

Extreme Fabric Automation 2.0.2 Release Notes v1.0

October 2019

9036036-02 Rev AA

Copyright Statement and Legal Notices

Copyright © 2019 Extreme Networks, Inc. All Rights Reserved.

Legal Notice

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries. All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see:

www.extremenetworks.com/company/legal/trademarks

Open Source Declarations

Some software files have been licensed under certain open source or third-party licenses. End-user license agreements and open source declarations can be found at:

www.extremenetworks.com/support/policies/software-licensing

Contents

Copyright Statement and Legal Notices	2
Document history	4
Preface	5
Introduction	7
Installation	9
Features Supported	10
Server Prerequisites for DCA.....	11
Switch Prerequisites.....	11
Known Limitations/Issues	12

Document history

Version	Summary of changes	Publication date
1.0	Release 2.0.2	28 October 2019

Preface

Contacting Extreme Technical Support

As an Extreme customer, you can contact Extreme Technical Support using one of the following methods: 24x7 online or by telephone. OEM customers should contact their OEM/solution provider.

If you require assistance, contact Extreme Networks using one of the following methods:

- GTAC (Global Technical Assistance Center) for immediate support
- Phone: 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact.
- Email: support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- GTAC Knowledge - Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- The Hub - A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- Support Portal - Manage cases, downloads, service contracts, product licensing, and training and certifications.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Extreme resources

Visit the Extreme website to locate related documentation for your product and additional Extreme resources.

White papers, data sheets, and the most recent versions of Extreme software and hardware manuals are available at www.extremenetworks.com. Product documentation for all supported releases is available to registered users at www.extremenetworks.com/support/documentation.

Document feedback

Quality is our first concern at Extreme, and we have made every effort to ensure the accuracy and completeness of this document. However, if you find an error or an omission, or you think that a topic needs further development, we want to hear from you.

You can provide feedback in two ways:

- Use our short online feedback form at <http://www.extremenetworks.com/documentation-feedback-pdf/>
- Email us at internalinfodev@extremenetworks.com

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Introduction

Extreme Fabric Automation (EFA) is also known as Data Center Automation Application (DCA) is a Go-based, scalable Golang-based application that orchestrates the following installations:

- 3-stage IP Fabric
- 5-stage IP Fabric
- Tenant Aware Networks

Scope

This document was originally a “Release” document titled Extreme Fabric Automation (EFA), 2.0.0 Release Notes v1.0. Its content has been subsequently updated. For additions in 2.0.2 please refer to the section below titled ‘Following enhancements/defect fixes were carried out in EFA 2.0.2 release’

This release addresses only the automation of Fabric infrastructure and Tenant Services lifecycle management of 3- and 5-stage IP Clos DC Fabrics. It does not address the automation of Small Data Centers or 7-stage IP Clos Fabrics.

EFA does not support any additional manual configuration changes directly on the IP fabric nodes and EFA cannot reconcile any manually performed configurations. It is recommended to use EFA for any IP Fabric configuration operations to ensure correctness of the configurations

Key features

The key features of this application are as follows:

- Conformance to the EVD (Extreme Validated Design for IP Fabric) - <https://www.extremenetworks.com/resources/extreme-validated-design/extreme-ip-fabric-architecture/>
- Ease and speed of provisioning and trouble shooting
- Seamless installation/deployment mechanism
- High performance and low resource utilization with minimal touch points
- Programmable containerized services through an industry-standard Open API (<https://www.openapis.org/>)-based programmable interface
- Easy-to-use CLI commands to manage devices in an IP Fabric and Tenant Networks.

Following enhancements/defect fixes were carried out in EFA 2.0.2 release

- Enhancements: None
- Defect fixes :
 1. Inventory service hangs during DeviceUpdate
 2. Failed error while executing "inventory device running-config persist" command
 3. Device Role not getting assigned during dca fabric device add-bulk operation in the Inventory service

Supported Platform Matrix

This application is supported on the following platforms.

Platform	Role	SLXOS version
SLX-9140	Leaf	18s.1.01/a/c , 18s.1.03
SLX-9240	Leaf/Spine/Super-spine	18s.1.01/a/c, 18s.1.03
SLX-9850	Spine/Super-spine	18r.1.00aa/b/c
EN-SLX-9030-48S	Leaf	18x.1.00/a/b
EN-SLX-9030-48T	Leaf	18x.1.00/a/b
SLX-9540	Leaf/Border Leaf	18r.1.00aa/b/c

EFA comprises three core containerized services that interact with each other and other infrastructure services to provide the core functions of IP Fabric automation:

Asset Service	Provides the secure credential store and deep discovery of physical/logical assets of the managed devices, and publishes the asset refresh/change events to other services
Fabric Service	Helps orchestrate and visualize the BGP/EVPN-based 3- and 5-stage Clos networks
Tenant Service	Helps manage the Tenants, Tenant Networks, and end points, fully leveraging the knowledge of Assets and the underlying fabric

The following figure illustrates the application's Docker-based functionality in provisioning and discovery.

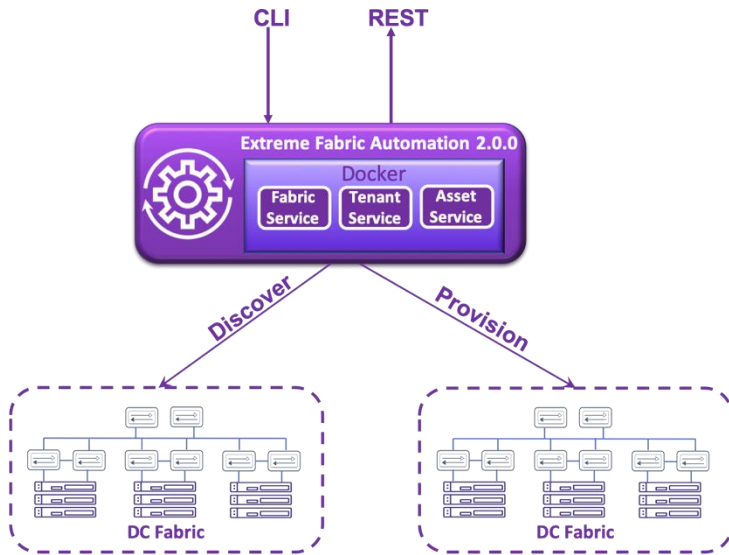


Figure 1. Docker-based provisioning and discovery

Features supported

1. Unified CLIs for provisioning and show commands
2. Underlay provisioning for 3-stage and 5-stage Clos topologies includes the following:
 - Interface configurations for Fabric and ICL links
 - MCT cluster configuration
 - BGP session between super-spine, spine, and leaf nodes
 - Validation of the connectivity between the nodes and identification of missing links
3. Overlay provisioning for 3-stage and 5-stage Clos topologies includes the following:
 - Overlay gateway/LVTEP configuration
 - EVPN configuration
4. Tenant Services
 - Simplified CLI – A single CLI to provision VLAN, associated VE, VRF, create and configure a port-channel, configure the port-channel as an MCT client, and add the VLAN to eVPN instance. The port-channel can be enabled with the Endpoint Tracking (EPT) feature or the VLAN can be statically associated.
 - Update CLIs – Used to associate additional VLANs statically to an interface.
 - Modular CLIs – Provide option to configure all the associated individual Tenant constructs provided by simplified CLI.
 - Delete and show commands for the Tenant constructs.
NOTE: For a detailed reference please refer to the section “Tenant Network Provisioning” in the *EFA Administration Guide* for this release.
5. Changes during installation.
 - None (Same as 2.0.1 installation)
For details please refer to “New Installation” in the *EFA Administration Guide 2.0.1*.
6. Upgrade section
 - For instructions on upgrading from the previous release of EFA, please refer to the section “Upgrade/reinstall” in the *EFA Administration Guide*.
 - MCT cluster configuration
 - BGP session between super-spine, spine, and leaf nodes
 - Validation of the connectivity between the nodes and identification of missing links

Server prerequisites for EFA

Note the following requirements.

Prerequisites	<ul style="list-style-type: none">• Minimum System Requirements<ul style="list-style-type: none">- CPU: 4 cores- Storage: 50 GB- RAM: 8 GB- OS: Ubuntu 16.04+• Software (installed by deployment script)<ul style="list-style-type: none">- Docker CE: v18.06.1~ce~3-0~ubuntu- Docker-compose: v1.22- Docker-compose file: version 3- postgresql-client: v9.6
----------------------	--

Switch prerequisites

- Management IP addresses need to be configured on all switches.
- SLX device should have appropriate firmware version mentioned in the “Supported Platform Matrix” section.
- On SLX 9850, fabric links need to be manually enabled i.e. “no shut”.
- On SLX 9540, correct TCAM profile needs to be set and switch rebooted.

```
SLX# conf
Entering configuration mode terminal
SLX(config)# hardware
SLX(config-hardware)# profile tcam vxlan-ext
%Warning: To activate the new profile config, please run
'copy running-config startup-config' followed by 'reload
system'.
SLX(config-hardware)#
```

- Breakout ports, if any, on SLX devices must be manually configured. Please see the appropriate SLX-OS Management Guide for configuration steps.
- EVD guidelines for fabric and ICL port connections on leaf nodes –
 - SLX9140, SLX9540: 0/49 – 0/54
 - SLX9030: 0/49 – 0/52

Software licenses requirements

EFA Software requires the “Advanced Feature” license enabled for all the nodes of the Fabric and supports the SLX platforms listed above in the [Supported Platform Matrix](#).

S/W License requirement	SLX 9140	SLX 9240	SLX 9030	SLX 9540	SLX 9850
Needs “License” for MCT feature	No	No	No	Yes (Advanced Feature License)	Yes (MPLS license)

Known Limitations/Issues

Issue Reference	Issue Summary	Symptom	Workaround
GA-1827	Partial completion of tenant network workflow creation command and failure	Tenant network workflow creation command fails after partial completion	manually delete the partial completed task, eggs,po before re-running workflow CLI.
GA-1432	vlan instead of bridge-domain as IRBD is not supported	VRF creation with vlan instead of bridge-domain as IRBD	No workaround. This is not supported in current release.
GA-2012	VRRP configuration is not done if multiple POs are created in a network	VRRP configuration is not done on switch	Create one network for each PO instead of multiple POs in a network.
GA-1398	Different values for “route-target export” and “route-target import” not supported	“route-target export/import” not configured on devices	No workaround. This is not supported in current release.
GA-1346	IRBD value auto picked	User can't specify IRBD value	No workaround. This is not supported in current release.
GA-898	CTRL+C exit when EFA CLIs execution is in-progress results in subsequent commands to take longer time as well as partial completion of in-progress commands.	Part of the aborted operation might have already been complete.	Check EFA fabric and asset services and undo part of the completed abort operation. While EFA commands are in progress, it is recommended not to abort them.

GA-961	Devices in the inventory are not listed in any order for inventory show commands.	Devices in inventory list will not be sorted.	No workaround, this is an expected behavior.
GA-1628	unnumbered IP address for fabric/MCT links is not supported	Unnumbered is not supported	unnumbered IP address for fabric/MCT links is not supported in this release
GA-1459	Not possible to edit fabric settings once the fabric is active	Once the fabric is configured, it is not allowed to edit fabric settings.	None, Fabric settings like IP, BFD enable/disable, ASN must be decided before configuring the fabric as part of planning.
GA-929	While fabric configuration is in-progress user is not prompted with any message on the progress/state	Option to see status of fabric configuration progress	Not supported in current release
GA-2032	Fabric formation is failing sometimes for 9540 with images 18r.1.00a/aa/b/c due to L3 reachability issues.	MCT wont form in few cases. The issue happens because we have a Stale entry in arpagt db	Reload/Reset the linecard
GA-2070	Network remains in error state after leaf nodes are removed from fabric and re-added - ept case only	Network will remain in error state and configs are not pushed	Recreate the network
GA-1383	"dca tenant workflow network bulk-create" failures	Following error is observed "CreateSwitchPortMode failed. "2" has a bad length/size."	Recreate network that has failed.
GA-2381	Driver bad connection error while creating tenant po in OVA installation	Tenant PO creation command fails	Restart the container, by executing the command - "docker-compose stop" followed by "docker-compose up -d"