It leverages the Nexus Dashboard Fabric Controller Modular Layer 2 (ML2) Mechanism Driver and Topology Agents to provide seamless connectivity between virtualized compute instances and network switches, allowing OpenStack to program fabric switches based on user-defined network resources.

New features and enhancements

This release of the Cisco OpenStack Integration for Nexus Dashboard offers the following key benefits:

- **Hardware Accelerated Networking:** Provides hardware accelerated Layer 2 and Layer 3 forwarding at the switch level, delivering enhanced scalability and performance for large-scale deployments.
- **BGP-EVPN Fabric with VXLAN:** Supports the deployment of BGP-EVPN fabrics utilizing VXLAN for overlay networking.
- **Automated Topology Discovery:** Facilitates automated host-to-fabric mappings through LLDP discovery, simplifying network configuration.
- **Streamlined Automation:** Offers streamlined fabric network automation for OpenStack deployments.
- **Simplified Management:** Simplifies the management of Layer 2 and Layer 3 networks within the integrated environment.
- **SDN Solution Compatibility:** Compatible with Open Virtual Networking (OVN) SDN solutions.
- **Resource Mapping:** Seamlessly maps OpenStack resources (Project, Network, Subnet, Port) to corresponding Nexus Dashboard resources (VRF, Network, Network's subnet gateway, Network attachment).

Install and upgrade

For detailed step-by-step instructions on installation and configuration, see Cisco OpenStack Integration for Nexus Dashboard 4.1 – Installation Guide.

Supported networking-cisco tag

For this release, ensure you use the `networking-cisco` tag version 8.1.0. This tag corresponds to the OpenStack Caracal (2024.1) release and is validated for compatibility with Nexus Dashboard 4.1. For detailed instructions on cloning the repository and checking out the appropriate tag, see “Creating and Installing OpenStack Packages for Nexus Dashboard” section in the Cisco OpenStack Integration for Nexus Dashboard 4.1 – Installation Guide.

Key configuration updates

The Cisco OpenStack Integration for Nexus Dashboard 4.1 – Installation Guide provides detailed steps for configuring the following:

- **Neutron on controller node:** Update the file `/etc/neutron/plugins/ml2/ml2_conf.ini` to include `[ndfc]` in the `mechanism_drivers` and configure the `[ndfc]` section (referring to the Nexus Dashboard Fabric Controller configuration).
- **Keystone configuration:** `/etc/keystone/keystone.conf` to configure the `oslo_messaging_notifications` section for the messaging bus used by the OpenStack cluster.
- **Topology agent on compute nodes:** Configure `/etc/neutron/plugins/ml2/lldp.ini` and update `/etc/neutron/neutron.conf` to enable and configure the topology agent service.

Upgrade process

Before performing an upgrade, ensure you back up your current configurations and database. Follow the same installation steps outlined in the Cisco OpenStack Integration for Nexus Dashboard 4.1 – Installation Guide, making sure to use the latest version of the Cisco networking package. After completing the upgrade, conduct comprehensive testing to verify connectivity and overall functionality.

Open issues

To see additional information about the caveats, click the bug ID to access the Bug Search Tool (BST). The "Exists In" column of the table lists the specific patches in which the issue exists.

To search for a bug ID within Cisco's product documentation, enter in the address bar of a web browser: <bug_number> site:cisco.com.

For example: CSCwo61222 site:cisco.com

Table 1. Open issues for OpenStack Integration for Nexus Dashboard 4.1.

Bug ID	Description	Exists in	Affected Functionality
CSCwq61006	ML2 Plugin to handle the Network VLAN overlapping with VRF VLAN on NDFC	8.1.0	Network creation
CSCwq73520	ML2 Plugin sending Network port attachment call twice to NDFC leading to deployment error	8.1.0	Instance launch

Related content

For additional information, see Cisco OpenStack Integration for Nexus Dashboard 4.1 – Installation Guide.

Documentation feedback

To provide technical feedback on this document, or to report an error or omission, send your comments to ciscodcnapps-docfeedback@cisco.com.

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