Cisco Dynamic Fabric Automation 1.0 Release Notes

Date: January 31, 2014
Part Number: OL-31108-01 AO
Current Release: Cisco Dynamic Fabric Automation 1.0

This document describes the features, caveats, and limitations for Cisco Dynamic Fabric Automation (DFA) 1.0 software. Use this document in combination with documents listed in the "Related Documentation" section on page 4.

Note Release notes are sometimes updated with new information about restrictions and caveats. See the following website for the most recent version of the Cisco Dynamic Fabric Automation 1.0 Release Notes:
http://www.cisco.com/en/US/solutions/ns340/ns517/ns224/ns945/dynamic_fabric_automation.html

Table 1 shows the online change history for this document:

Table 1 Online History Change

Part Number	Revision	Date	Description
OL-31108-01	A0	January 31, 2014	Created Release Notes for Cisco Dynamic Fabric Automation 1.0.

Contents

This document includes the following sections:

Cisco Systems, Inc.
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Introduction

Cisco Dynamic Fabric Automation (DFA) simplifies fabric management, optimize the fabric infrastructure, and automates provisioning across physical and virtual environments.

System Requirements

Hardware and Software Requirements

Cisco Dynamic Fabric Automation 1.0 has the following hardware and software requirements:

Table 2 Cisco Dynamic Fabric Automation 1.0 Hardware and Software Requirements

Function	Platform	I/O Module	Minimum Software Version
Fabric Management	Cisco DCNM		Cisco Prime DCNM Release 7.0(1)
DFA Spine	Cisco Nexus 600x		Cisco NX-OS Release 7.0(0)N1(1)
	Cisco Nexus 7x00	F2, F2e	Cisco NX-OS Release 6.2(6)
DFA Leaf	Cisco Nexus 600x		Cisco NX-OS Release 7.0(0)N1(1)
DFA Border Leaf	Cisco Nexus 600x		Cisco NX-OS Release 7.0(0)N1(1)
L2-only Leaf	Cisco Nexus 500x		Cisco NX-OS Release 7.0(0)N1(1)
Virtual Switch	Cisco Nexus 1000v		Cisco NX-OS Release 4.2(1)SV2(2.1b)
Network Services Controller	Cisco Prime NSC		NSC 3.2
OpenStack Build Node	Openstack		dfa 1.0 (grizzly-based)
OpenStack Control Node	Openstack		dfa 1.0 (grizzly-based)
OpenStack Compute Node	Openstack		dfa 1.0 (grizzly-based)

New and Changed Features

This section describes the new features introduced in Cisco Dynamic Fabric Automation 1.0.

Cisco Dynamic Fabric Automation 1.0 includes the following four modular and independent functions for simplifying, optimizing, and automating the Data Center fabric environment:

1. **Fabric Management**—offers new levels of management, simplifies workload visibility, optimizes troubleshooting, and automates fabric component configuration.
2. **Workload Automation**—integrates with automation and orchestration tools through northbound APIs. In addition, it offers a level of control for fabric component provisioning through the automatic application of templates, leveraging southbound APIs and/or standard based protocols. This mechanism is also extensible to network services.
3. **Optimized Networking**—offers Layer 2 switching and Layer 3 routing concurrently. With optimized networking, your network has smaller failure domains with subnets that support Layer 2 switching and Layer 3 routing concurrently when you use a simple distributed gateway mechanism.
4. **Virtual Fabrics**—offer logical fabric isolation and segmentation within the fabric, by extending the boundaries of segmented environments to different routing and switching instances. These technologies can be combined to support hosting, cloud, and/or multitenancy environments.

Limitations

The limitations of Cisco Dynamic Fabric Automation 1.0 are as follows:

- Cisco DFA requires a minimum of one multiprotocol Border Gateway Protocol (BGP) route reflector.
- Every Cisco DFA node, which is intended to be managed by fabric management, needs to connect through an Ethernet out-of-band port (mgmt0) to this network.
- Console connection for management is recommended but not required for Cisco DFA.
- In order to avoid Cisco DFA device autoconfiguration interfering with other DHCP servers, we recommend that you use a dedicated VLAN and subnet for an enhanced fabric management network. Cisco Data Center Network Manager (DCNM) as well as the Ethernet out-of-band port of the DFA nodes (for example, mgmt0) will reside in the enhanced fabric management network. You have the option to interconnect the enhanced fabric management network with your existing out-of-band management network.
- The Cisco Nexus 5000 Series supports the following:
  - L2 only DFA leaf.
  - L3 Anycast gateway via a Cisco Nexus 6000 DFA leaf .
  - Fabric Management as a DFA leaf by DCNM 7.0.

Note The Cisco Nexus 5000 Series does not support auto-configuration.

- The Cisco Nexus 5000 Series does not support Segment ID.

Caveats

This section includes the following topics:

Cisco Bug Search

Bug Search Tool (BST), the online successor to Bug Toolkit, is designed to improve our customers' effectiveness in network risk management and device troubleshooting.

BST allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The service has provision to filter bugs based on credentials to provide external and internal bug views for the search input.

Please check out Bug Search Tools & Resources on Cisco.com. For more details on the tool overview and functionalities, check out the help page, located at http://www.cisco.com/web/applicat/cbsshelp/help.html.

Open Caveats—Cisco Dynamic Fabric Automation 1.0

- CSCul28424

  Symptom: In a DFA enhanced multicast environment, duplicate packets will be sent out on fabric, where host VLAN is enabled with fabricpath and PIM.

  Condition: In a DFA enhanced multicast environment, if host VLAN is fabricpath and PIM enabled, duplicate packets will be sent out on fabric. We currently do not support enabling PIM on fabricpath VLANs in DFA enhanced multicast environment.

  Workaround: Do not explicitly configure PIM on host VLANs in a DFA enhanced multicast environment.

- CSCum37744

  Symptom: In a DFA enhanced multicast environment, if DFA border leafs are in VPC+ mode, duplicate packets may be sent towards the receivers.

  Conditions: This happens in a DFA enhanced multicast environment, if DFA border leafs are in VPC+ mode.

  Workaround: Deploy border leafs in a non-VPC+ mode.

Related Documentation

Software Downloads, Release, and General Information

Cisco DCNM Release Notes, Release 7.0:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/7_x/dcnm/release/notes/dcnm_7_0_relnotes.html

Cisco Dynamic Fabric Automation Solution Guide:

http://www.cisco.com/en/US/docs/switches/datacenter/dfa/solution/guide/b-dfa-solution-.html

Reference Guides

Cisco Dynamic Fabric Automation Command Reference:

http://www.cisco.com/en/US/docs/ios-xml/ios/dfa/command/dfa-cr-book.html

Install and Upgrade Guides

Cisco DCNM 7.0 OVA Installation Guide:

http://cisco.com/en/US/docs/switches/datacenter/sw/7_x/dcnm/installation/master_files/OVA_Installation_Guide.html

Cisco Dynamic Fabric Automation Migration Guide:

http://www.cisco.com/en/US/docs/switches/datacenter/dfa/migration/guide/b-dfa-migration.html

OpenStack for Cisco DFA

http://docwiki.cisco.com/wiki/OpenStack

Configuration Guides

Cisco DCNM 7.0 Fundamentals Guide:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/7_x/dcnm/fundamentals/guide/dcnm/DCNM-SAN-LAN_published/DCNM_Fundamentals.html

Cisco Dynamic Fabric Automation Verified Scalability Guide:

http://www.cisco.com/en/US/docs/switches/datacenter/dfa/verified-scalability/guide/b-dfa-scale-guide.html

Cisco Nexus 1000V DFA Configuration Guide, Release 4.2(1)SV2(2.2):

http://cisco.com/en/US/docs/switches/datacenter/nexus1000/sw/4_2_1_s_v_2_2_2/DFA/configuration/b_Cisco_Nexus_1000V_DFA_Configuration_Guide_421_SV2_2_2.html

Cisco Nexus 1000V VDP Configuration Guide, Release 4.2(1)SV2(2.2):

http://cisco.com/en/US/docs/switches/datacenter/nexus1000/sw/4_2_1_s_v_2_2_2/VDP/configuration/b_Cisco_Nexus_1000V_VDP_Configuration_Guide_421_SV2_2_2.html

Cisco DFA REST 7.0 API Guide:

http://www.cisco.com/en/US/docs/switches/datacenter/sw/7_x/dcnm/rest_api/guide/dcnm/restapi_published/rest_api.html

Cisco Prime Network Services Controller 3.2 User Guide:

http://cisco.com/en/US/docs/net_mgmt/prime/network_services_controller/3.2/user/guide/b_32_User_Guide.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly What's New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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