Extreme Fabric Automation 2.3.0

Command Reference

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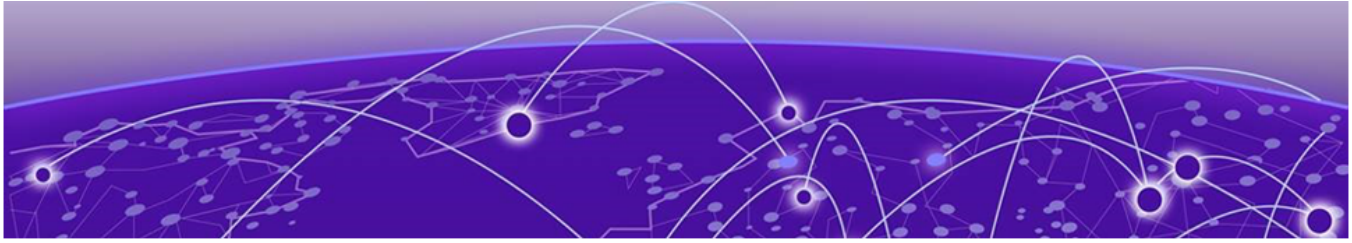

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Preface

This section describes the text conventions used in this document, where you can find additional information, and how you can provide feedback to us.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product.
	Note	Useful information or instructions.
	Important	Important features or instructions.

Table 1: Notes and warnings (continued)

Icon	Notice type	Alerts you to...
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.

Table 2: Text

Convention	Description
`screen displays`	This typeface indicates command syntax, or represents information as it appears on the screen.
The words *enter* and *type*	When you see the word *enter* in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says *type*.
Key names	Key names are written in boldface, for example **Ctrl** or **Esc**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **Ctrl**+**Alt**+**Del**
Words in italicized type	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
italic text	Italic text indicates variable content.
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ **x** | **y** | **z** }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x | **y**	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, *member*[*member*...].
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

Current Product Documentation

Release Notes

Hardware and software compatibility for Extreme Networks products

Extreme Optics Compatibility

Other resources such as white papers, data sheets, and case studies

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Getting Help

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

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: (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

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

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions 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

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Note
You can modify your product selections or unsubscribe at any time.

4. Select **Submit**.

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- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information in the document.
- Broken links or usability issues.

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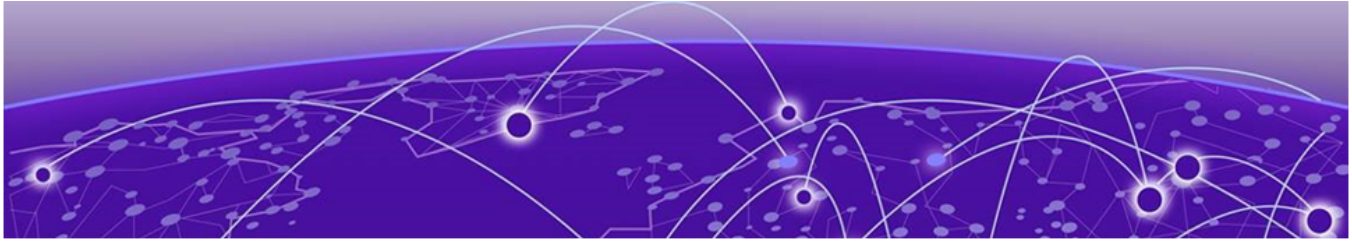
- In a web browser, select the feedback icon and complete the online feedback form.
- Access the feedback form at https://www.extremenetworks.com/documentation-feedback/.
- Email us at documentation@extremenetworks.com.

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.



About this Document

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Supported Platforms and Deployment Models on page 13

What's New in this Document

There are new, modified, and deprecated commands in this release.

New commands

- **efa inventory admin-state up**
- **efa inventory admin-state down**
- **efa inventory admin-state delete**
- **efa inventory admin-state detail**
- **efa inventory admin-state history**
- **efa inventory admin-state show**
- **efa notification subscribers add-syslog-relp**
- **efa system backup**
- **efa system backup-list**
- **efa system feature show**
- **efa system feature update**
- **efa system restore**
- **efa system settings show**
- **efa system settings update**
- **efa tenant service bgp peer-group configure**
- **efa tenant service bgp peer-group create**
- **efa tenant service bgp peer-group delete**
- **efa tenant service bgp peer-group show**
- **efa tenant service bgp peer-group update**
- **efa-change-hostname**
- **efa-change-ip**
- **efa-change-vip**

- **efa-sync execute**
- **efa inventory debug devices-lock**

Modified commands

- **efa inventory device interface set-admin-state**
- **efa inventory device interface set-breakout**
- **efa inventory device interface set-mtu**
- **efa inventory device interface set-speed**
- **efa inventory device interface unset-breakout**
- **efa inventory device system set-mtu**
- **efa inventory config-replay**
- **efa tenant vrf create**
- **efa tenant vrf update**
- **efa tenant update**
- **efa tenant epg show**
- **efa fabric setting update**
- **efa tenant service bgp configure → efa tenant service bgp peer configure**
- **efa tenant service bgp create → efa tenant service bgp peer create**
- **efa tenant service bgp delete → efa tenant service bgp peer delete**
- **efa tenant service bgp show → efa tenant service bgp peer show**
- **efa tenant service bgp update → efa tenant service bgp peer update**

Deprecated commands

- **efa backup**
- **efa fabric import**
- **efa fabric export**
- **efa restore**
- **efa supportsave**

Supported Platforms and Deployment Models

Table 4: Bare Metal Deployment Models

Version	Deployment	Managed SLX Devices	Multi-Fabric Support	Ubuntu Version	Server Requirement
EFA 2.1.0	External server (bare metal)	More than 24	Yes	16.04	CPU: 4 cores Storage: 50 GB RAM: 8 GB
EFA 2.2.0 and later	External server (bare metal)	More than 24	Yes	16.04, 18.04	

Table 5: OVA Deployment Models

Version	Deployment	Managed SLX Devices	Multi-Fabric Support	Ubuntu Version	Server Requirement
EFA 2.1.0	External server (OVA)	More than 24	Yes	16.04	CPU: 4 cores Storage: 50 GB RAM: 8 GB
EFA 2.2.0 and later, in secure mode	External server (OVA)	More than 24	Yes	18.04	

Table 6: TPVM Deployment Models

Version	Deployment	Managed SLX Devices	Multi-Fabric Support	Ubuntu Version	Minimum SLX-OS version
EFA 2.1.0	SLX 9150 TPVM SLX 9250 TPVM	Up to 24	Yes	16.04	20.1.1
EFA 2.2.0	SLX 9150 TPVM SLX 9250 TPVM	Up to 24	Yes	18.04	20.1.x

Table 6: TPVM Deployment Models (continued)

Version	Deployment	Managed SLX Devices	Multi-Fabric Support	Ubuntu Version	Minimum SLX-OS version
EFA 2.3.0	SLX 9150 TPVM SLX 9250 TPVM	Up to 24	Yes	18.04	20.1.2x
EFA 2.3.0	SLX 9740 TPVM	Up to 24	Yes	18.04	20.2.2

Table 7: TPVM Software Support

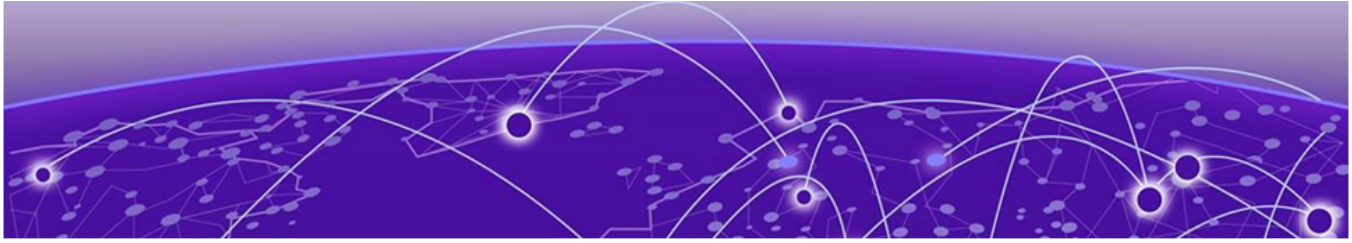
TPVM Version	SLX-OS 20.1.1	SLX-OS 20.1.2x	SLX-OS 20.2.1x	SLX-OS 20.2.2	Ubuntu Version	EFA Version
3.0	Yes	Yes	No	No	16.04	2.1.0
4.0.0-5	No	Yes	No	No	18.04	2.2.0
4.0.0-7, 4.0.1	No	Yes	Yes	No	18.04	2.2.0, 2.3.0
4.1.1-0	No	No	No	Yes	18.04	2.3.0

Table 8: IP Fabric Topology Matrix

Platforms	SLX-OS Release	Leaf	Spine	Super Spine	Border Leaf	Small DC Fabric
SLX 9030	18x.1.00b	✔				
SLX 9140	18s.1.03	✔				✔
SLX 9240	18s.1.03	✔	✔	✔		
SLX 9150	20.1.x, 20.2.x	✔				✔
SLX 9250	20.1.x, 20.2.x	✔	✔			✔
SLX 9540	20.1.x, 20.2.x	✔			✔	
SLX 9640	20.1.x, 20.2.x				✔	
SLX 9740	20.2.x		✔	✔	✔	✔
SLX 9850	18r.1.00c		✔	✔		

Table 9: EFA, Neutron, and SLX-OS Compatibility

EFA Version	Neutron Version	SLX-OS Version
2.3.0	2.3.0_19	20.1.2d



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efa auth apikey

Creates or displays the API Key for the OpenStack instance.

Syntax

efa auth apikey generate --client-id --force --help

efa auth apikey show --client-id --help

Parameters

--client-id

Generates the API Key for the indicated client ID.

--force

Forces key regenerate.

--help

Displays help for the command.

Usage Guidelines

Use this command to generate the API Key after you used the **efa auth client register** command to register the client.

Save the generated key to use for configuring the ML2 plug in.

Examples

This example generates an API Key for the indicated client ID.

```
# efa auth apikey generate --client-id d6d7430e-7cd0-11ea-b7a6-aaa8d3cb654e
API Key is created successfully.
eyJhbGciOiJSUzI1NiIsImtZCI6IjEuMCIssInR5cCI6IkpX...
--- Time Elapsed: 506.458623ms ---
```

efa auth client

Deletes or registers OpenStack tenant clients and displays client details.

Syntax

efa auth client delete --name *tenant-name* **--help**

efa auth client register --name *tenant-name* **--type** *client-type* **--help**

efa auth client show --name *tenant-name* **--help**

Parameters

--name *tenant-name*

Specifies the name of the tenant to register.

--type *client-type*

Specifies the type of client you are registering (`cli` or `OpenStack`.

--help

Provides help for the commands.

Usage Guidelines

Use the generated key when you configure the ML2 plugin.

Examples

This example registers a tenant called RegionOne.

```
# efa auth client register --name RegionOne -- type OpenStack
Successfully registered client.
Attribute          Value
name               RegionOne
type               OPENSTACK
ID                 d6d7340e-7cd0-11ea-b7a6-aaa8d3cb654e
```

efa auth execution

Deletes or displays the authorization execution logs.

Syntax

efa auth execution delete --days int32 --help

efa auth execution show --help --id string --limit int32 --status string

Parameters

show

Displays a list of executions.

--id string

Filters the executions based on execution id. The "limit" and "status" flags are ignored when "id" flag is given.

--limit int32

Limits the number of executions to be listed. Value "0" lists all the executions (default 10).

--status string

Filters the executions based on the status (failed/succeeded/all) (default "all").

delete *--days int32*

Deletes execution entries that are older than the specified number of days (default 30).

Examples

This example deletes entries older than 15 days.

```
efa auth execution delete 15
```

efa auth generatekey

Creates an API key for the OpenStack instance.

Syntax

efa auth generatekey --clientID *id*

Parameters

--clientid *id*

Specifies the client ID.

Usage Guidelines

The client ID is generated when you run the **efa auth client register** command.

Examples

This example creates an API key for the specified client ID.

```
# efa auth generatekey --clientID d6d7340e-7cd0-11ea-b7a6-aaa8d3cb654e
API key is created successfully.
eyJhbGciOiJSUzI1NiIsImtpZCI6IjEuMCIsInR5cCI6IkpX...
-- Time Elapsed: 506.458623ms --
```

efa auth ldapconfig

Configures an external LDAP server for user validation and to fetch user groups

Syntax

efa auth ldapconfig { **add** | **delete** | **update** }{ **--name** *ldap-name* | **--primary** *value* |**--host** *hostname* | **--port** *port-num* | [**--tls** | **--insecure-tls**] **--cacert** *cert-loc* | **--timeout** *value* | **--bind-user-name** *dn* | **--bind-user-password** *pword* |**--user-search-base** *dn* | **--user-object-class** *obj-class* | **--user-login-attribute** *att-value* | **--user-role-attribute** *att-value* |**--user-role-attribute-key** *att-value* | **--user-member-attribute** *att-value* | **--group-search-base** *dn* | **--group-object-class** *obj-class* | **--group-attribute** *att-value* | **--group-member-user-attribute** *att-value* | **--group-member-mapping-attribute** *att-value*}

efa auth ldapconfig show

Parameters

add | **delete** | **update**

Designates the type of action to perform for the LDAP configuration.

show

Displays the current LDAP server configuration.

--name *ldap-name*

Specify the name of the LDAP connection.

--primary *value*

Specify 1 when multiple LDAP connections are available.

--host *hostname*

Specify the host name or IP address of the host server.

--port *port-num*

Specify the port at which the LDAP server listens for connections.

--tls | **--insecure-tls**

Specify **--tls** to use LDAP over SSL and TLS. Specify **--insecure-tls** to use LDAP without certification verification.

--cacert *cert-loc*

Specify the location of the Certificate Authority certificate.

--timeout *value*

Specify the number of seconds that must elapse before the LDAP server is considered unreachable. The default is 5 seconds.

--bind-user-name *dn*

Specify the Distinguished Name (DN) of the user that you want to use to bind, search, and retrieve LDAP entries.

--bind-user-password *pword*

Specify the password of the bind user.

--user-search-base *dn*

Specify the DN of the node in the directory tree from which searches for user objects will start.

--user-object-class *obj-class*

Specify the name of the object class to use for user objects. The default is `inetOrgPerson`.

--user-login-attribute *att-value*

Specify the attribute that matches the user name part of credentials that users enter while logging in. The default is `uid`.

--user-role-attribute *att-value*

Specify the attribute from which the user role is read.

--user-role-attribute-key *att-value*

Specify the attribute that reads the role value from the role attribute.

--user-member-attribute *att-value*

Specify the attribute that reads the member of the group that the user is part of.

--group-search-base *dn*

Specify the DN of the node in the directory tree from which searches for group objects begins.

--group-object-class *obj-class*

Specify the name of the object class to use for group searches. The default is `groupOfNames`.

--group-attribute *att-value*

Specify the attribute that defines the search filter on a group. The default is `cn`.

--group-member-user-attribute *att-value*

Specify the name of the user attribute whose format matches the group members. The default is `entrydn`.

--group-member-mapping-attribute *att-value*

Specify the name of the group attribute that contains the members of a group. The default is `member`.

Usage Guidelines

You configure an LDAP server for user validation and to fetch user groups.

When a user is assigned EFA roles in LDAP, ensure that you define the **--user-role-attribute** parameter.

You can use key-value pairs to define one attribute value that assigns multiple roles to a user. Use the **--user-role-attribute-key** parameter for such a scenario.

When you use LDAP groups to assign roles to users, ensure that you define the **--user-member-attribute** parameter.

When LDAP groups are not in the same search base as the users in the groups, ensure that you define the following parameters.

- **--group-search-base**
- **--group-object-class**
- **--group-attribute**
- **--group-member-user-attribute**
- **--group-member-mapping-attribute**

To configure LDAP for a deployment of EFA on a TPVM, see the "TPVM Management" section of the *Extreme SLX-OS Management Configuration Guide*.

Examples

This example configures the bind user name, the bind password, and the DN of the node from which searches start.

```
# efa auth ldapconfig add --name ldapconfig -- host 10.x.x.x
--bind-user-name cn=admin,dc=extrnet,dc=com --bind-user-password password
--user-search-base ou=people,dc=extrnet,dc=com
```

This example configures the **--user-role-attribute** parameter for a user that is assigned EFA roles in LDAP.

```
# efa auth ldapconfig add --name ldap1 --host 10.x.x.x
--bind-user-name cn=x,dc=y,dc=com --bind-user-password xxx
--user-search-base ou=people,dc=y,dc=com --user-role-attribute role
```

This example assigns multiple roles to a user with one key-value pair. The role attribute for the user entry in LDAP has the value of `datacenterowner:SystemAdmin,datacenterowner:FabricAdmin`.

```
# efa auth ldapconfig add --name ldap1 --host 10.x.x.x
--bind-user-name cn=x,dc=y,dc=com --bind-user-password xxx
--user-search-base ou=people,dc=y,dc=com --user-role-attribute role
--user-role-attribute-key  datacenterowner
```

This example configures the **--user-member-attribute** for a user entry in LDAP that has an attribute of `memberOf`.

```
# efa auth ldapconfig add --name ldap1 --host 10.x.x.x
--bind-user-name cn=x,dc=y,dc=com --bind-user-password xxx
--user-search-base ou=people,dc=y,dc=com --user-member-attribute memberOf
```

This example configures the attributes required when LDAP groups are not in the same search base as the users in the groups.

```
# ldapconfig add --name ldap1 --host 10.x.x.x --bind-user-name cn=x,dc=y,dc=com
--bind-user-password xxx --user-search-base ou=people,dc=x,dc=com
--group-search-base ou=groups,dc=x,dc=in --group-member-user-attribute dn
--group-member-mapping-attribute memberUid --group-object-class posixGroup
```

This example maps an LDAP group to an EFA role.

```
# efa auth rolemapping add --name <group name> --type GROUP --role SystemAdmin
```

This example configures LDAP Active Directory.

```
# efa auth ldapconfig add --name ldap1 --host 10.x.x.x --bind-user-name cn=x,dc=y,dc=com
--bind-user-password xxx --user-search-base ou=people,dc=y,dc=com --user-object-class
user
--user-login-attribute sAMAccountName --user-member-attribute memberOf
```

efa auth rolemapping

Assigns EFA roles to a user or an LDAP group.

Syntax

efa auth rolemapping add {**--name** *user-name* **--role** *efa-role* **--type** *user-type*}

efa auth rolemapping show

efa auth rolemapping remove--id *id*

Parameters

--name *user-name*

Specifies the user name or the LDAP group name.

--role *efa-role*

Specifies the role that you want to assign. One of the following: FabricAdmin, SecurityAdmin, NetworkOperator, SystemDebugger, SystemAdmin, <Tenant>Admin. The Tenant Administrator is assigned dynamically when the tenant is created. The role name has the format of `<Tenant-name>Admin`.

--type *user-type*

Specifies the type of user. Enter either `user` or `group`.

add

Specifies that you want to add a mapping.

show

Indicates that you want to show all role mappings.

remove --id *id*

Specifies that you want to remove the mapping for the indicated ID number.

Examples

This example assigns the role of Fabric Admin to a user named fabricuser.

```
# efa auth rolemapping add --name fabricuser --role FabricAdmin --type user
Successfully added the role mapping
```

This example assigns the role of NetworkOperator to a group named viewer.

```
# efa auth rolemapping add --name viewer --role NetworkOperator --type group
Successfully added the role mapping.
```

This example displays all assigned mappings.

```
# efa auth rolemapping show
ID  Name     Role          Type
1   efauser    SystemAdmin      USER
2   fabricuser FabricAdmin      USER
3   viewer     NetworkOperator  GROUP
```

This example deletes the role for the user with ID 3.

```
# efa auth rolemapping remove --id 3
Deleted role mapping successfully
```

efa auth settings token

Configures and displays the expiration settings for authentication tokens.

Syntax

efa auth settings token update { **--type cli** | **access** | **refresh** } { **--hours** *num* | **--minutes** *num* }

efa auth settings token show

Parameters

update

Specifies that you want to change one or more of the following:
--type cli | **access** | **refresh**

Specifies the type of token you want to update.

--hours *num* | **--minutes** *num*

Specifies the number of hours or minutes that should elapse before a token expires.

show

Displays the current expiration settings.

Examples

This example sets the CLI token to expire after 2 hours.

```
$ efa auth settings token update --type CLI --hours 2

Successfully updated the token expiry time.
+------+-------+---------+
| Type | Hours | Minutes |
+------+-------+---------+
| CLI  | 2     | 0       |
+------+-------+---------+
--- Time Elapsed: 193.455466ms ---
```

This example displays the current expiration settings.

```
$ efa auth settings token show

+---------+-------+---------+
| Type    | Hours | Minutes |
+---------+-------+---------+
| ACCESS  | 1     | 0       |
+---------+-------+---------+
| REFRESH | 8     | 0       |
+---------+-------+---------+
| CLI     | 2     | 0       |
+---------+-------+---------+
```

efa certificates device install

Installs HTTPS and OAuth2 certificates on SLX devices.

Syntax

efa certificates device install { **--ips** *ip-addr* **certType** [**https**| **token**]}

Command Default

By default, certificates are not installed.

Parameters

--ips *ip-addr*

Specifies a comma-separated list of the IP addresses of the SLX devices on which you want to install the certificate.

certType [**https**| **token**]

Specifies the type of certificate you are installing.

Usage Guidelines

During the registration of an SLX device in EFA, the following configuration changes are made on the device.

- The public certificate for verifying an EFA token is copied to the device as an OAuth2 certificate.
- EFA generates the HTTPS certificate for the SLX device. The certificate is copied to the device, HTTP mode is disabled on the device, and HTTPS is enabled on the device.
- OAuth2 is enabled as the primary mode of authentication. Fallback is set to "local login."

You can use the **efa inventory device list** command to verify the status of the certificates on the device. If the Cert/Key Saved column contains "N," then certificates are not installed. You can then use the **efa certificates device install** command to install the certificates.

Examples

This example installs the HTTPS certificate on two devices.

```
efa certificates device install --ips 1.1.1.1,2.2.2.2 certType http
```

efa certificates server

Installs a third-party certificate that was acquired through a trusted Certificate Authority.

Syntax

efa certificates server [**--certificate** *cert-filename* **--key** *key-filename* **--configfile** *config-filename*]

Parameters

--certificate *cert-filename*

Specifies the file name of the certificate.

--key *key-filename*

Specifies the file name of the certificate key.

--configfile *config-filename*

(Optional) Specifies a different configuration file from the `efa.conf` file used by EFA for its settings.

Examples

This example installs a certificate titled `mycert` using the `myconfigfile.conf` file.

```
$ efa certificate server --certificate mycert --key mycertkey --configfile
myconfigfile.conf
```

efa fabric clone

Cloning can expedite the deployment of fabrics across different sites / data centers. For fabrics in two different data centers to look exactly the same for disaster recovery purposes, create a clone for the source fabric.

Syntax

efa fabric clone [**--source** *source-fabric-name* **--destination** *destination-fabric-name*]

Parameters

--source

Name of the fabric to be cloned.

--destination

New name of the cloned fabric.

Usage Guidelines

This command clones all the fabric properties - type, stage, description, fabric settings - but not the devices on the fabric.

Examples

The following example clones BLR_FABRIC into PUN_FABRIC.

```
efa fabric clone --source BLR_FABRIC --destination PUN_FABRIC
```

efa fabric configure

Configures the underlay and overlay on all fabric devices.

Syntax

efa fabric configure [**--name** *<fabric-name>* | **--force** | **--help**]

Parameters

--name

Specifies the name of the fabric.

--force

Forces the configuration on the devices.

--help

Display help for configure.

Usage Guidelines

If the --force option is used, all the devices will be removed and added back to the fabric. This can result in config remove and add on all the devices.

If the addition of devices to a fabric is successful, the underlay and overlay is configured on all the devices of the Fabric using the `efa fabric configure` command.

Examples

```
(efa:extreme)extreme@tpvm:~$ efa fabric configure --name fabric-2 --force
Configure fabric force
WARNING: Fabric configure with 'force' option 'removes' all the devices from fabric and
'adds' back all the devices to fabric. Do you want to proceed [y/n]?
y
Fetching devices from fabric fabric-2
Removing device from fabric fabric-2
Remove Device(s) [Success]
Removal of device with ip-address = 10.24.80.159 [Succeeded]
Removal of device with ip-address = 10.24.80.158 [Succeeded]
Updating the devices in inventory for fabric fabric-2
Update of device with ip-address = 10.24.80.158 [Succeeded]
Update of device with ip-address = 10.24.80.159 [Succeeded]
Clearing the devices in the fabric fabric-2
Updating the devices in inventory for fabric fabric-2
Update of device with ip-address = 10.24.80.158 [Succeeded]
Update of device with ip-address = 10.24.80.159 [Succeeded]
Add the devices to fabric fabric-2
Add Device(s) [Success]
Addition of Leaf device with ip-address = 10.24.80.158 [Succeeded]
Addition of Leaf device with ip-address = 10.24.80.159 [Succeeded]
Validate Fabric [Success]
Configure Fabric [Success]
Please verify the fabric physical/underlay topology using 'efa fabric topology show
{physical | underlay}
```

```
' before attempting tenant configuration on the fabric.
— Time Elapsed: 1m52.840570796s —
```

efa fabric create

Creates a fabric.

Syntax

efa fabric create [**--name** *<fabric-name>* | **--type** *< clos | non-clos >* |**--stage** *< 3 | 5 >* |**--description** *<description>* |**--help**]

Parameters

--name

Specifies the name of the fabric.

--description

Displays description of the product.

--type *< clos | non-clos >*

Specifies the type of the fabric (default: clos).

--stage

Specifies the stage of the fabric [3 | 5] (default: 3). Stage 0 is considered as Default stage for CLOS and ignored for NON-CLOS.

--help

Displays help for create.

Examples

```
efa fabric create --name clos-fabric --type clos --stage 3
```

efa fabric debug clear-config

Clears the underlay/overlay configuration from the device and recovers the device from erroneous conditions.

Syntax

efa fabric debug clear-config [**--device** *device ip* | **--reference-fabric** *fabric name*]

Parameters

--device

The device IP address

--reference-fabric

Name of the fabric and to which device it will eventually belong.

Examples

```
$ efa fabric debug clear-config --device 10.24.4810.24.48.131,10.24.51.135,10.24.51.
131,10.25.225.58,10.24.80.139.131,10.24.51.135,10.24.51.131,10.25.225.58,10.24.80.139
```

efa fabric debug config-gen-reason

Obtains the configuration generation reason for a particular fabric device.

Syntax

efa fabric debug config-gen-reason [**--device** *device ip* | **--name** *fabric name*]

Parameters

--device

The device IP address

--name

Name of the fabric to which the device belongs

Examples

```
efa fabric debug config-gen-reason --device 10.24.80.139 --name BLR_FABRIC
```

efa fabric debug device drift

Reconciles or displays the device configuration drift between the device and intended fabric configuration.

Syntax

efa fabric debug device drift [**--name string** | **--ip string** | **--reconcile** | **--help**]

Parameters

--name string

Specifies the name of the fabric.

--ip string

Specifies the device IP.

--reconcile

Reconciles the device configuration.

--help

Provides help for the selected commands.

efa fabric delete

Deletes the fabric from inventory.

Syntax

efa fabric delete [**--name** *fabric-name*] [**--force**]

Parameters

--name

Name of the fabric to be deleted.

--force

Forces the deletion of Fabric even if the Fabric has devices.

Usage Guidelines

Deletion of a fabric is not allowed if the fabric has one or more devices. You must delete all the devices from the fabric prior to deleting the fabric.

Forced deletion of a fabric removes the devices from fabric but not from inventory.

Examples

The following example deletes the fabric BLR_FABRIC.

```
efa fabric delete --name BLR_FABRIC
```

efa fabric device add

Adds a device to an existing fabric.

Syntax

efa fabric device add [**--name --ip** *device-ip* **--role** < *leaf* | *spine* | *super-spine* | *border-leaf* > | **--leaf-type** < *single-homed* | *multi-homed* > |**--hostname** <*hostname*> |**--asn** <*local-asn*> |**--vtep-loopback** <*id*> |**--loopback** <*id*> |**--pod** |**--username** |**--password** | **--rack** | **--help**]

Command Default

A device must be registered with Inventory Service before being added to a Fabric. Fabric Service supports IP numbered configuration. Each interface on a link between leaf and spine is assigned an IP address. eBGP peering use these IP addresses.

Device credentials must be provided as part of this command if the devices are not already registered with the inventory.

If user provides “username” and “password”, then the device will be auto registered with the inventory service.

If user doesn’t provide “username” and “password”, then user would need to explicitly register the device with the inventory service.

Parameters

--name

Specifies the name of the fabric.

--ip

Specifies the pair of device IPs for rack, single IP for non-rack.

--role

Specifies the device role (leaf | spine | super-spine | border-leaf).

--leaf-type

Specifies the leaf type (single-homed | multi-homed).

--hostname

Specifies the host name.

--asn

Specifies ASN.

--vtep-loopback

Specifies VTEP loopback.

--loopback

Specifies the loopback port number.

--pod

Specifies the name of the pod.

--rack

Specifies the name of the rack.

--username

Specifies the username for the device.

--password

Specifies the password for the device.

Examples

```
efa fabric device add --name extr-fabric --ip 10.24.80.134,10.24.80.135  --rack room1-
rack1 --username admin --password password
```

efa fabric device add-bulk

Adds multiple devices to an existing fabric.

Syntax

efa fabric device add-bulk [**--name** | **--ip device-ip** | **--leaf** | **--border-leaf** *<hostname>* | **--three-stage-pod** | **--five-stage-pod** | **--spine** | **--super-spine** | **--username** |**--password** | **--rack** | **--help**]

Command Default

If “username” and “password” are provided, the devices will be auto registered with the inventory service.

If “username” and “password” are not provided, the devices must be registered with the inventory service.

A single “three-stage-pod” and “five-stage-pod” can be provided per CLI execution.

Parameters

--name

Specifies the name of the fabric.

--ip

Specifies the pair of device IPs for rack.

--leaf

Specifies the comma separated list of leaf IP Address/Host names.

--border-leaf

Specifies the comma separated list of borderLeaf IP Address/Host names.

--three-stage-pod

Specifies the name of the leaf/spine pod.

--five-stage-pod

Specifies the name of the super-spine pod.

--spine

Specifies the comma separated list of spine IP Address/Host names.

--super-spine

Specifies the comma separated list of super spine IP Address/Host names.

--username

Specifies the username for the list of devices.

--password

Specifies the password for the list of devices.

--rack

Specifies the rack name.

--help

Displays help for add-bulk.

Examples

```
efa fabric device add-bulk --name BLR_FABRIC --leaf 10.24.48.131,10.24.51.135 --border-
leaf 10.24.51.131,10.25.225.58 --spine 10.24.80.139  --username admin --password password
```

efa fabric device remove

Removes existing device from a fabric.

Syntax

efa fabric device remove { **--name** *<fabric-name>* | **--ip** *<list-of-device-ips>* }| [**--no-device-cleanup**]

Command Default

If the "--no-device-cleanup" option is used, the configuration pushed by the automation engine will not be cleaned up from the fabric devices. Removal of a device from fabric doesn't delete the device from inventory. The device from inventory must be deleted.

Parameters

--name

Name of the fabric

--ip

Device IP

--no-device-cleanup

Do not clean up the configuration on the devices

Examples

```
efa fabric device remove --ip
10.24.48.131,10.24.51.135,10.25.225.58,10.24.51.131,10.24.80.139
 --name BLR_FABRIC --no-device-cleanup
```

efa fabric error show

Displays the name of the Fabric, error types, and reasons for the errors.

Syntax

efa fabric error show [**--name** | **--export** | **--help**]

Parameters

--name

Specifies the name of the Fabric.

--export

Export error details to a CSV file.

--help

Displays help for show.

Usage Guidelines

Topology validation occurs during the addition of a device and during Fabric configuration. Use this command to display any errors that occur during validation and, optionally, to export them to a CSV file.

Errors that occur during the add, validate, and configure phases are persisted in the DB.

Examples

```
efa fabric device error show --name BLR_FABRIC
```

efa fabric execution

Displays the RESTAPI executions, event histories, and deletes entries older than the specified days.

Syntax

efa fabric execution delete [**--days int32** | **--help**]

efa fabric execution show [**--help** | **--id** *execution id* | **--limit int32** *number of executions* | **--status string** *failed* | *succeeded* | *all*]

efa fabric execution show-event [**--device** *ip address* | **--execution-id** *execution id* | **--help**]

Parameters

--days int32

Deletes execution entries older than the specified days (default 30).

--device

Filters on IP address.

--execution-id

Filters on Execution UUID.

--id

Filters the executions based on the execution id. "Limit" and "status" flags are ignored when the "id" flag is given.

--help

Provides help for the selected command.

--limit

Limits the number of executions to be listed. A value of "0" lists all the executions. The default is 10.

--status

Filters the executions based on the status (failed/succeeded/all). The default is "all".

Examples

```
efa fabric execution show
```

efa fabric setting

Displays or updates the IP fabric settings.

Syntax

efa fabric setting show [**--name** | **--advanced** | **--help**]

efa fabric setting update [**--name** | **--p2p-link-range** | **--loopback-ip-range** | **--rack-l3-backup-ip-range** | **--loopback-port-number** | **--vtep-loopback-port-number** | **--spine-asn-block** | **--super-spine-asn-block** | **--leaf-asn-block** | **--border-leaf-asn-block** | **--rack-asn-block** | **--anycast-mac-address** | **--ipv6-anycast-mac-address** | **--mac-aging-timeout** | **--mac-aging-conversation-timeout** | **--mac-move-limit** | **--duplicate-mac-timer** | **--duplicate-mac-timer-max-count** | **--configure-overlay-gateway** | **--bfd-enable** | **--bfd-tx** | **--bfd-rx** | **--bfd-multiplier** | **--bgp-multihop** | **--max-paths** | **--allow-as-in** | **--mtu** | **--ip-mtu** | **--leaf-peer-group** | **--optimized-replication-enable** < *yes* | *no*> | **--spine-peer-group** | **--super-spine-peer-group** | **--rack-underlay-ebgp-peer-group** | **--rack-overlay-ebgp-peer-group** | **--mctlink-ip-range** | **--lacp-timeout** | **--mct-port-channel** | **--rack-l3-backup-port** | **--rack-mct-ports** | **--rack-ld-l3-backup-port** | **--rack-ld-mct-ports** | **--control-vlan** | **--control-ve** | **--vni-auto-map** | **--backup-routing-enable** | **--backup-routing-ipv4-range** | **--backup-routing-ipv6-range** | **--mdtgroup-range** | **--default-mdtgroup** | **--help**]

Parameters

--name

Specifies the name of the fabric.

--p2p-link-range

Specifies the IP pool used for P2P Link Configuration.

--loopback-ip-range

Specifies the IP Address Pool for Loopback interface to be used for unnumbered and VTEP IP.

--rack-l3-backup-ip-range

Specifies the IP Address Pool for L3 Back up.

--loopback-port-number

Specifies the loopback ID on the device to be used as donor IP interface for the link between Leaf and Spine <NUMBER: 1-255>

--vtep-loopback-port-number

Specifies the loopback ID on the device to be used as VTEP IP interface <NUMBER: 1-255>

--spine-asn-block

Specifies the ASN Pool for spine nodes or single AS.

--super-spine-asn-block

Specifies the single AS.

--leaf-asn-block

Specifies the ASN pool for leaf nodes.

--border-leaf-asn-block

Specifies the ASN pool for border leaf nodes.

--rack-asn-block

Specifies the ASN pool for rack nodes.

--anycast-mac-address

Specifies the IPV4 ANY CAST MAC address. mac address HHHH.HHHH.HHHH

--ipv6-anycast-mac-address

Specifies the IPV6 ANY CAST MAC address. mac address HHHH.HHHH.HHHH

--mac-aging-timeout

Specifies the MAC Aging Timeout <NUMBER: 0|60-86400>

--mac-aging-conversation-timeout

Specifies the MAC Conversational Aging time in seconds <NUMBER: 0|60-100000>.

--mac-move-limit

Specifies the MAC move detect limit <NUMBER: 5-500>.

--duplicate-mac-timer

Specifies the duplicate MAC timer.

--duplicate-mac-timer-max-count

Specifies the duplicate MAC timer max count.

--configure-overlay-gateway

Configures Overlay Gateway.

--bfd-enable

Enables or disables BFD.

--bfd-tx

Specifies the BFD desired min transmit interval in milliseconds <NUMBER: 50-30000>.

--bfd-rx

Specifies the BFD desired min receive interval in milliseconds <NUMBER: 50-30000>.

--bfd-multiplier

Specifies the BFD detection time multiplier <NUMBER: 3-50>.

--bgp-multihop

Enables EBGP neighbors not on directly connected networks <Number:1-255>.

--max-paths

Forwards packets over multiple paths <Number:1-64>.

--allow-as-in

Disables the AS_PATH check of the routes learned from the AS<Number:1-10>.

--mtu

For SLX-OS 21.1 and later versions: The MTU size in bytes is <Number:1500-9216>. For other SLX-OS versions: The MTU size in bytes is <Number:1548-9216>.

--ip-mtu

For SLX IPV4/IPV6 MTU size in bytes <Number:1300-9194>.

--leaf-peer-group

Specifies the leaf peer group name <WORD: 1-63>.

--optimized-replication-enable

Enables optimized replication. Valid values are yes and no. Default value is no.

--spine-peer-group

Specifies the Spine Peer Group Name <WORD: 1-63>.

--super-spine-peer-group

Specifies the Super Spine Peer Group Name <WORD: 1-63>.

--rack-underlay-ebgp-peer-group

Specifies the Rack Underlay EBGP Peer Group Name <WORD: 1-63>.

--rack-overlay-ebgp-peer-group

Specifies the Rack Overlay EBGP Peer Group Name <WORD: 1-63>.

--mctlink-ip-range

Specifies the address pool to be used for MCT peering.

--lacp-timeout

Specifies LACP Timeout for MCT member ports. Accepted values are long and short.

--mct-port-channel

Specifies the port-channel interface ID to be used as MCT peer-interface <NUMBER: 1-64>.

--rack-l3-backup-port

Specifies the rack L3 backup port <: default '0/48'>.

--rack-mct-ports

Specifies the rack MCT ports <STRING: default '0/46,0/47'>.

--rack-ld-l3-backup-port

Specifies the Rack Low Density L3 Backup port (not applicable to SLX-9250) <STRING: default '0/32'>.

--rack-ld-mct-ports

Specifies the Rack Low Density MCT Ports <STRING: default '0/30,0/31'>.

--control-vlan

Specifies the VLAN ID to be used as MCT cluster control VLAN <NUMBER: 1-4090>.

--control-ve

Specifies the VE ID to be used as MCT cluster control VE <NUMBER: 1-4090>.

--vni-auto-map

Specifies the VTEP VLAN/BD to VNI Mode Auto <NUMBER: Yes/No>.

--backup-routing-enable

Enables or disables backup routing <STRING Yes/No>.

--backup-routing-ipv4-range

Specifies the IPv4 Backup Routing Range.

--backup-routing-ipv6-range

Specifies the IPv6 Backup Routing Range.

--mdtgroup-range

Specifies the IPv4 multicast address range in IP prefix format. Example: 239.0.0.0/8

--default-mdtgroup

Specifies the default IPv4 multicast address. The address must be from the MDT group range.

--help

Provides help for the selected command.

```
# efa fabric setting --update --optimized-replication-enable yes --name <fabric name>
# efa fabric setting --update --mdtgroup-range 239.0.0.0/8 --name clos_fabric
# efa fabric setting --update --default-mdtgroup 239.1.1.1 --name clos_fabric
```

efa fabric show

Displays the details of the fabric.

Syntax

efa fabric show [**--name** *fabric name*]

Command Default

Displays the details of all the fabrics when the “--name” option is not provided.

Displays the details of a given fabric when the “--name” option is provided.

Parameters

--name *<fabric-name>*

Name of the fabric

Examples

```
efa fabric show --name BLR_FABRIC
```

efa fabric show-config

Displays the config of a given fabric.

Syntax

efa fabric show-config [**--name** *fabric name* | **--device-role** *leaf* | *spine* | *super-spine* | *border-leaf* | **--ip** *ip address*]

Parameters

--name

Name of the fabric

--device-role

Role of devices for which config needs to show (leaf | spine | super-spine | border-leaf)

--ip

The specific ip provided in conjuction with the device-role field.

Examples

```
efa fabric show-config --name BLR_FABRIC --device-role border-leaf --ip 10.25.225.58
```

efa fabric show summary

Displays the summary of the fabric.

Syntax

efa fabric show summary [**--name** *<fabric-name>*]

Command Default

Displays the summary of all the fabrics when the “--name” option is not provided.

Displays the summary of a given fabric when the “--name” option is provided.

Parameters

--name *<fabric-name>*

Name of the fabric

Examples

```
efa fabric show summary --name BLR_FABRIC
```

efa fabric topology show overlay

Displays the overlay connectivity (VxLAN tunnels) of the devices in a Fabric.

Syntax

efa fabric topology show overlay [**--name** *name*]

Parameters

--name *name*

Specifies the name of the fabric.

Examples

This example displays the overlay topology information for the fabric.

```
# efa fabric topology show overlay --name clos_fabric

+-------------------+-------------+----------------+---------------------+----------------
+---------------------+---------------------+--------------------+
| OVERLAY ECAP TYPE | TUNNEL TYPE | SOURCE LEAF IP | DESTINATION LEAF IP | SOURCE VTEP IP
| DESTINATION VTEP IP | OVERLAY ADMIN STATE | OVERLAY OPER STATE |
+-------------------+-------------+----------------+---------------------+----------------
+---------------------+---------------------+--------------------+
| vxlan             | unicast     | 10.24.80.158   | 10.24.80.159        | 172.31.254.7
| 172.31.254.9        | up                  | up                 |
| vxlan             | unicast     | 10.24.80.159   | 10.24.80.158        | 172.31.254.9
| 172.31.254.7        | up                  | up                 |
| vxlan             | multicast   | 10.24.80.158   |                     | 172.31.254.7
| 239.1.1.1           | up                  | up                 |
| vxlan             | multicast   | 10.24.80.159   |                     | 172.31.254.9
| 239.1.1.1           | up                  | up                 |
+-------------------+-------------+----------------+---------------------+----------------
+---------------------+---------------------+--------------------+
```

efa fabric topology show physical

Displays the physical connectivity (LLDP neighbors) of the devices in a fabric.

Syntax

efa fabric topology show physical [**--name** *name*]

Parameters

--name *name*

Specifies the name of the Fabric.

Examples

This example displays a portion of the physical topology information for the fabric.

```
efa fabric topology show physical --name clos_fabric
+--------------+-----------+--------------------------+------------------+---------------
+--------------+-------
| SOURCE       | SOURCE    |  DESTINATION  | DESTINATION | SOURCE           DESTINATION
| SOURCE DEVICE| DESTINATION DEVICE
  NODE IP        NODE ROLE    NODE IP        NODE ROLE     NODE INTERFACE   NODE
INTERFACE  MULTI HOMED    MULTI HOMED
+--------------+-----------+---------------+-------------+----------------+---------------
+--------------+-------
| 10.24.80.135 | LEAF      |10.25.225.163  | LEAF        | 0/39           | 0/39
| TRUE         | FALSE
| 10.24.80.135 | LEAF      |10.25.225.163  | LEAF        | 0/40           | 0/40
| TRUE         | FALSE
| 10.24.80.135 | LEAF      |10.24.80.134   | LEAF        | 0/46           | 0/46
| TRUE         | TRUE
|
| 10.24.80.134 | LEAF      |10.24.80.135   | LEAF        | 0/46           | 0/46
| TRUE         | TRUE
```

efa fabric topology show underlay

Displays the underlay connectivity (BGP neighbors) of the devices in a Fabric.

Syntax

efa fabric topology show underlay [**--name** *name*]

Parameters

--name *name*

Specifies the name of the Fabric.

Examples

This example displays the underlay topology information for the fabric.

```
efa fabric topology show underlay --name clos_fabric
+--------------+----------------+---------------------------------+----------
| SOURCE       | DESTINATION    |  SOURCE DEVICE  | NEIGHBOR IP   | UNDERLAY
  DEVICE IP      DEVICE IP         ROUTER ID                       STATE
+--------------+----------------+-----------------+---------------+----------
| 10.25.225.163| 10.25.225.167  |172.31.254.24    | 10.20.20.16   | ESTAB
| 10.25.225.163| 10.24.80.135   |172.31.254.24    | 172.31.254.19 | ESTAB
| 10.25.225.163| 10.24.80.134   |172.31.254.24    | 172.31.254.23 | ESTAB
| 10.25.225.167| 10.25.225.163  |172.31.254.21    | 10.20.20.17   | ESTAB
| 10.25.225.167| 10.24.80.135   |172.31.254.21    | 172.31.254.19 | ESTAB
| 10.25.225.167| 10.24.80.134   |172.31.254.21    | 172.31.254.23 | ESTAB
| 10.24.80.134 | 10.24.80.135   |172.31.254.23    | 10.20.20.14   | ESTAB
| 10.24.80.134 | 10.25.225.167  |172.31.254.23    | 172.31.254.21 | ESTAB
| 10.24.80.134 | 10.25.225.163  |172.31.254.23    | 172.31.254.24 | ESTAB
| 10.24.80.135 | 10.254.80.134  |172.31.254.19    | 10.20.20.15   | ESTAB
| 10.24.80.135 | 10.25.225.167  |172.31.254.19    | 172.31.254.21 | ESTAB
| 10.24.80.135 | 10.25.225.163  |172.31.254.19    | 172.31.254.24 | ESTAB
```

efa inventory admin-state

Changes, displays, and deletes device state, state change history, or state change record.

Syntax

efa inventory admin-state up [**--ip** *ipaddr*|**--help**]

efa inventory admin-state down [**--ip** *ipaddr*|**--help**]

efa inventory admin-state detail [**--uuid** *uuid*|**--help**]

efa inventory admin-state delete [**--key** *ipaddr*|**--help**]

efa inventory admin-state history [**--ip** *ipaddr*|**--help**]

efa inventory admin-state show [**--ip** *ipaddr*|**--help**]

Parameters

up --ip *ipaddr*

Changes the state of the specified device to "admin up" and generates a UUID for the instance.

down --ip *ipaddr*

Changes the state of the specified device to "admin down." Also puts the device in maintenance mode and generates a UUID for the instance.

detail --uuid *uuid*

Displays details of the admin state change for the specified UUID.

delete --key *ipaddr*

Deletes the instance of the admin state change for the specified IP address.

history --ip *ipaddr*

Displays the admin status history for the specified device.

show --ip *ipaddr*

Displays details of the state of the specified device. Derives the operational up or down status from the health status of the device.

--help

Displays help for the selected command.

Usage Guidelines

When a device changes to "admin down" state, the device goes into maintenance mode.

When a device changes to "admin up" state, the device is taken out of maintenance mode.

For more information, see the "Administered Partial Success" topic in the *Extreme Fabric Automation Administration Guide, 2.2.0*.

Examples

This example changes the device state to "admin up" and generates a UUID to use in the **efa inventory admin-state detail** version of the command.

```
$ efa inventory admin-state up --ip 10.24.80.158
AdminStateUp [success]
Admin State Up execution UUID: 8d9fa0cf-dc76-42cc-ac7a-57902a47c1b2
```

This example changes the device state to "admin down" generates a UUID to use in the **efa inventory admin-state detail** version of the command.

```
$ efa inventory admin-state down --ip 10.24.80.158
AdminStateDown [success]
Admin State Down execution UUID: 28eb0845-7a7a-4851-b453-b3020c6900f2
```

This example displays the history of the admin status for the specified device.

```
# efa inventory admin-state history --ip 10.24.80.158
-------------------------------------------------------------------------------
UUID                                 Device IP     Admin State  Status
-------------------------------------------------------------------------------
8d9fa0cf-dc76-42cc-ac7a-57902a47c1b2   10.24.80.158  up       success
-------------------------------------------------------------------------------
28eb0845-7a7a-4851-b453-b3020c6900f2   10.24.80.158  down        success
-------------------------------------------------------------------------------
Device State Change Records
— Time Elapsed: 172.640786ms —
```

This example shows details of admin state changes for the specified UUID.

```
$ efa inventory admin-state detail --uuid 28eb0845-7a7a-4851-b453-b3020c6900f2

-------------------------------------------------------------------------+
NAME            VALUE
-------------------------------------------------------------------------+
UUID            28eb0845-7a7a-4851-b453-b3020c6900f2
-------------------------------------------------------------------------+
Device IP          10.24.80.158
-------------------------------------------------------------------------+
Admin State Action down
-------------------------------------------------------------------------+
Status          success
-------------------------------------------------------------------------+
Maintenance Mode Enable Status     success
-------------------------------------------------------------------------+
Start Time     2020-07-30 10:04:33.982447 +0000 UTC
-------------------------------------------------------------------------+
Last Modified    2020-07-30 10:04:38.437425 +0000 UTC
-------------------------------------------------------------------------+
Duration      4.454976211s
-------------------------------------------------------------------------+
— Time Elapsed: 183.253381ms —
```

This example shows details of the state of the specified device.

```
$ efa inventory admin-state show --ip 10.24.80.158
---------------------------------+
NAME                 VALUE
---------------------------------+
Device IP            10.24.80.158
---------------------------------+
Admin State             up
---------------------------------+
Health Check Status     Disable
---------------------------------+
— Time Elapsed: 241.831181ms —
```

This example deletes the state change instance for the specified IP address.

```
$ efa inventory admin-state delete --key 10.24.80.159
--------------------------
USERKEY     STATUS     ERROR
--------------------------
10.24.80.159   deleted
--------------------------
— Time Elapsed: 216.332171ms —
```

efa inventory config-backup

Configures device configuration backup.

Syntax

efa inventory config-backup history[**--ip** *<ip address>* | **--help**]

efa inventory config-backup execute[**--ip** *<ip address>* | **--help**]

efa inventory config-backup delete[**--key** *<ip address>* | **--help**]

efa inventory config-backup detail[**--uuid** *<cb-uuid>* | **--show-config** | **--file-dump** | **--help**]

Parameters

--detail

Displays config-backup detail

--delete

Deletes config-backup record

--execute

Executes SLX configuration backup

--file-dump

Dumps config text to the given file

--help

Provides help for config-backup commands

--history

Displays config-backup history

--ip

Specifies IP address of the device

--key

Specifies IP address of the device or config-backup UUID to be deleted

--show-config

Displays configuration text

--uuid

Specifies config-backup id

Examples

The following examples show **#efa inventory config-backup** commands.

```
# efa inventory config-backup execute --ip 10.24.14.133
# efa inventory config-backup history --ip 10.24.14.133
# efa inventory config-backup detail --uuid 1111-1111-1111 --show-config
# efa inventory config-backup detail --uuid 1111-1111-1111 --show-config --file-dump
```

```
<filename>
# efa inventory config-backup delete --key 10.24.14.133
# efa inventory config-backup delete --key 1111-1111-111
```

efa inventory config-replay

Configures device config-replay.

Syntax

efa inventory config-replay history [**--ip** | **--help**]

efa inventory config-replay execute [**--ip** | **--uuid** | **--ssid** | **--startup-config** | **--no-reboot** | **--help**]

efa inventory config-replay delete [**--key** | **--help**]

efa inventory config-replay detail [**--uuid** *<cr-uuid>* |**--help**]

Parameters

--detail

Displays config-backup detail.

--delete

Deletes config-backup record.

--execute

Executes SLX configuration backup.

--help

Displays help for config-replay commands.

--history

Displays config-replay history.

--ip

Specifies the IP address of the device.

--key

Specifies the IP address of the device or config-replay UUID to be deleted.

--ssid

Specifies the SSID of config-backup execution.

--startup-config

Copies backup file to the startup-config file.

--no-reboot

Configures replay without rebooting the device.

--uuid

Specifies the config replay ID or UUID of config backup execution.

Examples

The following examples show **efa inventory config-replay** commands.

```
# efa inventory config-replay execute --ip 10.24.14.133 --uuid 1111-1111-111
# efa inventory config-replay history --ip 10.24.14.133
# efa inventory config-replay detail --uuid 1111-1111-1111
# efa inventory config-replay delete --key 10.24.14.133
# efa inventory config-replay delete --key 1111-1111-111
# efa inventory config-replay execute --ip 10.24.14.133 --uuid 1111-1111-111 --startup-
config
# efa inventory config-replay execute --ip 10.24.14.133 --uuid 1111-1111-111 --no-reboot
```

efa inventory debug devices-lock

Displays lock status of the devices.

Syntax

efa inventory debug devices-lock

Usage Guidelines

Diagnostic commands are developed and intended for specialized troubleshooting. Work closely with Extreme Networks technical support when running **debug** or **show system internal** commands and interpreting their results.

Examples

```
(efa:extreme)extreme@tpvm51:~$ efa inventory debug devices-lock
+--------------+--------+
|  IP Address  | Locked |
+--------------+--------+
| 10.20.49.119 | false  |
+--------------+--------+
| 10.20.49.118 | false  |
+--------------+--------+
| 10.20.50.202 | false  |
+--------------+--------+
| 10.20.50.201 | false  |
+--------------+--------+
| 10.20.61.91  | false  |
+--------------+--------+
| 10.20.61.90  | false  |
+--------------+--------+
| 10.20.50.206 | false  |
+--------------+--------+
| 10.20.50.205 | false  |
+--------------+--------+
Devices Lock Status
--- Time Elapsed: 155.281222ms ---
```

efa inventory device compare

Compares the device configuration with the configuration details saved in the application.

Syntax

efa inventory device compare [**--ip** | **--help**]

Parameters

--ip

Specifies IP Address of the device to be compared.

--help

Provides help for compare.

efa inventory device delete

Deletes the device.

Syntax

efa inventory device delete [**--ip** | **--fabric** | **--help**]

Parameters

--ip

Specifies comma separated range of device IP addresses. Example: 1.1.1.1-3,1.1.1.2,2.2.2.2.

--fabric

Fabric name for which devices needs to deleted.

--help

Provides help for compare.

efa inventory device discovery-time list

Displays the configured device discovery interval for devices or for a Fabric.

Syntax

efa inventory device discovery-time list { **--ips** *ip-addr* | **--fabric** *fabric-name*}

Command Default

The default discovery interval is one hour.

Parameters

--ips *ip-addr*

Specifies a comma-separated list of the IP addresses for which you want to see the configured interval. For example, `1.1.1.1,2.2.2.2`.

--fabric *fabric-name*

Specifies the name of the Fabric for which you want to see the configured interval for every device.

Examples

This example displays the device discovery interval for each device in the Fabric named `myFabric`.

```
efa inventory device discovery-time list --fabric myFabric
```

This example displays the device discovery interval for two device IP addresses.

```
efa inventory device discovery interval --ips 1.1.1.1,2.2.2.2
```

efa inventory device discovery-time update

Configures the interval for periodic discovery of devices.

Syntax

efa inventory device discovery-time update { **--ip** *ip-addr* | **--fabric** *fabric-name* } { **--min** *minutes* | **--hour** *hours*}

Command Default

The default discovery interval is one hour.

Parameters

--ip *ip-addr*

Specifies the IP address of the device for which you are configuring the interval.

--fabric *fabric-name*

Specifies the name of the Fabric for which you are configuring the interval. All devices in this Fabric will have the same interval.

--min *minutes*

Specifies the interval in minutes.

--hour *hours*

Specifies the interval in hours.

Usage Guidelines

Tenant and Fabric Services use periodic discovery to detect out-of-sync configurations on the devices.

Fabric and Tenant Services act on the published events and update the database to reflect the status of the devices as in-sync and out-of-sync.

Examples

This example configures an interval of 20 minutes for a specific IP address.

```
efa inventory device discovery-time update --ip 1.1.1.1 --min 20
```

This example configures an interval of 2 hours for a Fabric named `myFabric`.

```
efa inventory device discovery-time update -- fabric myFabric --hour 2
```

efa inventory device execute-cli

Executes CLI on the device.

Syntax

efa inventory device execute-cli [**--ip** | **--fabric** | **--role** | **--command** | **--config** | **--help**]

Parameters

--ip

Specifies comma separated range of device IP addresses. Example: 1.1.1.1-3,1.1.1.2,2.2.2.2.

--fabric

Specifies devices from the fabric.

--role

Specifies devices based on role from the fabric.

--command

Specifies comma/Semi-colon separated list of CLI commands to execute on the device(s).

--config

Indicates whether commands are for config-term or exec-mode.

--help

Provides help for execute-cli.

```
# efa inventory device execute-cli --ip 10.18.120.187 --command "Interface ethernet 0/1,
no reload-delay enable" --config
```

efa inventory device firmware-download execute

Starts the firmware upgrade with maintenance mode for devices in prepared state and clear out the prepared list.

Syntax

efa inventory device firmware-download execute --fabric *<fabric name>*

Command Default

General warning for traffic loss for single-homed servers if any leafs or non-Clos devices are prepared for firmware-download.

Parameters

--fabric

Name of the fabric

Usage Guidelines

One or more devices are prepared.

Only allow one outstanding firmware-download execution per fabric.

efa inventory device firmware-download prepare add

Prepares a device for a firmware download. Firmware host sanity validations will be done at this time. If the validations are successful, then the device will be prepared.

Syntax

efa inventory device firmware-download prepare add [**--ip** *device ip address* | **--fabric** *fabric name* | **--firmware-host** *firmware download host ip address* | **--firmware-directory** *path to the target firmware build* | **--help**]

Command Default

Traffic loss expected for non-redundant devices (single non-MCT leaf, spine, or super spine).

This command accepts only one device IP address and allows only one outstanding prepared device.

Parameters

--fabric

Name of the fabric

--firmware-host

Firmware download host IP address

--firmware-directory

Path to the target firmware build

--help

Help for add

--ip

IP address of the device

Usage Guidelines

Firmware host must be registered.

Device IPs belong to the same fabric (for Clos topologies).

Do not allow devices to be prepared if a firmware-download is in progress.

Allow a device to be prepared after a firmware-download has completed or in an unprepared state.

Do not allow for both MCT leaf pairs to be prepared together.

Do not allow for all spines in the same pod of the same fabric to be prepared together.

Do not allow for all super-spines in the fabric to be prepared together.

Firmware sanity check performed for the registered firmware-host and firmware-directory on the given device.

Examples

```
efa inventory device firmware-download prepare add --ip 10.24.12.122 --firmware-host
10.31.2.101 --firmware-directory /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60

Fabric Name: stage5

+--------------+-----------+-------+--------------+-------+------+------------------
+---------------+-----------------------------------------------------
+--------------------------------+

|  IP Address  | Host Name | Model | Chassis Name |  ASN  | Role | Current Firmware |
Firmware Host |                Firmware Directory                |       Last Update
Time        |

+--------------+-----------+-------+--------------+-------+------+------------------
+---------------+-----------------------------------------------------
+--------------------------------+

| 10.24.12.122 | SLX       |  3010 | SLX9150-48XT | 65001 | Leaf | 20.1.1_bld59     |
10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:15.736483-07 |

+--------------+-----------+-------+--------------+-------+------+------------------
+---------------+-----------------------------------------------------
+--------------------------------+

Firmware Download Prepare Details

Prepare Device Firmware Download [Success]

10.24.12.122 [Succeeded]
```

efa inventory device firmware-download prepare list

Prepares a list of all devices for firmware download.

Syntax

efa inventory device firmware-download prepare list [**--ip** *<device ip address>* | **--fabric** *<fabric name>* | **--help**]

Command Default

Only a single prepared device will be allowed.

Parameters

--fabric

Name of the fabric

--help

Help for list

--ip

IP address of the device

Examples

```
efa inventory device firmware-download prepare list --fabric stage5

 Fabric Name: stage5

+--------------+-----------+-------+--------------+-------+------------+------------------
+---------------+-----------------------------------------------------
+--------------------------------+

|  IP Address  | Host Name | Model | Chassis Name |  ASN  |    Role    | Current Firmware
| Firmware Host |                Firmware Directory                |       Last Update
Time        |

+--------------+-----------+-------+--------------+-------+------------+------------------
+---------------+-----------------------------------------------------
+--------------------------------+

| 10.24.12.153 | SLX       |  3012 | SLX9250      | 64512 | SuperSpine | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

| 10.24.12.146 | SLX       |  3012 | SLX9250      | 64521 | Spine      | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

| 10.24.12.148 | SLX       |  3012 | SLX9250      | 64523 | Spine      | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

| 10.24.12.121 | SLX       |  3010 | SLX9150-48XT | 65001 | Leaf       | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
```

```
06:30:01.424591-07 |

| 10.24.12.123 | SLX       |  3010 | SLX9150-48XT | 65002 | Leaf       | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

| 10.24.12.125 | SLX       |  3010 | SLX9150-48XT | 65003 | Leaf       | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

| 10.24.12.127 | SLX       |  3010 | SLX9150-48XT | 65004 | Leaf       | 20.1.1_bld59
|   10.31.2.101 | /proj/buildsjc/sre/SQA/slxos/20.1.1/20.1.1_bld60 | 2019-10-21
06:30:01.424591-07 |

+--------------+-----------+-------+--------------+-------+------------+------------------
+---------------+-------------------------------------------------
+--------------------------------+
```

efa inventory device firmware-download prepare remove

Removes the device from the prepared list.

Syntax

efa inventory device firmware-download prepare remove [**--fabric** *<fabric name>* |**--ip** *<device ip address>*]

Command Default

This command will unprepare the single device if it is prepared.

Parameters

--fabric

Name of the fabric

--ip

IP address of the device

efa inventory device firmware-download show

Shows the progress and status of the executed firmware-download.

Syntax

efa inventory device firmware-download show [**--fabric** *<fabric name>* | **--ip** *<device ip address>* | **--help**]

Parameters

--fabric

Name of the fabric

--help

Help for show

Examples

```
efa inventory device firmware-download show --fabric stage5

Fabric Name: stage5

+-----------+-------+--------------+-------+------------+------------------
+-----------------+--------------+--------------------------
+---------------------------------+

| Host Name | Model | Chassis Name |  ASN  |    Role    | Current Firmware | Target
Firmware | Update State |          Status          |       Last Update Time        |

+-----------+-------+--------------+-------+------------+------------------
+-----------------+--------------+--------------------------
+---------------------------------+

| SLX       |  3012 | SLX9250      | 64512 | SuperSpine | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:01.424591-07
|

| SLX       |  3012 | SLX9250      | 64513 | SpineSpine | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:09.744543-07
|

| SLX       |  3012 | SLX9250      | 64521 | Spine      | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:16.563591-07
|

| SLX       |  3012 | SLX9250      | 64522 | Spine      | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:15.736483-07
|

| SLX       |  3012 | SLX9250      | 64523 | Spine      | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:17.665491-07
|

| SLX       |  3012 | SLX9250      | 64524 | Spine      | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                          | 2019-10-21 06:30:20.244241-07
|
```

```
| SLX       |  3010 | SLX9150-48XT | 65001 | Leaf       | 20.1.1_bld60     |
20.1.1_bld60    | Completed    |                           | 2019-10-21 06:30:25.441725-07
|

| SLX       |  3010 | SLX9150-48XT | 65001 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | In Progress  | Maintenance Mode Enabled | 2019-10-21 06:34:25.211744-07
|

| SLX       |  3010 | SLX9150-48XT | 65002 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

| SLX       |  3010 | SLX9150-48XT | 65002 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

| SLX       |  3010 | SLX9150-48XT | 65003 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

| SLX       |  3010 | SLX9150-48XT | 65003 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

| SLX       |  3010 | SLX9150-48XT | 65004 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

| SLX       |  3010 | SLX9150-48XT | 65004 | Leaf       | 20.1.1_bld59     |
20.1.1_bld60    | Not Prepared |                           |
|

+-----------+-------+--------------+-------+------------+------------------
+-----------------+--------------+--------------------------
+--------------------------------+
```

efa inventory device health status

Displays device health status.

Syntax

efa inventory device health status [**--ip** | **--help**]

Parameters

--ip

Specifies IP address of the device.

--help

Provides help for status.

efa inventory device interface set-admin-state

Brings an interface administratively up or down.

Syntax

efa inventory device interface set-admin-state {**--ip** *device-ip* |**--fabric** *fab-name* }**--if-type eth --if-name** *if-list* **--state** [**up** | **down** }

Command Default

By default, all ports on the SLX device are down.

Parameters

--ip *device-ip*

Specifies a comma-separated list of device IP addresses.

--fabric *fab-name*

Specifies a Fabric name.

--if-type eth

Specifies that the interface type is Ethernet, which is the default setting.

--if-name *if-list*

Specifies a comma-separated list of interface names.

--state { **up** | **down** }

Specifies a state of up or down.

Usage Guidelines

In SLX-OS, you can use the **show interface ethernet** command to see the status of the Ethernet interfaces on your device.

Examples

This example changes the Admin Status on one IP address.

```
efa inventory device interface set-admin-state --ip 10.25.225.167
--if-name 0/20-22 --state down
+---------------+----+------+----------------+--------------+---------+--------+
|   DeviceIP    | ID | Name | Interface Type | Admin Status | Result  | Reason |
+---------------+----+------+----------------+--------------+---------+--------+
| 10.25.225.167 | 9  | 0/21 | ethernet       | down         | Success |        |
+               +----+------+----------------+--------------+---------+--------+
|               | 89 | 0/20 | ethernet       | down         | Success |        |
+               +----+------+----------------+--------------+---------+--------+
|               | 1  | 0/22 | ethernet       | down         | Success |        |
+---------------+----+------+----------------+--------------+---------+--------+
Interface Details
--- Time Elapsed: 19.5606145s ---
```

This example attempts to change the Admin Status on two IP addresses, however one IP address is invalid.

```
efa inventory device interface set-admin-state --ip 10.25.225.167,10.10.10.10
--if-name 0/20-22 --state down
+---------------+----+------+----------------+--------------+---------+----------------+
|   DeviceIP    | ID | Name | Interface Type | Admin Status | Result  |      Reason
+---------------+----+------+----------------+--------------+---------+----------------
| 10.10.10.10   |    |      |                |              | Failed  | Device does not
|               |    |      |                |              |         | exist with IP:
                                                                       10.10.10.10
+---------------+----+------+----------------+--------------+---------+----------------+
| 10.25.225.167 | 9  | 0/21 | ethernet       | down         | Success |                |
+               +----+------+----------------+--------------+---------+----------------+
|               | 89 | 0/20 | ethernet       | down         | Success |                |
+               +----+------+----------------+--------------+---------+----------------+
|               | 1  | 0/22 | ethernet       | down         | Success |                |
+---------------+----+------+----------------+--------------+---------+----------------+
Interface Details
--- Time Elapsed: 20.740265s ---
```

This example changes the Admin State on multiple valid IP addresses.

```
efa inventory device interface set-admin-state
--ip 10.25.225.167,10.24.48.131,10.24.51.135 --if-name 0/20-22 --state up

+---------------+-----+------+----------------+--------------+---------+--------+
|   DeviceIP    | ID  | Name | Interface Type | Admin Status | Result  | Reason |
+---------------+-----+------+----------------+--------------+---------+--------+
| 10.24.48.131  | 110 | 0/21 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 142 | 0/20 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 148 | 0/22 | ethernet       | up           | Success |        |
+---------------+-----+------+----------------+--------------+---------+--------+
| 10.24.51.135  | 16  | 0/21 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 48  | 0/22 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 86  | 0/20 | ethernet       | up           | Success |        |
+---------------+-----+------+----------------+--------------+---------+--------+
| 10.25.225.167 | 9   | 0/21 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 89  | 0/20 | ethernet       | up           | Success |        |
+               +-----+------+----------------+--------------+---------+--------+
|               | 1   | 0/22 | ethernet       | up           | Success |        |
+---------------+-----+------+----------------+--------------+---------+--------+
Interface Details
--- Time Elapsed: 56.4964544s ---
```

This example changes the Admin Status for the specified Fabric name.

```
efa inventory device interface set-admin-state --fabric nc_no_vni
--if-name 0/20-22 --state up
+--------------+-----+------+----------------+--------------+---------+--------+
|   DeviceIP   | ID  | Name | Interface Type | Admin Status | Result  | Reason |
+--------------+-----+------+----------------+--------------+---------+--------+
| 10.24.51.135 | 48  | 0/22 | ethernet       | up           | Success |        |
+              +-----+------+----------------+--------------+---------+--------+
|              | 16  | 0/21 | ethernet       | up           | Success |        |
+              +-----+------+----------------+--------------+---------+--------+
|              | 86  | 0/20 | ethernet       | up           | Success |        |
+--------------+-----+------+----------------+--------------+---------+--------+
| 10.24.48.131 | 148 | 0/22 | ethernet       | up           | Success |        |
+              +-----+------+----------------+--------------+---------+--------+
```

```
|              | 142 | 0/20 | ethernet       | up           | Success |         |
+              +-----+------+----------------+--------------+---------+---------+
|              | 110 | 0/21 | ethernet       | up           | Success |         |
+--------------+-----+------+----------------+--------------+---------+---------+
Interface Details
--- Time Elapsed: 37.9236481s ---
```

efa inventory device interface set-breakout

Breaks a port into multiple interfaces, such as breaking one 40G port into four 10G ports.

Syntax

efa inventory device interface set-breakout {**--ip** *device-ip* |**--fabric** *fab-name* } {**--if-type eth --if-name** *if-list* } {**--mode** { **1x10g** | **1x25g** | **1x40g** | **1x100g** | **2x40g** | **2x50g** | **4x10g** | **4x25g**} }

Parameters

--ip *device-ip*

Specifies a comma-separated list of device IP addresses.

--fabric *fab-name*

Specifies a Fabric name.

--if-type eth

Specifies that the interface type is Ethernet, which is the default setting.

--if-name *if-list*

Specifies a comma-separated list of interface names.

--mode { **1x10g** | **1x25g** | **1x40g** | **1x100g** | **2x40g** | **2x50g** | **4x10g** | **4x25g**}

Specifies the number of ports you want.

Usage Guidelines

In SLX-OS, you can use the **show running-config hardware** command to see whether breakout mode is configured for a device.

The new breakout interfaces you create are identified by the name of the original interface followed by a suffix.

Examples

This example breaks three interfaces into four ports each.

```
efa inventory device interface set-breakout --ip 10.24.80.158
+--------------+----+-------+----------------+---------+
|   DeviceIP   | ID | Name  | Interface Type | Result  |
+--------------+----+-------+----------------+---------+
| 10.24.80.158 | 73 | 0/2:2 | ethernet       | Success |
+              +----+-------+----------------+---------+
|              | 72 | 0/1:4 | ethernet       | Success |
+              +----+-------+----------------+---------+
|              | 74 | 0/3:2 | ethernet       | Success |
+              +----+-------+----------------+---------+
|              | 78 | 0/3:3 | ethernet       | Success |
+              +----+-------+----------------+---------+
|              | 75 | 0/3:4 | ethernet       | Success |
+              +----+-------+----------------+---------+
```

```
|               | 70 | 0/1:1 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 71 | 0/1:3 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 80 | 0/2:1 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 79 | 0/1:2 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 76 | 0/2:3 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 69 | 0/3:1 | ethernet       | Success |
+               +----+-------+----------------+---------+
|               | 77 | 0/2:4 | ethernet       | Success |
+---------------+----+-------+----------------+---------+
Interface Details
--- Time Elapsed: 48.3801684s ---
```

This example attempts to break out ports on two devices, but one IP address is invalid.

```
efa inventory device interface set-breakout
--ip 10.24.80.158,10.10.10
+--------------+----+-------+----------------+---------+------------------+
|   DeviceIP   | ID | Name  | Interface Type | Result  |    Reason        |
+--------------+----+-------+----------------+---------+------------------
| 10.10.10.10  |    |       |                | Failed  | Device does not
|              |    |       |                |         | exist with IP:
                                                         10.10.10.10
+--------------+----+-------+----------------+---------+------------------
| 10.24.80.158 | 94 | 0/8:3 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 91 | 0/9:3 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 83 | 0/9:4 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 86 | 0/6:3 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 82 | 0/7:1 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 88 | 0/7:3 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 89 | 0/7:4 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 90 | 0/9:2 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 81 | 0/9:1 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 95 | 0/6:1 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 93 | 0/8:2 | ethernet       | Success |
+              +----+-------+----------------+---------+-----------------
|              | 92 | 0/8:4 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 96 | 0/6:2 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 84 | 0/7:2 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 87 | 0/6:4 | ethernet       | Success |
+              +----+-------+----------------+---------+------------------
|              | 85 | 0/8:1 | ethernet       | Success |
+--------------+----+-------+----------------+---------+------------------
Interface Details
--- Time Elapsed: 59.3971958s ---
```

This example breaks out ports on multiple devices.

```
efa inventory device interface set-breakout
--ip 10.24.80.158,10.24.80
+--------------+-----+--------+----------------+---------+-------------------------+
|   DeviceIP   | ID  |  Name  | Interface Type | Result  |        Reason           |
+--------------+-----+--------+----------------+---------+-------------------------+
| 10.24.80.158 | 0   | 0/9    | ethernet       | Failed  | Interface [0/9] from the
|              |     |        |                |         | range [0/9-12] does not
|              |     |        |                |         | exist or port is already
|              |     |        |                |         | breakout for device
                                                          IP 10.24.80.158. Specify
                                                          a valid interface.
+              +-----+--------+----------------+---------+-------------------------+
|              | 105 | 0/10:2 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 108 | 0/12:2 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 102 | 0/12:3 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 101 | 0/10:3 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 99  | 0/11:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 107 | 0/12:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 103 | 0/10:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 104 | 0/11:4 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 97  | 0/12:4 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 106 | 0/10:4 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 98  | 0/11:2 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 100 | 0/11:3 | ethernet       | Success |                         |
+--------------+-----+--------+----------------+---------+-------------------------+
| 10.24.80.159 | 120 | 0/10:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 114 | 0/9:4  | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 118 | 0/10:3 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 116 | 0/10:2 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 111 | 0/9:2  | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 121 | 0/11:2 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 122 | 0/11:3 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 124 | 0/11:4 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 117 | 0/12:4 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 112 | 0/9:1  | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 123 | 0/12:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 119 | 0/9:3  | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
|              | 109 | 0/11:1 | ethernet       | Success |                         |
+              +-----+--------+----------------+---------+-------------------------+
```

```
|              | 110 | 0/12:3 | ethernet       | Success |                          |
+              +-----+--------+----------------+---------+--------------------------+
|              | 113 | 0/10:4 | ethernet       | Success |                          |
+              +-----+--------+----------------+---------+--------------------------+
|              | 115 | 0/12:2 | ethernet       | Success |                          |
+--------------+-----+--------+----------------+---------+--------------------------+
Interface Details
--- Time Elapsed: 1m16.6280022s ---
```

This example configures break out for the specified Fabric name.

```
efa inventory device interface set-breakout --if-name 0/19-20
--mode 4x25g --fabric fabric1
+--------------+-----+--------+----------------+---------+--------+
|   DeviceIP   | ID  |  Name  | Interface Type | Result  | Reason |
+--------------+-----+--------+----------------+---------+--------+
| 10.24.80.158 | 188 | 0/20:2 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 184 | 0/20:3 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 190 | 0/20:4 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 191 | 0/19:1 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 187 | 0/19:2 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 189 | 0/19:3 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 185 | 0/19:4 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 186 | 0/20:1 | ethernet       | Success |        |
+--------------+-----+--------+----------------+---------+--------+
| 10.24.80.159 | 196 | 0/19:2 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 194 | 0/19:3 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 197 | 0/19:4 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 199 | 0/20:1 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 193 | 0/20:2 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 195 | 0/20:3 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 192 | 0/20:4 | ethernet       | Success |        |
+              +-----+--------+----------------+---------+--------+
|              | 198 | 0/19:1 | ethernet       | Success |        |
+--------------+-----+--------+----------------+---------+--------+
Interface Details
--- Time Elapsed: 1m6.2210288s ---
```

efa inventory device interface set-mtu

Configures the MTU (maximum transmission unit) at the physical port level for Layer 2, IPv4, and IPv6.

Syntax

efa inventory device interface set-mtu [**--ip --if-type eth --if-name --mtu int --ip-mtu int --ipv6-mtu int32 --fabric --help**]

Parameters

--ip

Specifies a comma-separated range of device IP addresses.

--if-type eth

Specifies that the interface type is Ethernet, which is the default setting.

--if-name

Specifies a comma-separated list of interface names.

--mtu int

Specifies the global Layer 2 MTU on a device. For SLX-OS 20.1.1 and later, valid values range from 1500 through 9216. For other SLX-OS versions, valid values range from1548 through 9216.

--ip-mtu int

Specifies the global IP MTU value on device. For SLX IPV4/IPV6, valid values range from 1300 through 9194.

--ipv6-mtu int

Specifies the global IPv6 MTU on a device. For SLX IPV4/IPV6, valid values range from 1300 through 9194.

--fabric

Specifies a Fabric name.

--help

Displays help for set-mtu.

Usage Guidelines

In SLX-OS, you can use the **show interface ethernet** command to see the MTU configuration for an interface.

Examples

This example configures the MTU on one device.

```
efa inventory device interface set-mtu --ip 10.25.225.167 --if-name 0/20-22
--mtu 2000 --ip-mtu 2000 --ipv6-mtu 3000
+---------------+----+------+----------------+------+--------+----------+---------
|   DeviceIP    | ID | Name | Interface Type | MTU  | IP MTU | IPv6 MTU | Result
+---------------+----+------+----------------+------+--------+----------+---------
| 10.25.225.167 | 1  | 0/22 | ethernet       | 2000 | 2000   | 3000     | Success
```

```
+               +----+------+----------------+------+--------+----------+---------
|               | 9  | 0/21 | ethernet       | 2000 | 2000   | 3000     | Success
+               +----+------+----------------+------+--------+----------+---------
|               | 89 | 0/20 | ethernet       | 2000 | 2000   | 3000     | Success
+---------------+----+------+----------------+------+--------+----------+---------
Interface MTU Details
--- Time Elapsed: 18.6886395s ---
```

This example attempts to configure the MTU for two IP addresses, however one IP address is invalid.

```
efa inventory device interface set-mtu --ip 10.25.225.167,10.10.10.10
--if-name 0/20-22  --mtu 2500 --ip-mtu 2500 --ipv6-mtu 2500
---------------+----+------+----------------+------+--------+-----------------+------
|   DeviceIP    | ID | Name | Interface Type | MTU  | IP MTU |       IPv6 MTU |Result
+---------------+----+------+----------------+------+--------+-----------------+------
| 10.10.10.10   |    |      |                |      | Failed | Device does not
|               |    |      |                |      |        | exist with IP:
                                                              10.10.10.10
+---------------+----+------+----------------+------+--------+-----------------+-------
| 10.25.225.167 | 89 | 0/20 | ethernet       | 2500 | 2500   | 2500            |Success
+               +----+------+----------------+------+--------+-----------------+-------
|               | 1  | 0/22 | ethernet       | 2500 | 2500   | 2500            |Success
+               +----+------+----------------+------+--------+-----------------+-------
|               | 9  | 0/21 | ethernet       | 2500 | 2500   | 2500            |Success
+---------------+----+------+----------------+------+--------+-----------------+-------
Interface MTU Details
--- Time Elapsed: 18.6252821s ---
```

This example configures the MTU on multiple IP addresses.

```
efa inventory device interface set-mtu --ip 10.25.225.167,10.24.48.131,10.24.51.135
--if-name 0/20-22   --mtu 3600 --ip-mtu 3600 --ipv6-mtu 3600
+---------------+-----+------+----------------+------+--------+----------+---------
|   DeviceIP    | ID  | Name | Interface Type | MTU  | IP MTU | IPv6 MTU | Result
+---------------+-----+------+----------------+------+--------+----------+---------
| 10.25.225.167 | 9   | 0/21 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 89  | 0/20 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 1   | 0/22 | ethernet       | 3600 | 3600   | 3600     | Success
+---------------+-----+------+----------------+------+--------+----------+---------
| 10.24.48.131  | 142 | 0/20 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 148 | 0/22 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 110 | 0/21 | ethernet       | 3600 | 3600   | 3600     | Success
+---------------+-----+------+----------------+------+--------+----------+---------
| 10.24.51.135  | 16  | 0/21 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 48  | 0/22 | ethernet       | 3600 | 3600   | 3600     | Success
+               +-----+------+----------------+------+--------+----------+---------
|               | 86  | 0/20 | ethernet       | 3600 | 3600   | 3600     | Success
+---------------+-----+------+----------------+------+--------+----------+---------
Interface MTU Details
--- Time Elapsed: 59.5462548s ---
```

This example configures the MTU for the specified Fabric name.

```
efa inventory device interface set-mtu --fabric nc_no_vni --if-name 0/20-22,0/55-58
--mtu 3200 --ip-mtu 3200 --ipv6-mtu 3200
+--------------+-----+---------+----------------+------+--------+----------+---------
+-------------------------
|   DeviceIP   | ID  |  Name   | Interface Type | MTU  | IP MTU | IPv6 MTU | Result
|       Reason
```

```
+--------------+-----+---------+----------------+------+--------+----------+---------
+--------------------------
| 10.24.51.135 | 16  | 0/21    | ethernet       | 3200 | 3200   | 3200     | Success
|
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 48  | 0/22    | ethernet       | 3200 | 3200   | 3200     | Success
|
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 86  | 0/20    | ethernet       | 3200 | 3200   | 3200     | Success
|
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 0   | 0/55-58 | ethernet       | 0    | 0      | 0        | Failed  |
Interfaces [0/55-58]
|              |     |         |                |      |        |          |         | do
not exist for
                                                        device IP 10.24.51.135

Specify a valid interface
+--------------+-----+---------+----------------+------+--------+----------+---------
+--------------------------
| 10.24.48.131 | 0   | 0/55-58 | ethernet       | 0    | 0      | 0        | Failed  |
Interfaces [0/55-58]
|              |     |         |                |      |        |          |         |
does not exist for
                                                        device IP 10.24.51.131

Specify a valid interface
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 110 | 0/21    | ethernet       | 3200 | 3200   | 3200     | Success
|
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 148 | 0/22    | ethernet       | 3200 | 3200   | 3200     | Success
|
+              +-----+---------+----------------+------+--------+----------+---------
+--------------------------
|              | 142 | 0/20    | ethernet       | 3200 | 3200   | 3200     | Success
|
+--------------+-----+---------+----------------+------+--------+----------+---------
+--------------------------
Interface MTU Details
--- Time Elapsed: 37.3021602s ---
```

efa inventory device interface set-speed

Configures the speed for receiving and transmitting data on a physical port.

Syntax

efa inventory device interface set-speed [**--ip** *device-ip* |**--fabric** *fab-name* |**--if-type eth** |**--if-name** *if-list* |**--speed** [**100mbps** | **1gbps** | **10gbps** | **25gbps** | **40gbps** | **100gbps** | **auto**]]

Parameters

--ip *device-ip*

Specifies a comma-separated list of device IP addresses.

--fabric *fab-name*

Specifies a Fabric name.

--if-type eth

Specifies that the interface type is Ethernet, which is the default setting.

--if-name *if-list*

Specifies a comma-separated list of interface names.

--speed { **100mbps** | **1gbps** | **10gbps** | **25gbps** | **40gbps** | **100gbps** | **auto--help**}

Specifies the speed for the port.

Usage Guidelines

In SLX-OS, you can use the **show interface ethernet** command to see the speed of the Ethernet interfaces on your device.

Examples

This example sets the port speed on one device.

```
efa inventory device interface set-speed --ip 10.25.225.167 --if-name 0/20-22  --speed
10gbps
+---------------+----+------+----------------+------------+---------+--------+
|   DeviceIP    | ID | Name | Interface Type | Port Speed | Result  | Reason |
+---------------+----+------+----------------+------------+---------+--------+
| 10.25.225.167 | 89 | 0/20 | ethernet       | 10gbps     | Success |        |
+               +----+------+----------------+------------+---------+--------+
|               | 1  | 0/22 | ethernet       | 10gbps     | Success |        |
+               +----+------+----------------+------------+---------+--------+
|               | 9  | 0/21 | ethernet       | 10gbps     | Success |        |
+---------------+----+------+----------------+------------+---------+--------+
Interface Details
--- Time Elapsed: 17.9586487s ---
```

This example attempts to set the port speed on two IP addresses, however one IP address is invalid.

```
efa inventory device interface set-speed --ip 10.25.225.167,10.10.10.10 --if-name
0/20-22   --speed 25gbps
+---------------+----+------+----------------+------------+---------+----------------
|   DeviceIP    | ID | Name | Interface Type | Port Speed | Result  |        Reason  |
+---------------+----+------+----------------+------------+---------+----------------+
| 10.10.10.10   |    |      |                |            | Failed  | Device does not
|               |    |      |                |            |         | exist with IP:
                                                                      10.10.10.10
+---------------+----+------+----------------+------------+---------+----------------+
| 10.25.225.167 | 89 | 0/20 | ethernet       | 25gbps     | Success |                |
+               +----+------+----------------+------------+---------+----------------+
|               | 1  | 0/22 | ethernet       | 25gbps     | Success |                |
+               +----+------+----------------+------------+---------+----------------+
|               | 9  | 0/21 | ethernet       | 25gbps     | Success |                |
+---------------+----+------+----------------+------------+---------+----------------+
Interface Details
--- Time Elapsed: 18.3503896s ---
```

This example sets the port speed on multiple valid IP addresses.

```
efa inventory device interface set-speed --ip 10.25.225.167,10.24.48.131,10.24.51.135 --
if-name 0/20-22  --speed 25gbps
+---------------+-----+------+----------------+------------+---------+--------+
|   DeviceIP    | ID  | Name | Interface Type | Port Speed | Result  | Reason |
+---------------+-----+------+----------------+------------+---------+--------+
| 10.25.225.167 | 9   | 0/21 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 89  | 0/20 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 1   | 0/22 | ethernet       | 25gbps     | Success |        |
+---------------+-----+------+----------------+------------+---------+--------+
| 10.24.51.135  | 16  | 0/21 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 86  | 0/20 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 48  | 0/22 | ethernet       | 25gbps     | Success |        |
+---------------+-----+------+----------------+------------+---------+--------+
| 10.24.48.131  | 142 | 0/20 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 110 | 0/21 | ethernet       | 25gbps     | Success |        |
+               +-----+------+----------------+------------+---------+--------+
|               | 148 | 0/22 | ethernet       | 25gbps     | Success |        |
+---------------+-----+------+----------------+------------+---------+--------+
Interface Details
--- Time Elapsed: 53.8631425s ---
```

This example sets the port speed for the specified Fabric name.

```
efa inventory device interface set-speed --fabric nc_no_vni --if-name 0/20-22  --speed
25gbps
+--------------+-----+------+----------------+------------+---------+
|   DeviceIP   | ID  | Name | Interface Type | Port Speed | Result  |
+--------------+-----+------+----------------+------------+---------+
| 10.24.51.135 | 86  | 0/20 | ethernet       | 25gbps     | Success |
+              +-----+------+----------------+------------+---------+
|              | 48  | 0/22 | ethernet       | 25gbps     | Success |
+              +-----+------+----------------+------------+---------+
|              | 16  | 0/21 | ethernet       | 25gbps     | Success |
+--------------+-----+------+----------------+------------+---------+
| 10.24.48.131 | 142 | 0/20 | ethernet       | 25gbps     | Success |
+              +-----+------+----------------+------------+---------+
|              | 110 | 0/21 | ethernet       | 25gbps     | Success |
```

```
+              +-----+------+----------------+------------+---------+
|              | 148 | 0/22 | ethernet       | 25gbps     | Success |
+--------------+-----+------+----------------+------------+---------+
Interface Details
--- Time Elapsed: 36.9974805s ---
```

efa inventory device interface unset-breakout

Reverts the breakout of multiple ports back to the original configuration.

Syntax

efa inventory device interface unset-breakout {**--ip** *device-ip* |**--fabric** *fab-name* } **--if-type eth --if-name** *if-list*

Parameters

--ip *device-ip*

Specifies a comma-separated list of device IP addresses.

--fabric *fab-name*

Specifies a Fabric name.

--if-type eth

Specifies that the interface type is Ethernet, which is the default setting.

--if-name *if-list*

Specifies a comma-separated list of interface names.

Usage Guidelines

In SLX-OS, you can use the **show running-config hardware** command to see whether breakout mode is configured for a device.

When you run this command, the breakout interfaces are deconfigured and deleted. The original Ethernet interface in the default configuration is created automatically.

Examples

This example removes breakout mode on one device.

```
efa inventory device interface unset-breakout --ip 10.24.80.158
--if-name 0/1-3
+--------------+--------------+----------------+----------------+---------+
|   DeviceIP   | Interface ID | Interface Name | Interface Type | Result  |
+--------------+--------------+----------------+----------------+---------+
| 10.24.80.158 | 171          | 0/2            | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 175          | 0/3            | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 182          | 0/1            | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+
Interface Details
```

This example attempts to remove breakout mode on two devices, however one IP address is invalid.

```
efa inventory device interface unset-breakout --ip 10.24.80.158,10.10.10.10
--if-name 0/6-9
+--------------+--------------+----------------+----------------+---------+-----------
|   DeviceIP   | Interface ID | Interface Name | Interface Type | Result  |    Reason
+--------------+--------------+----------------+----------------+---------+-----------
```

```
| 10.10.10.10  |              |                |                | Failed  |Device does
|              |              |                |                |         |not exist
                                                                        with IP:
                                                                        10.10.10.10
+--------------+--------------+----------------+----------------+---------+-----------
| 10.24.80.158 | 229          | 0/6            | ethernet       | Success |
+              +--------------+----------------+----------------+---------+-----------
|              | 227          | 0/7            | ethernet       | Success |
+              +--------------+----------------+----------------+---------+-----------
|              | 228          | 0/8            | ethernet       | Success |
+              +--------------+----------------+----------------+---------+-----------
|              | 230          | 0/9            | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+-----------
Interface Details
--- Time Elapsed: 1m6.5402944s ---
```

This example removes breakout mode on multiple devices.

```
efa inventory device interface unset-breakout
--ip 10.24.80.158,10.24.80.159 --if-name 0/9-12
+--------------+--------------+----------------+----------------+---------+
|   DeviceIP   | Interface ID | Interface Name | Interface Type | Result  |
+--------------+--------------+----------------+----------------+---------+
| 10.24.80.158 | 248          | 0/10           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 250          | 0/11           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 249          | 0/12           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 247          | 0/9            | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+
| 10.24.80.159 | 252          | 0/10           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 254          | 0/11           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 253          | 0/12           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 251          | 0/9            | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+
Interface Details
--- Time Elapsed: 1m52.8562333s ---
```

This example removes breakout mode for the specified Fabric name.

```
efa inventory device interface unset-breakout --if-name 0/19-20
--fabric fabric1
+--------------+--------------+----------------+----------------+---------+
|   DeviceIP   | Interface ID | Interface Name | Interface Type | Result  |
+--------------+--------------+----------------+----------------+---------+
| 10.24.80.159 | 279          | 0/19           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 280          | 0/20           | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+
| 10.24.80.158 | 281          | 0/19           | ethernet       | Success |
+              +--------------+----------------+----------------+---------+
|              | 282          | 0/20           | ethernet       | Success |
+--------------+--------------+----------------+----------------+---------+
Interface Details
--- Time Elapsed: 1m19.226463s ---
```

efa inventory device list

Lists all devices for a fabric. If fabric name is not provided, list of all devices not associated to a fabric is displayed.

Syntax

```
efa inventory device list [ --orphan | --fabric | --role | --ips | --
   help ]
```

Parameters

--orphan

Fetch devices not associated to a fabric.

--fabric

Specifies fabric name.

--role

Specifies device role (leaf | spine | super-spine).

--ips

Specifies comma separated device IPs.

--help

Provides help for list.

efa inventory device running-config persist

Saves the running-config to the startup-config on SLX devices.

Syntax

efa inventory device running-config persist { **--ip** *ip-addr* | **--fabric** *fabric-name*}

Parameters

--ip *ip-addr*

Specifies a comma-separated list of IP address and IP address ranges of the devices for which you want the configuration to persist.

--fabric *fabric-name*

Specifies the Fabric that contains the devices for which you want the configuration to persist.

Usage Guidelines

Device configurations configured by the Fabric Service and Tenant Service do not automatically persist on SLX devices.

Use this command to specify the IP addresses or Fabric for which configurations should persist.

Examples

This example configures persistence for two IP addresses.

```
# efa inventory device running-config persist --ip 10.20.50.212,10.20.50.213

Persist Devices Running-Config (success)
IP Address     Device Name     Fabric     Status
10.20.50.212   Leaf-1-3        stage5     Success
10.20.50.213   Leaf-1-3        stage5     Success

Persist Running-Config Details
--- Time Elapsed: 12.2902836s ---
```

This example configures persistence for the same devices, but by Fabric instead of IP address.

```
# efa inventory device running-config persist --fabric stage5

Persist Devices Running-Config (success)
IP Address     Device Name     Fabric     Status
10.20.50.212   Leaf-1-3        stage5     Success
10.20.50.213   Leaf-1-3        stage5     Success


Persist Running-Config Details
--- Time Elapsed: 11.4899986s ---
```

efa inventory device register

Registers the device.

Syntax

```
efa inventory device register [ --ip | --username |--password |--
   maintmode-enable-on-reboot |--help ]
```

Parameters

--ip

Specifies comma separated range of device IP addresses. Example: 1.1.1.1-3,1.1.1.2,2.2.2.2.

--username

Specifies username to connect to the device.

--password

Specifies password to connect to the device.

--maintmode-enable-on-reboot

Configures maintenance mode enable on reboot.

--help

Provides help for register.

efa inventory device setting show

Displays device setting show.

Syntax

efa inventory device setting show [**--ip** | **--help**]

Parameters

--ip

Specifies IP address of the device.

--help

Provides help for show.

efa inventory device setting update

Configures device settings.

Syntax

efa inventory device setting update [**--ip** | **--maint-mode-enable-on-reboot string** | **--maint-mode-enable** | **--health-check-enable** | **--health-check-interval** | **--health-check-heartbeat-miss-threshold** | **--config-backup-periodic-enable** | **--config-backup-interval** | **--number-of-config-backups** | **--help**]

Parameters

--ip

Specifies IP address of the device.

--maint-mode-enable-on-reboot string

Enter Yes to configure maintenance mode enable on reboot and No to de-configure.

--maint-mode-enable

Enter Yes to configure maintenance mode enable and No to de-configure.

--health-check-enable

Enter Yes to enable health check and No to disable health check.

--health-check-interval

Specifies health check interval in minutes, valid values 6 m-24 h.

--health-check-heartbeat-miss-threshold

Specifies health check heart miss threshold, valid values 2-5.

--config-backup-periodic-enable

Enter Yes to enable periodic config backup and No to disable periodic config backup.

--config-backup-interval

Specifies config backup interval in minutes, valid values 3m-30h, default 24h.

--number-of-config-backups

Specifies config backup count, valid values 2-20, default 4.

--help

Provides help for update.

efa inventory device system set-mtu

Configures the global MTU (maximum transmission unit) for Layer 2, IPv4, and IPv6.

Syntax

efa inventory device system set-mtu {**--ip** *device-ip* |**--fabric** *fab-name* }
{**--mtu** *l2-mtu* **--ip-mtu** *ipv4-mtu* **--ipv6-mtu** *ipv6-mtu* }

Parameters

--ip *device-ip*

Specifies a comma-separated list of device IP addresses.

--fabric *fab-name*

Specifies a Fabric name.

--mtu *l2-mtu*

Specifies the global MTU for Layer 2.

--ip-mtu *ipv4-mtu*

Specifies the global MTU for IPv4.

--ipv6-mtu *ipv6-mtu*

Specifies the global MTU for IPv6.

Usage Guidelines

In SLX-OS, you can use the **show running-config** command to see see the global MTU configuration.

Examples

This example configures the MTU on one device.

```
efa inventory device system set-mtu --ip 10.25.225.167 --mtu 3000
--ip-mtu 3000 --ipv6-mtu 3000
WARNING: Setting MTU at device level will set MTU for all the interfaces where
its not explicitly set. This could cause some issues where traffic is running.
Do you want to proceed [y/n]?
y
Global MTU Updated Successfully
+----+---------------+------+--------+----------+---------+--------+
| ID |  IP Address   | MTU  | IP MTU | IPv6 MTU | Result  | Reason |
+----+---------------+------+--------+----------+---------+--------+
| 1  | 10.25.225.167 | 3000 | 3000   | 3000     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
Global MTU Details
--- Time Elapsed: 23.5212882s ---
```

This example attempts to configure the MTU for two IP addresses, however one IP address is invalid.

```
efa inventory device system set-mtu --ip 10.25.225.167,10.10.10.10
--mtu 2500 --ip-mtu 2500 --ipv6-mtu 2500
WARNING: Setting MTU at device level will set MTU for all the interfaces where
```

```
its not explicitly set. This could cause some issues where traffic is running.
Do you want to proceed [y/n]?
y
Global MTU Updated Successfully
+----+---------------+------+--------+----------+---------+------------------
| ID |  IP Address   | MTU  | IP MTU | IPv6 MTU | Result  |      Reason
+----+---------------+------+--------+----------+---------+------------------
| 0  | 10.10.10.10   |      |        |          | Failed  | Device does not
                                                          exist with IP:
                                                          10.10.10.10
+----+---------------+------+--------+----------+---------+------------------
| 1  | 10.25.225.167 | 2500 | 2500   | 2500     | Success |
+----+---------------+------+--------+----------+---------+------------------
| 1  | 10.25.225.167 | 2500 | 2500   | 2500     | Success |
+----+---------------+------+--------+----------+---------+------------------
Global MTU Details
--- Time Elapsed: 31.6608056s ---
```

This example configures the MTU on multiple IP addresses.

```
efa inventory device system set-mtu
--ip 10.25.225.167,10.24.48.131,10.24.51.135 --mtu 3600 --ip-mtu 3600
--ipv6-mtu 3600
WARNING: Setting MTU at device level will set MTU for all the interfaces
where its not explicitly set. This could cause some issues where traffic
is running. Do you want to proceed [y/n]?
y
Global MTU Updated Successfully
+----+---------------+------+--------+----------+---------+--------+
| ID |  IP Address   | MTU  | IP MTU | IPv6 MTU | Result  | Reason |
+----+---------------+------+--------+----------+---------+--------+
| 2  | 10.24.51.135  | 3600 | 3600   | 3600     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
| 1  | 10.25.225.167 | 3600 | 3600   | 3600     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
| 3  | 10.24.48.131  | 3600 | 3600   | 3600     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
Global MTU Details
--- Time Elapsed: 50.7948311s ---
```

This example configures the MTU for the specified Fabric name.

```
efa inventory device system set-mtu --fabric nc_no_vni --mtu 3100
--ip-mtu 3100 --ipv6-mtu 3100
WARNING: Setting MTU at device level will set MTU for all the interfaces
where its not explicitly set. This could cause some issues where traffic
is running. Do you want to proceed [y/n]?
y
Global MTU Updated Successfully
+----+---------------+------+--------+----------+---------+--------+
| ID |  IP Address   | MTU  | IP MTU | IPv6 MTU | Result  | Reason |
+----+---------------+------+--------+----------+---------+--------+
| 2  | 10.24.51.135  | 3100 | 3100   | 3100     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
| 3  | 10.24.48.131  | 3100 | 3100   | 3100     | Success |        |
+----+---------------+------+--------+----------+---------+--------+
Global MTU Details
--- Time Elapsed: 38.1473365s ---
```

efa inventory device update

Synchronizes the IP address on a device with the Asset service.

Syntax

efa inventory device update --ip

Parameters

--ip

Specifies the IP address of the device that you want to synchronize.

Usage Guidelines

This command ensures that the Asset service has the latest information.

Examples

This example synchronizes IP address 10.24.80.158.

```
(efa:extreme)extreme@tpvm:~$ efa inventory device update --ip 10.24.80.158
-------------------------------------------------------------------------------------------------
-----------------------
ID     IP Address     Host Name     Model     Chassis Name     Firmware     ASN
Role     Fabric     Status     Reason
-------------------------------------------------------------------------------------------------
-----------------------
2     10.24.80.158     SLX     3012     SLX9250-32C
20.1.2slxos20.1.2x_patch_200531_2152     4200000000     Leaf     fabric-2
Success
-------------------------------------------------------------------------------------------------
-----------------------
Device Details
— Time Elapsed: 12.210281486s —
```

efa inventory drift-reconcile

Identifies drift in device configuration and performs reconciliation.

Syntax

efa inventory drift-reconcile history [**--ip** *<ip address>* | **--help**]

efa inventory drift-reconcile execute [**--ip** *<ip address>* | **--reconcile** | **--help**]

efa inventory drift-reconcile delete [**--key** [*<ip address>* | *<UUID>*] | **--help**]

efa inventory drift-reconcile detail [**--uuid** *<dr-uuid>* | **--help**]

Parameters

--detail

Displays drift-reconcile detail

--delete

Deletes drift-reconcile record

--execute

Executes drift-reconcile

--help

Provides help for drift-reconcile commands

--history

Displays drift-reconcile history

--ip

Specifies IP address of the device

--key

Specifies IP address of the device or drift and execution UUID to be deleted

--reconcile

Identifies drift and reconcile with device

--uuid

Specifies drift reconcile id

Examples

The following example shows **efa inventory drift-reconcile** commands.

```
# efa inventory drift-reconcile execute --ip 10.24.14.133 --reconcile
# efa inventory drift-reconcile history --device-ip 10.24.14.133
# efa inventory drift-reconcile detail --uuid 1111-1111-1111
# efa inventory drift-reconcile delete --key 10.24.14.133
# efa inventory drift-reconcile delete --key 1111-1111-1111
```

efa inventory execution

Displays the list of inventory executions.

Syntax

efa inventory execution [**--show** | **--help**]

efa inventory execution show [**--id** | **--limit int32** | **--status** | **--help**]

Parameters

--id

Filters the executions based on execution id. If --id is available, --limit and --status are ignored.

--help

Provides help for execution commands

--limit int32

Limits the number of executions to be listed. Value 0 lists all the executions. (default - 10)

--status

Filters the executions based on the status (failed / succeeded / all) (default - all)

efa inventory firmware-host delete

Removes a firmware host.

Syntax

efa inventory firmware-host delete --ip *<firmware host ip address>*

Parameters

--ip

Firmware host IP address

efa inventory firmware-host list

Displays all registered firmware hosts.

Syntax

efa inventory firmware-host list [**--ip** *<comma separated Firmware Host IPs>* **--help** <help for list>]

Parameters

--ip*<string>*

Name of the fabric

--help

Help for list

efa inventory firmware-host register

Registers a firmware host which will be used to download firmware builds to the devices.

Syntax

efa inventory firmware-host register [**--ip** *<firmware host ip address>* | **--protocol** *< scp | ftp | sftp | http >* |**--username** *<username credentials to login to the firmware download host>* | **--password** *<password credentials to login to the firmware download host>*]

Command Default

Simple connectivity test to the firmware-host by given IP. The complete firmware-host sanity check will be performed later when a device is prepared and again when firmware-download is executed.

Parameters

--ip

Firmware host IP address

--protocol

Protocol < scp | ftp | sftp | http >

--username

Username credentials to login to the firmware download host

--password

Password credentials to login to the firmware download host

efa inventory firmware-host update

Updates the login credentials or file transfer protocol to be used by a switch when downloading firmware from the firmware host.

Syntax

efa inventory firmware-host update [**--ip** *<firmware host ip address>* | **--protocol** *< scp | ftp | sftp | http >* | **--username** *<username credentials to login to the firmware download host>* | **--password** *<password credentials to login to the firmware download host>*]

Parameters

--ip

Firmware host IP address

--protocol

Protocol < scp | ftp | sftp | http >

--username

Username credentials to login to the firmware download host

--password

Password credentials to login to the firmware download host

efa inventory kvstore

Configures KV pair.

Syntax

efa inventory kvstore create [**--key** | **--value** | **--encrypt** |**--help**]

efa inventory kvstore delete [**--key** | **---help**]

efa inventory kvstore list [**--decrypt** | **--key** | **--prefix** | **--help**]

Parameters

create

Creates KV Pair.

--decrypt

Decrypts secret fields.

delete

Deletes KV Pair.

--encrypt

Encrypts

--help

Provides help for kvstore.

--key

Specifies KV pair name.

list

Lists all KV Store entries or filtered by key.

--prefix

Retrieve list of KV pairs matching the prefix.

--value

Specifies Value for the key.

efa inventory rma

Initiates Return Material Authorization (RMA).

Syntax

efa inventory rma history [**--ip** *<ip address>* | **--help**]

efa inventory rma detail [**--uuid** *<drift-reconcile id>* | **--help**]

efa inventory rma delete [**--key** *<ip address>* | **--help**]

efa inventory rma execute [**--ip** *<ip address>* |**--config-backup-id** *<config-backup-uuid>* |**--help**]

Parameters

--config-backup-id

Specifies UUID of the configuration to be replayed

--detail

Displays device replace detail

--delete

Deletes RMA record

--execute

Executes RMA for device with the given IP

--help

Provides help for inventory commands

--history

Displays RMA history

--ip

Specifies IP address of the device

--key

Specifies IP address of the device or RMA execution UUID to be deleted

--uuid

Specifies drift reconcile id

Examples

The following example shows **efa inventory rma** commands.

```
# efa inventory rma execute --ip 10.24.14.133 --config-backup-id 1111-1111-111
# efa inventory rma history -ip 10.24.14.133
# efa inventory rma detail -uuid 123e4567-e89b-12d3-a456-426614174000
```

efa login

Logs into the EFA application.

Syntax

efa login [**--username** | **--password** | **--help**]

Parameters

--username

Specifies name of the user to login.

--password

Specifies password of the user.

--help

Provides help for login.

efa logout

Logs out of the EFA application.

Syntax

```
efa logout --help
```

Parameters

--help

Provides help for logout.

efa notification subscribers add-https

Registers a new subscriber to the notification service with an HTTPS webhook.

Syntax

efa notification subscribers add-https --url *address* **--username** *name* **--password** *password* **--insecure**

Parameters

--url *address*

Specifies the URL of the subscriber.

--username *name*

Specifies the user name for access to the URL.

--password *password*

Specifies the password for the user name.

--insecure

(Optional) Indicates that insecure SSL connection and transfers are used for sending notifications. By default, the SSL connection and transfers are secure.

The following example registers a new HTTPS webhook subscriber to the Notification Service.

```
efa notification subscribers add-https --url https://path/to/my/service:port
--username myusername --password mypassword --insecure
Successfully registered subscriber.

+-----------+-------------------------------------------------------------------------+
| attribute | value                                                                   |
+-----------+-------------------------------------------------------------------------+
| id        | 1                                                                       |
+-----------+-------------------------------------------------------------------------+
| handler   | http                                                                    |
+-----------+-------------------------------------------------------------------------+
| endpoint  | https://path/to/my/service:port                                         |
+-----------+-------------------------------------------------------------------------+
| config    | {"cacert":"","insecure":true,"password":"mypassword",
              "username":"myusername"}                                                |
+-----------+-------------------------------------------------------------------------+
Notification Subscriber ID=1
--- Time Elapsed: 2.203878641s ---
```

efa notification subscribers add-syslog-relp

Registers a syslog subscriber to receive notifications over RELP from the EFA Notification Service.

Syntax

efa notification subscribers add-syslog-relp { **--address** *host:port* } [**--insecure**] [**--cacert** *local-path*] [**--conn-timeout** *seconds*]

Command Default

By default, subscribers do not receive syslog notifications over RELP.

Parameters

--address *host:port*

Specifies the address of the syslog server in `host:port` format. The default port is 514.

--insecure

(Optional) Indicates that insecure SSL connection and transfers are used for sending notifications. By default, the SSL connection and transfers are secure.

--cacert *local-path*

Specifies the local path to the cacert.pem file for SSL verification. Required *only* when the **--insecure** parameter is not specified.

--conn-timeout *seconds*

(Optional) Specifies the maximum amount of time allowed to open a connection to the syslog server before the request times out. The default is 10 seconds.

Usage Guidelines

Any external server that is configured with RELP can be registered as a subscriber to EFA notifications. For more information, see "Notification Service" in the *Extreme Fabric Automation Administration Guide, 2.2.0*.

Examples

The following example registers 10.x.x.x:20514 as a subscriber for insecure notifications.

```
$ efa notification subscribers add-syslog-relp --address
10.x.x.x:20514 --insecure
Successfully registered subscriber.

+-----------+-------------------------------------------------+
| attribute | value                                           |
+-----------+-------------------------------------------------+
| id        | 1                                               |
+-----------+-------------------------------------------------+
| handler   | relp                                            |
+-----------+-------------------------------------------------+
| endpoint  | 10.x.x.x:20514                                  |
+-----------+-------------------------------------------------+
```

```
| config    | {"cacert":"","conn-timeout":10,"insecure":true}|
+-----------+------------------------------------------------+
Notification Subscriber ID=1
--- Time Elapsed: 2.399195253s ---
```

efa notification subscribers delete

Deletes the specified subscriber from the Notification service.

Syntax

efa notification subscribers delete *id*

Parameters

id

Specifies the ID of the subscriber that you want to delete.

Examples

The following example deletes the specified subscriber from the Notification service.

```
efa notification subscribers delete 1
Successfully unregistered subscriber.
--- Time Elapsed: 186.568274ms ---
```

efa notification subscribers get

Retrieves subscription details about the Notification service for the specified subscriber.

Syntax

efa notification subscribers get *id* **--help**

Parameters

id

Specifies the ID of the subscriber that you want to review.

--help

Provides help for command.

Examples

The following is sample output for the subscriber with the ID of '1'.

```
efa notification subscribers get 1

+-----------+-------------------------------------------------------------------------+
| attribute | value                                                                   |
+-----------+-------------------------------------------------------------------------+
| id        | 1                                                                       |
+-----------+-------------------------------------------------------------------------+
| handler   | http                                                                    |
+-----------+-------------------------------------------------------------------------+
| endpoint  | https://path/to/my/service:port                                       |
+-----------+-------------------------------------------------------------------------+
| config    | {"cacert":"","insecure":true,"password":"mypassword",
              "username":"myusername"}                                                |
+-----------+-------------------------------------------------------------------------+
Notification Subscriber ID=1
--- Time Elapsed: 2.203878641s ---
```

efa notification subscribers list

Provides a list of subscribers to the Notification service.

Syntax

efa notification subscribers list

Examples

The following example lists the subscribers to the Notification service.

```
efa notification subscribers list
+----+---------+-------------------------------------------------+
| id | handler | endpoint                                        |
+----+---------+-------------------------------------------------+
| 1  | http    | https://path/to/my/service:port                 |
+----+---------+-------------------------------------------------+
Notification Subscribers Count=1
--- Time Elapsed: 121.443493ms ---
```

efa openstack debug

Displays OpenStack debug information.

Syntax

efa openstack debug [**network** | **network-interface** | **tenant** | **router** | **router-interface**]

efa openstack debug network delete *--neutron-id*

efa openstack debug network-interface delete *--neutron-id*

efa openstack debug router delete *--router-id*

efa openstack debug router-interface delete --router-id *<router-id>* **--subnet-id** *<subnet-id>*

efa openstack debug tenant cleanup --name *tenant name*

Parameters

cleanup *--name*

Cleans up all OpenStack assets associated to a tenant

delete *--neutron-id* | *--router-id* | *subnet-id*

Deletes the selected network element

network

Specifies the name of the network

network-interface

Specifies the name of the network-interface

tenant

Specifies the name of the tenant

router

Specifies the name of the router

router-interface

Specifies the name of the router-interface

efa openstack execution

Provides OpenStack execution commands.

Syntax

efa openstack execution delete [**--days int32** | **--help**]

efa openstack execution show [**--help** | **--id** | **--limit int32** | **--status**]

Parameters

delete

Deletes execution entries older than the specified days.

--days int32

Deletes execution entries older than the specified days (default 30).

--id

Filters the executions based on execution id. "limit" and "status" flags are ignored when "id" flag is given.

--help

Provides help for execution.

--limit int32

Limits the number of executions to be listed. Value "0" will list all the executions (default 10).

show

Lists all Networks and its summary information.

--status

Filters the executions based on the status (failed/succeeded/all) (default "all").

efa openstack network show

Displays OpenStack network information.

Syntax

efa openstack network show

Parameters

network

Lists all networks

Examples

```
# efa openstack network show
+--------------------------------------+-----------+------+
|              Neutron ID              | Tenant    | CTAG |
+--------------------------------------+-----------+------+
| 123e4567-e89b-12d3-a456-426655440001 | RegionOne | 900  |
+--------------------------------------+-----------+------+
| 123e4567-e89b-12d3-a456-426655440002 | RegionOne | 950  |
+--------------------------------------+-----------+------+
```

efa openstack network-interface show

Displays OpenStack network-interface information.

Syntax

efa openstack network-interface show

Parameters

network-interface

Lists all network-interfaces

Examples

```
# efa openstack network-interface show

+--------------------------------------+--------------------------------------
+--------------+------------------+
|           Neutron Port ID            |          Neutron Network ID          |  Switch
IP   | Switch Interface |
+--------------------------------------+--------------------------------------
+--------------+------------------+
| 123e4567-e89b-12d3-a456-426655440001 | 123e4567-e89b-12d3-a456-426655440001 |
10.24.80.134 | 0/9              |
+--------------------------------------+--------------------------------------
+--------------+------------------+
| 123e4567-e89b-12d3-a456-426655440003 | 123e4567-e89b-12d3-a456-426655440001 |
10.24.80.133 | 0/9              |
+--------------------------------------+--------------------------------------
+--------------+------------------+
| 123e4567-e89b-12d3-a456-426655440005 | 123e4567-e89b-12d3-a456-426655440002 |
10.24.80.134 | 0/9              |
+--------------------------------------+--------------------------------------
+--------------+------------------+
| 123e4567-e89b-12d3-a456-426655440007 | 123e4567-e89b-12d3-a456-426655440002 |
10.24.80.133 | 0/9              |
+--------------------------------------+--------------------------------------
+--------------+------------------+
```

efa openstack router show

Displays OpenStack router information.

Syntax

efa openstack router show

Parameters

Router

Lists all routers

Examples

```
# efa openstack router show

+--------------------------------------+-----------+
|              Router ID               | Tenant    |
+--------------------------------------+-----------+
| 523e4567-e89b-12d3-a456-426655440001 | RegionOne |
+--------------------------------------+-----------+
```

efa openstack router-interface show

Displays OpenStack router-interface information.

Syntax

efa openstack router-interface show

Parameters

router-interface

Lists all router-interfaces

Examples

```
# efa openstack router-interface show

+--------------------------------------+--------------------------------------+
|              Subnet ID               |              Router ID               |
+--------------------------------------+--------------------------------------+
| 323e4567-e89b-12d3-a456-426655440001 | 523e4567-e89b-12d3-a456-426655440001 |
+--------------------------------------+--------------------------------------+
| 323e4567-e89b-12d3-a456-426655440002 | 523e4567-e89b-12d3-a456-426655440001 |
+--------------------------------------+--------------------------------------+
```

efa openstack subnet show

Displays OpenStack subnet information.

Syntax

efa openstack subnet show

Parameters

subnet

Lists all subnets

Examples

```
# efa openstack subnet show

+--------------------------------------+--------------------------------------
+---------------+------------+
|              Subnet ID               |              Network ID              |
CIDR      | Gateway IP |
+--------------------------------------+--------------------------------------
+---------------+------------+
| 323e4567-e89b-12d3-a456-426655440001 | 123e4567-e89b-12d3-a456-426655440001 |
20.32.45.0/24 | 20.32.45.1 |
+--------------------------------------+--------------------------------------
+---------------+------------+
| 323e4567-e89b-12d3-a456-426655440002 | 123e4567-e89b-12d3-a456-426655440002 |
10.32.45.0/24 | 10.32.45.1 |
+--------------------------------------+--------------------------------------
+---------------+------------+
```

efa rbac execution

Displays or deletes the execution logs of Auth and RBAC service.

Syntax

efa rbac execution show [**--id** | **--help**]

efa rbac execution delete [**--days int32** | **--help**]

Parameters

--day int32

Deletes execution entries older than the specified days (default 30).

delete

Deletes execution entries older than the specified days.

--help

Provides help for rbac execution.

--id

Filters the executions based on execution id. "limit" and "status" flags are ignored when "id" flag is given.

--limit int32

Limits the number of executions to be listed. Value "0" will list all the executions. (default 10).

show

Displays the list of executions.

--status

Filters the executions based on the status (failed/succeeded/all) (default "all").

efa rbac role show

Displays the roles available in EFA.

Syntax

efa rbac role show [**--name** | **--help**]

Parameters

--name

Specifies name of the role.

--help

Provides help for the command.

Usage Guidelines

Output of the command is similar to the following.

Role	Description
FabricAdmin	• Registers devices to the Fabric • Configures Fabric parameters • Validates all devices in the Fabric • Configures switches for IP Fabric with overlay and without overlay • Creates tenants • Creates networks inside tenants, such as VRF, EPG, and PO • Performs Fabric debug activities • Has privileges for OpenStack, Hyper-V, and vCenter operations
SecurityAdmin	Performs user management, PKI, and key management operations
NetworkOperator	• Has view-only privileges for Fabric configurations, information for tenants and inventory, and all ecosystem information • Cannot make changes in the system
SystemDebugger	• Has privileges to perform supportsave and system backup, and to view the running system configurations • Has privileges to perform Fabric debug operations • Sets debug levels for services • Has privileges to collect execution logs from services

Role	Description
SystemAdmin	Has complete privileges to all operations in the system
<Tenant>Admin * Created dynamically per tenant	Performs tenant administration within the assigned tenant, such as the following: • Adding networks to the tenant • Configuring network parameters • Configuring switches with tenant-specific information Cannot perform actions for any other tenant

efa scvmm delete

Deletes SCVMM Server.

Syntax

efa scvmm delete [**--host** | **--cleanup-epgs** | **--help**]

Parameters

--host

Specifies IP or Hostname of the SCVMM server to be deleted.

--cleanup-epgs

Cleans up EPGs from Tenant service when SCVMM server is deleted.

--help

Provides help for delete.

efa scvmm links physical

Configures SCVMM physical Links.

Syntax

efa scvmm links physical [**--host** | **--hyperv** | **--help**]

Parameters

--host

Specifies IP/Hostname of the SCVMM server.

--hyperv

Specifies Hostname of the Hyper-V host.

--help

Provides help for SCVMM physical links.

efa scvmm links virtual

Configures SCVMM virtual Links.

Syntax

efa scvmm links virtual [**--hyperv** | **--help**]

Parameters

--hyperv

Specifies Hostname of the Hyper-V host.

--help

Provides help for SCVMM virtual links.

efa scvmm list

Lists all SCVMM Servers and their summary information.

Syntax

efa scvmm list [**--host** | **--help**]

Parameters

--host

Specifies Hostname/IP of the SCVMM server.

--help

Provides help for SCVMM list.

efa scvmm register

Registers SCVMM.

Syntax

efa scvmm register [**--host** | **--username** | **--password** | **--tenant** | **--help**]

Parameters

--host

Specifies IP or Hostname of the SCVMM server to connect to.

--username

Specifies Username to connect to the SCVMM server.

--password

Specifies password to connect to the SCVMM server.

--tenant

Specifies tenant name for the SCVMM server.

--help

Provides help for register.

efa scvmm settings show

Lists SCVMM Service Settings.

Syntax

```
efa scvmm settings show --help
```

Parameters

--help

Provides help for show.

efa scvmm settings update

Updates SCVMM Service Settings.

Syntax

efa scvmm settings update [**--poll-frequency string** | **--help**]

Parameters

--poll-frequency string

Specifies polling frequency in hours between 1 to 24

--help

Provides help for SCVMM settings update.

efa scvmm update

Updates SCVMM Server.

Syntax

efa scvmm update [**--host** | **--username** | **--password** | **--help**]

Parameters

--host

Specifies IP or Hostname of the SCVMM Server to update.

--username

Specifies username to connect to the SCVMM Server.

--password

Specifies password to connect to the SCVMM Server.

--help

Provides help for update.

efa show-running-config

Displays the running-config of all current EFA configurations.

Syntax

efa show-running-config

Usage Guidelines

Run this command to display the running-config of current configurations for core services.

The output is displayed in the following order: Asset, Fabric, Tenant commands.

The command output contains the default values for each configuration line item.

You can use the command output for CLI playback on an empty EFA deployment, which is a useful tool for recovery.

This example shows a partial list of typical output.

```
$ efa show-running-config

efa inventory device register --ip "10.24.80.191" --username admin --password password

efa inventory device setting update --ip "10.24.80.191" --maint-mode-enable-on-reboot  No
--maint-mode-enable No --health-check-enable No --health-check-interval 6m
--health-check-heartbeat-miss-threshold 2 --config-backup-periodic-enable Yes
--config-backup-interval 24h --number-of-config-backups 4

efa inventory device register --ip "10.24.80.192" --username admin --password password

efa inventory device setting update --ip "10.24.80.192" --maint-mode-enable-on-reboot  No
--maint-mode-enable No --health-check-enable No --health-check-interval 6m
--health-check-heartbeat-miss-threshold 2 --config-backup-periodic-enable Yes
--config-backup-interval 24h --number-of-config-backups 4

efa fabric create --name "default" --type clos --stage 3 --description "Default Fabric"
```

efa-sync execute

Syncs EFA with Neutron.

Syntax

efa-sync execute

```
# sudo efa-sync execute
```

efa system backup

Backs up the EFA system, including the database and certificates.

Syntax

efa system backup

Usage Guidelines

You can restore a backed-up database for various reasons, such as if the database becomes corrupted or you want to revert to a previous configuration. The backup process creates a backup tar file, which you specify for the restore process. The backup tar file is saved to one of the following locations.

- Server: `/var/log/efa/backup`
- TPVM: `/apps/efa_logs/backup`

Run this command as a sudo user for the base operating system.

Examples

This example backs up the database and creates a tar file.

```
efa system backup
Backup file ::  /apps/efa_logs/backup//EFA-2020.06.08-15.52.09.tar
--- Time Elapsed: 9.603815206s ---
```

efa system backup-list

Displays a list of all available EFA backup files.

Syntax

efa system backup-list

Examples

This example shows 2 backup .tar files that are available to use in a restore operation.

```
$ efa system backup-list
+----+-----------------------------------+---------+----------------+
| ID    | File                           | Version | Generated By   |
+----+-----------------------------------+---------+----------------+
| 1     | EFA-2020.08.20-20.26.46.tar    | 2.3.0-1 | User           |
+----+-----------------------------------+---------+----------------+
| 2     | EFA-2020.08.20-20.27.29.tar    | 2.3.0-GA| System         |
+----+-----------------------------------+---------+----------------+
--- Time Elapsed: 183.69386ms ---
```

efa system feature show

Displays the status of the automatic in-progress transaction recovery feature.

Syntax

efa system feature show

Usage Guidelines

Use the **efa system feature update** command to enable the feature.

For more information about the feature, see the "Transaction Handling after Failover or Restart" topic in the *Extreme Fabric Automation Administration Guide, 2.2.0*.

Examples

The following example shows that the feature is disabled.

```
# efa system feature show
+-----------------------------------------+----------+
|         FEATURE NAME                    |  STATUS  |
+-----------------------------------------+----------+
| Inflight Transaction Auto Recovery      | Disabled |
+-----------------------------------------+----------+
```

efa system feature update

Enables the automatic recovery of in-flight (in-progress) transactions after a service restart or high-availability failover.

Syntax

efa system feature update --inflight-transaction-auto-recovery{**enable** | **disable**}

Parameters

--inflight-transaction-auto-recovery{**enable** | **disable**}

Enables or disables the automatic recovery of in-flight transactions after a service restart or high-availability failover.

Usage Guidelines

After a service restart or high-availability failover, EFA can recover in-progress transactions by rolling them back or rolling them forward. In-progress transactions are those that are outstanding in the execution log after a restart or a failover.

- When transactions are rolled back, the requested action is undone. This category includes transactions launched by create commands and by update commands with add operations.
- When transactions are rolled forward, the requested action is completed. This category includes transactions launched by delete commands and by update commands with delete operations.

When this feature is enabled, all Day-1 to Day-N tenant operations support automatic in-progress transaction recovery.

When this feature is disabled, Day-1 to Day-N tenant operations do not support automatic in-progress transaction recovery.

Examples

This example enables automatic in-flight transaction recovery.

```
efa system feature update --inflight-transaction-auto-recovery enable
Feature Setting Updated Successful
--- Time Elapsed: 634.557118ms ---
```

This example disables automatic in-flight transaction recovery.

```
efa system feature update --inflight-transaction-auto-recovery disable
Feature Setting Updated Successful
--- Time Elapsed: 634.557125ms ---
```

efa system restore

Restores the EFA system from a backup.

Syntax

efa system restore [**--backup-tar** *filename*]

Parameters

--backup-tar *filename*

Specifies the file name for the backup tar file.

Usage Guidelines

You can restore a backed-up database for various reasons, such as if the database becomes corrupted or you want to revert to a previous configuration. The backup process creates a backup tar file, which you specify for the restore process.

If you do not specify the **--backup-tar** parameter, the restore process displays the list of available backup files for you to choose from.

After the database is restored, a list of all pods is displayed, showing their status, number of restarts, and age.

Run this command as a sudo user for the base operating system.

Examples

This syntax restores the database.

```
efa system restore --backup-tar EFA-2020.06.08-15.52.09.tar
Backup file name:  EFA-2020.06.08-15.52.09.tar
Restore result :: Restore operation successful
--- Time Elapsed: 3m11.269648985s ---
```

efa system settings show

Displays the settings for the maximum number of backup and supportsave files to save, and the schedules for backing up the database and purging the database and supportsave files.

Syntax

efa system settings show

Examples

This example shows typical output for the command.

```
$ efa system settings show
+----------------------------------------+
|           SETTING            | VALUE   |
+----------------------------------------+
| Max backup file limit        | 5       |
+----------------------------------------+
| Max supportsave file limit   | 5       |
+----------------------------------------+
| Periodic backup schedule     | 0 0 *** |
+----------------------------------------+
| Backup purge schedule        | 0 0 *** |
+----------------------------------------+
| Supportsave purge schedule   | 0 0 *** |
+----------------------------------------+
```

efa system settings update

Configures the schedule for automatic database backups and purges, and determines the maximum number of backup and supportsave files to save before purging begins.

Syntax

efa system settings update [**--backup-schedule** *time*] [**--backup-purge-schedule** *time*] [**--supportsave-purge-schedule** *time*] [**--max-backup-files** *num*] [**--max-supportsave-files** *num*]

Parameters

--backup-schedule *time*

Specifies the schedule for periodic, automatic backups, in the format HOUR:DOM:MON:DOW (hour, day of month, month, day of week). The default schedule is Sunday 12 AM.

--backup-purge-schedule *time*

Specifies the schedule for deleting old backup .tar files, in the format HOUR:DOM:MON:DOW (hour, day of month, month, day of week).

--supportsave-purge-schedule *time*

Specifies the schedule for deleting old supportsave files, in the format HOUR:DOM:MON:DOW (hour, day of month, month, day of week).

--max-backup-files *num*

Specifies the maximum number of backup files to keep. The backup purge process deletes the older backup files in excess of this value. The default is 5 backup files.

--max-supportsave-files *num*

Specifies the maximum number of supportsave files to keep. The supportsave purge process deletes the older files in excess of this value. The default is 5 supportsave files.

Examples

This example configures a backup schedule of 0200 on the 3rd day of the month and then shows how to use the **efa system settings show** command to view all settings, including the new backup schedule.

```
$ efa system settings update --backup-schedule 2:3:*:*
Setting Update Successful
--- Time Elapsed: 319.383113ms ---

$ efa system settings show
+---------------------------+-----------+
|          SETTING          |   VALUE   |
+---------------------------+-----------+
| Max Backup File Limit     | 5         |
+---------------------------+-----------+
| Max Supportsave File Limit | 5         |
+---------------------------+-----------+
| Backup Schedule           | 0 2 3 * * |
+---------------------------+-----------+
| Backup Purge Schedule     | 0 0 * * * |
```

```
+----------------------------+-----------+
| Supportsave Purge Schedule | 0 0 * * * |
+----------------------------+-----------+
--- Time Elapsed: 181.854843ms ---
```

efa system supportsave

Collects the system support-save of the Inventory, Tenant, and Fabric service logs, and their associated database dumps

Syntax

efa system supportsave

Usage Guidelines

The supportsave file is saved to `/var/log/efa/efa_<log_id>.logs.zip`.

Examples

This example collects the system supportsave logs.

```
(efa:root)root@admin1-00:~# efa system supportsave
Capturing Database Snapshot..
Capturing Database Snapshot took 1.697961249s
Capturing Pod logs for all services...
Capturing Pod logs for all services took 17.148416322s
Capturing logs for database error, k3s and EFA running config...
Capturing logs for database errors, k3s and EFA running config took 2.674920598s
Archiving...
Archiving took 2.048826234s
Cleaning up files...
Cleaning up files took 165.106125ms

Support Save File: /var/log/efa/efa_2020-10-08T07:11:01.logs.zip
--- Time Elapsed: 28.695437855s ---
(efa:root)root@admin1-00:~#
```

efa tenant create

Creates tenant reserved resources like total number of L3 VNIs, VLANs, VRFs, and Bridge Domains for fabrics with non-auto VNI settings which can later be applied to an end point group.

Syntax

efa tenant create [**--name** | **--description** | **--type** < *private* | *shared* > | **--l2-vni-range** | **--l3-vni-range** | **--vlan-range** |**--vrf-count** | **--enable-bd** |**--port** | **--help**]

Parameters

--name

Specifies the name of the tenant.

--description

Describes the tenant.

--l2-vni-range

Specifies the contiguous range of L2 VNIs in ascending order will be reserved for the tenant within the scope of a fabric. Valid VNI values are <1-16777215>. Example: 14201-14300

--l3-vni-range

Specifies the contiguous range of L3 VNIs in ascending order starting from l3-vni-range will be reserved for the tenant within the scope of a fabric contiguous range of L3 VNIs in ascending order will be reserved for the tenant within the scope of a fabric. Valid VNI values are <1-16777215>. Example: 14201-14300

--vlan-range

Specifies the contiguous range of Vlans to be reserved for the tenant. Valid values are <2-4090>. Example: 2-100

--vrf-count

Specifies the number of VRFs reserved for the tenant.

--enable-bd

Enables BD capability for networks created under this tenant. Example: --enable-bd=true | --enable-bd=false

--port

Lists physical ports of devices which are reserved for the asset. Example: SW1_IP[0/1,0/2,0/12-15,0/5:4],SW2_IP[0/1,0/4,0/5:1-2,0/5:3,0/9-20]

--type

Specifies the type. POs/VRFs of shared tenant that are available to other tenants. Create EPG is not allowed to share tenant. Default Type: private. Valid values are shared | private.

--help

Displays help for efa tenant create.

Examples

```
# efa tenant create --name vPOD1 --vrf-count 10 --vlan-range 2-4090 --port
172.31.254.13[0/1],172.31.254.20[0/1] --description Subscriber1
1) Cluster On device

SLX# show running-config cluster
cluster fabric1-cluster-1
 peer 10.20.20.7
 peer-interface Port-channel 64
 peer-keepalive
  auto
 !
 member vlan all
 member bridge-domain all
!
SLX#

2) EPG creation

$ ./efa.exe tenant create --name tenant1 --l2-vni-range 10002-14190 --vlan-range 2-4090 --
port 10.25.225.173[0/21-25],10.25.225.174[0/21-25] --description Tenant1 --vrf-count 10
--enable-bd

Tenant created successfully.

--- Time Elapsed: 405.0004ms ---

$ ./efa.exe tenant po create --name po1 --port 10.25.225.173[0/22],10.25.225.174[0/22] --
speed 10Gbps --negotiation active --tenant tenant1 --lacp-timeout short

PortChannel created successfully.

--- Time Elapsed: 53.5310544s ---

$ ./efa.exe tenant epg create --name epg_nonclos --tenant tenant1 --description
Epg_nonclos --port 10.25.225.173[0/23] --ctag-range 2001-2003 --switchport-mode trunk --
po po1 --type l3-hand-off

EndpointGroup created successfully.

--- Time Elapsed: 23.1993643s ---


3) Cluster config on deivce after EPG

SLX# show running-config cluster
cluster fabric1-cluster-1
 peer 10.20.20.7
 peer-interface Port-channel 64
 peer-keepalive
  auto
 !
 member vlan all
 member bridge-domain all
 member bridge-domain remove 1-3
!

4) DB added after EPG

dcapp_tenant=# SELECT * FROM public.mct_cluster_bridge_domain_mapping;
 id | cluster_id | bridge_domain | bridge_domain_value | member_action | oob_created |
dev_state  |  app_state  | reason
----+------------+---------------+---------------------+---------------+-------------
```

```
+-------------+-------------+--------
 70 |          4 |             0 |                   1 | Removed       | f           |
provisioned | cfg-in-sync |
 71 |          4 |             0 |                   2 | Removed       | f           |
provisioned | cfg-in-sync |
 72 |          4 |             0 |                   3 | Removed       | f           |
provisioned | cfg-in-sync |
 73 |          3 |             0 |                   1 | Removed       | f           |
provisioned | cfg-in-sync |
 74 |          3 |             0 |                   2 | Removed       | f           |
provisioned | cfg-in-sync |
 75 |          3 |             0 |                   3 | Removed       | f           |
provisioned | cfg-in-sync |
(6 rows)

5) EPG delete
$ ./efa.exe tenant epg delete --name epg_nonclos --tenant
tenant1
EndpointGroup: epg_nonclos deleted successfully.

--- Time Elapsed: 16.2781195s ---

6) Cluser config on device after epg delete

SLX# show running-config cluster
cluster fabric1-cluster-1
 peer 10.20.20.7
 peer-interface Port-channel 64
 peer-keepalive
  auto
 !
 member vlan all
 member bridge-domain all
!

7) DB table after epg delete

dcapp_tenant=# SELECT * FROM public.mct_cluster_bridge_domain_mapping;
 id | cluster_id | bridge_domain | bridge_domain_value | member_action | oob_created |
dev_state | app_state | reason
----+------------+---------------+---------------------+---------------+-------------
+-----------+-----------+--------
(0 rows)
```

efa tenant debug

Identifies drift in device configuration. The API can be used to setup debug level and debug for the module.

Syntax

efa tenant debug device drift [**--device-ip** | **--filter** | **--help**| **--reconcile**]

efa tenant debug set [**--level** | **--help**]

Parameters

--device-ip

Specifies IP address of the device.

--filter

Filters displaying drift data (po/evpn/ovg/lif/bd/vlan,intf/ve/vrf/mct/routerbgp/pwprofile/all) (default "all").

--help

Provides help for debug.

--level

Specifies debug Level. Example: debug | info | debugdb | nodebugdb

--reconcile

Reconciles configuration on the device.

efa tenant delete

Deletes a tenant.

Syntax

efa tenant delete [-- **name** *tenant-name* --**force**]

Command Default

Parameters

--name *tenant-name*

Specifies a tenant and a tenant name.

--force

Forces the deletion on the tenant if the option is provided.

Examples

The following example deletes a tenant:

```
efa tenant delete --name tenant11
```

efa tenant epg configure

Configures to push or remove pending configuration

Syntax

efa tenant epg configure [**--name** | **--tenant** | **--help**]

Parameters

--name

Specifies name of the EPG.

--tenant

Specifies name of the tenant.

--help

Provides help for tenant epg configure.

```
(efa:root)root@admin1-00:~/sam# efa tenant epg configure --name epgv201 --tenant tv1

EndpointGroup configured successfully.

--- Time Elapsed: 337.645809ms ---
(efa:root)root@admin1-00:~/sam#
```

efa tenant epg create

Creates an End Point Group (EPG). An EPG can be created from input CLI parameters such as name, po, mode, ctag, tag, port, and ept.

Syntax

efa tenant epg create [**--name** |**--tenant** |**--description** | **--port** |**--po** |**--switchport mode** *< access | trunk | trunk-no-default-native >* |**--type** *< l3-hand-off | extension >* |**--switchport-native-vlan-tagging** |**--switchport-native-vlan** | **--ctag-range** |**--vrf** | **--l3 vni** | **--l2 vni** | **--anycast-ip** | **--anycast-ipv6** |**--local-ip --local-ipv6** | **--bridge-domain** | **--help**]

Parameters

--name

Specifies the name of the EPG.

--tenant

Specifies the name of the tenant.

--description

Displays description of the EPG.

--port

Specifies the device ip along with ethernet port details. Example: SW1_IP[0/1], SW2_IP[0/5,0/6], SW3_IP[0/7-10]

--po

Lists port channels. Example: po1, po2

--switchport-mode

Configures switch port mode on the interfaces. Valid values are access, trunk, trunk-no-default-native. Default value is set to trunk.

--type

Configures BGP service type. Valid values are l3-hand-off and extension. Default value is extension.

--switchport-native-vlan-tagging

Enables the native vlan characteristics on the ports of this endpoint group. Valid only if mode is set to trunk.

--switchport-native-vlan

Configures native vlan on the interfaces. Valid values are 2 through 4090 corresponding to the value of its Ctag-range.

--ctag-range

Specifies the Customer vlan range in comma and hyphen separated format. Example: 2-20, 30, 40, 50-55.

--vrf

Specifies the VRF to which these networks are attached.

--l3-vni

Specifies the L3 VNI to be used for this VRF.

--l2-vni

Specifies the L2 VNI to be used for this network in the format `ctag:l2-vni`.

--anycast-ip

Specifies the Ipv4 anycast address in the format `ctag:anycast-ip`.

--anycast-ipv6

Specifies the Ipv6 anycast address in the format ctag:anycast-ipv6.

--local-ip

Specifies the Ipv4 local address in the format ctag,device-ip:local-ip

--local-ipv6

Specifies the Ipv6 local address in the format ctag,device-ip:local-ipv6

--bridge-domain

Specifies the bridge domain name in the format `ctag:bridge-domain`.

--help

Displays help for tenant epg create.

Examples

```
# efa tenant epg create --name epgL3 --tenant tenant1 --po po1 --switchport-mode trunk --
switchport-native-vlan 211 --ctag-range 211-212 --vrf red --l3-vni 14200 --type l3-hand-
off
```

efa tenant epg delete

Deletes an End Point Group (epg)

Syntax

efa tenant epg delete [**--force** | **--name** *epg-name*| **--tenant** *tenant name* | **--help**]

Parameters

--force

Forces the deletion of any underling End Point Group tied to the tenant.

--help

Displays help for delete.

--name

Specifies the EPG name or comma separated EPG names to be deleted. Example: EPG-1 or EPG-1,EPG2,EPG3.

--tenant

Specifies the tenant name.

Usage Guidelines

Any EPG tied to a tenant should first be deleted before attempting to delete the tenant, as this removes any port level configurations on the switch that are defined by the EPG. Failure to do this will result in EFA returning an error, however using the –force option will override this error and delete the underlying EPG configuration on the switch.

Examples

The following example deletes epg 11 on tenant 11.

```
efa tenant epg delete --name epg11 --tenant tenant11
```

efa tenant epg detach

Detaches an EPG.

Syntax

efa tenant epg detach [**--tenant** |**--source-epg** |**--destination-epg** |**--destination-epg-description** |**--destination-epg-ctag-range** |**--help**]

Parameters

--tenant

Specifies the tenant name.

--source-epg

Specifies the source EPG name.

--destination-epg

Specifies the destination EPG name.

--destination-epg-description

Displays destination EPG description.

--destination-epg-ctag-range

Specifies the destination EPG ctag range.

--help

Displays help for detach.

Examples

The following is an example of using the `epg split` flag.

```
efa tenant epg show
================================================================================
Name           : epg11
Tenant         : tenant11
Description    :
Ports          :
POs            : po1315, po1215, po1115
Port Property : switchport mode     : trunk
        : native-vlan-tagging : false
NW Policy  : ctag-range          :211-212
               : vrf                : blue11
               : l3-vni             : 14191
Network Property [Flags : * - Native Vlan]
+------+--------+---------------+---------+-------------+-------------+
| Ctag | L2-Vni |  Anycast-ip   | BD-name |  Dev-state  | App-state   |
+------+--------+---------------+---------+-------------+-------------+
| 211  | 10002  | 10.10.11.1/24 |         | provisioned | cfg-in-sync |
+------+--------+---------------+---------+-------------+-------------+
| 212  | 10003  | 10.10.12.1/24 |         | provisioned | cfg-in-sync |
+------+--------+---------------+---------+-------------+-------------+

================================================================================
efa tenant epg split --tenant tenant11 --source-epg epg11 --destination-epg epg12 --
```

```
destination-epg-ctag-range 212

efa tenant epg show
================================================================================
Name          : epg12
Tenant        : tenant11
Description   :
Ports         :
POs           : po1315, po1215, po1115
Port Property : switchport mode     : trunk
        : native-vlan-tagging : false
NW Policy  : ctag-range          : 212
             : vrf                  : blue11
             : l3-vni               : 14191
Network Property [Flags : * - Native Vlan]
+------+--------+---------------+---------+-------------+-------------+
| Ctag | L2-Vni |  Anycast-ip   | BD-name |  Dev-state  |  App-state  |
+------+--------+---------------+---------+-------------+-------------+
| 212  | 10003  | 10.10.12.1/24 |         | provisioned | cfg-in-sync |
+------+--------+---------------+---------+-------------+-------------+
================================================================================
Name          : epg11
Tenant        : tenant1
Description   :
Ports         :
POs           : po1315, po1215, po1115
Port Property : switchport mode     : trunk
             : native-vlan-tagging : false
NW Policy  : ctag-range          : 211
             : vrf                  : blue11
             : l3-vni               : 14191
Network Property [Flags : * - Native Vlan]
+------+--------+---------------+---------+-------------+-------------+
| Ctag | L2-Vni |  Anycast-ip   | BD-name |  Dev-state  |  App-state  |
+------+--------+---------------+---------+-------------+-------------+
| 211  | 10002  | 10.10.11.1/24 |         | provisioned | cfg-in-sync |
+------+--------+---------------+---------+-------------+-------------+
```

efa tenant epg error show

Reports errors to the user for epg create or update operation in the DB.

Syntax

efa tenant epg error show [**--name** |**--tenant** | **--summary** |**--help**]

Parameters

--name

Specifies the name of the EPG.

--tenant

Specifies the tenant name.

--summary

Displays summary of EPGs in the error state.

--help

Displays help for **efa tenant epg error show**.

Examples

```
# efa tenant epg error show --name epg_nonclos --tenant tenant1
================================================================================================
================================================================
Name : epg_nonclos
Tenant : tenant1

Errors
--------------------------------------------------------------------------------
MgmtIp     Ctag     NetworkPolicyErrorList
--------------------------------------------------------------------------------
10.25.225.173     2001     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
10.25.225.173     2002     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
10.25.225.173     2003     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
10.25.225.174     2001     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
10.25.225.174     2002     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
10.25.225.174     2003     Adding/Removing VLANs under MCT Cluster failed due to
            netconf rpc [error] '"2001:2002:2003" is an invalid value.'
--------------------------------------------------------------------------------
```

efa tenant epg show

Shows EPG details for all flags or specific flags.

Syntax

efa tenant epg show [**--name** | **--summary** | **--tenant** | **--vrf** |**--help**]

Parameters

--name

Specifies the name of the EPG.

--summary

Displays EPGs for all tenants.

--tenant

Specifies the Tenant Name.

--vrf

Specifies the name of the vrf.

--help

Provides help for show.

```
# efa tenant epg show --vrf vrf1 --tenant tenant1

================================================================================================
Name : epg2
Tenant : tenant1
Description :
Type : extension
Ports : 10.24.48.131[0/24]
POs :
Port Property : switchport mode : trunk
: native-vlan-tagging : false
NW Policy : ctag-range : 1004-1005
: vrf : vrf1
: l3-vni : 14192

Network Property [Flags : * - Native Vlan]
------------------------------------------------------------------------------------------+
Ctag L2-Vni Anycast-IPv4  Anycast-IPv6  BD-name Local IP     Dev-state     App-
state
                                          Device-IP->Local-IP
------------------------------------------------------------------------------------------+
1005 10006 10.10.1.254/24                                 provisioned cfg-refresh-err
------------------------------------------------------------------------------------------+
1004 10007 10.10.10.254/24                                provisioned cfg-refresh-err
------------------------------------------------------------------------------------------+
```

efa tenant epg update

Updates an existing End Point Group (EPG).

Syntax

efa tenant epg update [**--name** |**--tenant** |**--operation** [*port-group-add* | *port-group-delete* | *ctag-range-add* | *ctag-range-delete* | *vrf-add*, *vrf-delete* | *local-ip-add* | *local-ip-delete*] |**--port** |**--po** |**--switchport mode** [*access* | *trunk* | *trunk-no-default-native*] |**--switchport-native-vlan-tagging** |**--switchport-native-vlan** |**--ctag range** |**--vrf** |**--l3 vni** |**--l2 vni** |**--anycast-ip** |**--anycast-ipv6** |**--bridge-domain** |**--local-ip** |**--local-ipv6** | **--help**]

Parameters

--name

Specifies the name of the EPG.

--tenant

Specifies the name of the tenant.

--operation

Defines the operation to be performed. Valid values are port-group-add, port-group-delete, ctag-range-add, ctag-range-delete, vrf-add, vrf-delete, local-ip-add, and local-ip-delete.

--port

Specifies the port or ports on the device where the tenant network is configured. For example, SW1_IP[0/1],SW2_IP[0/5].

--po

Lists port channels where the tenant network is configured. Example; po1 or po1,po2.

--switchport-mode

Configures Switch port mode on the interfaces. Valid values are access | trunk | trunk-no-default-native. Default value is set to trunk.

--switchport-native-vlan-tagging

Enables the native vlan characteristics on the ports of this endpoint group. Valid only if mode is set to trunk.

--switchport-native-vlan

Configures native VLAN on the interfaces. Valid values are 2 through 4090.

--ctag-range

Specifies the customer VLAN range in comma and hyphen separated format. Example: 2-20,30,40,50-55

--vrf

Specifies the VRF to which the networks are attached. Example: VRF-GREEN

--l3 vni

Specifies the L3 VNI to be used for this VRF.

--l2 vni

Specifies the L2 VNI to be used for this network in the format ctag:l2-vni.

--anycast-ip

Specifies the IPv4 anycast address in the format ctag:anycast-ip.

--anycast-ipv6

Specifies the IPv6 anycast address in the format ctag:anycast-ipv6.

--bridge-domain

Specifies the bridge domain name in the format ctag:bridge-domain.

--local-ip

Specifies the IPv4 local address in the format ctag,device-ip:local-ip.

--local-ipv6

Specifies the IPv6 local address in the format ctag,device-ip:local-ipv6.

--help

Displays help for update.

Usage Guidelines

An empty EPG is an EPG without any network-policy, network-property, or port-property.

An EPG can be created with a port-property and without a port-group. But an EPG cannot be created with a port-group and without a port-property.

ARP suppression is enabled for all the possible broadcast domains (VLAN/BD) on the device.

CEP is handled by replicating all the tenant configuration on the MCT neighbor except for the endpoint configuration, since the endpoint doesn't exist on the MCT neighbor.

The EPG update for a bridge domain-based EPG is similar to an update to a VLAN-based EPG. During a port-group add/delete operation, the logical interface configurations will be created/deleted for the existing ctags, and the corresponding bridge-domains.

During a ctag-range-add or delete operation, the logical interface and bridge-domain configurations are updated on the EPG.

During vrf-add or delete operation, the corresponding L3 configurations will be added or deleted to the EPG.

Event handling sets the corresponding tenant networks to the `cfg-refreshed` state. However, there is no way to re-push the refreshed configuration onto the devices.

Examples

The following example is an EPG update for a VLAN-based L3 EPG : port-group-delete.

```
efa tenant epg update --name epgb31 --tenant t4 --operation port-group-add --port
10.20.49.119[0/15]
EndpointGroup updated successfully.
```

```
# efa tenant epg update --operation port-group-delete --name epgL3 --tenant tenant1 --po
po1
EndpointGroup updated successfully.
```

efa tenant execution

Displays the list of executions, event histories, and deletes entries older than the specified days.

Syntax

efa tenant execution delete [**--days int32** | **--help**]

efa tenant execution show [**--help** | **--limit int32** | **--status** *failed* | *succeeded* | *all*]

efa tenant execution show-event [**--device** | **--execution-id** | **--help**]

Parameters

--days int32

Deletes execution entries older than the specified days (default 30).

--device

Filters execution entries on IP address.

--help

Provides help for the selected command.

--limit int32

Limits the number of executions to be listed. Value "0" will list all the executions. (default 10)

--status

Filters the executions based on the status (failed/succeeded/all) (default "all").

--execution-id

Filters execution entries on execution UUID.

The following example shows **efa tenant execution show** command.

```
# efa tenant execution show
+--------------------+----------------------------------------+-----------
+----------------------+----------------------+-----------+
|         ID         |                 COMMAND                |  STATUS   |      START
TIME      |       END TIME       | USER NAME |
+--------------------+----------------------------------------+-----------
+----------------------+----------------------+-----------+
| 4c193423-a7bc-4dc5 | tenant update:updateTenant             | Failed    |
2020-05-20T10:20:19Z | 2020-05-20T10:20:19Z | root      |
| 4c95d4e5-ad96-4d81 | tenant update:updateTenant             | Failed    |
2020-05-20T10:20:14Z | 2020-05-20T10:20:14Z | root      |
| 6583f01f-87f1-4870 | delete executions time > 30            | Completed |
2020-05-19T23:53:23Z | 2020-05-19T23:53:23Z |           |
|                    | days:DeleteExecutions                  |
|                      |                      |           |
| d38c97d9-8596-4636 | po create:CreatePortChannel            | Failed    |
2020-05-19T11:54:01Z | 2020-05-19T11:54:01Z | root      |
| b1fd2aca-9b74-4b1b | po create:CreatePortChannel            | Failed    |
2020-05-19T11:54:01Z | 2020-05-19T11:54:01Z | root      |
| 68883d88-8c37-4cd3 | po create:CreatePortChannel            | Failed    |
2020-05-19T11:54:01Z | 2020-05-19T11:54:01Z | root      |
| bf41fcae-9d58-4399 | po create:CreatePortChannel            | Failed    |
2020-05-19T11:54:01Z | 2020-05-19T11:54:01Z | root      |
```

```
| e121f092-98e7-486d | tenant create:CreateTenant              | Failed    |
2020-05-19T11:54:00Z | 2020-05-19T11:54:00Z | root      |
| dc8cd04e-b82f-444a | show-running-config:GetCLIRunningConfig | Completed |
2020-05-19T11:04:02Z | 2020-05-19T11:04:02Z | root      |
| 06c4b6ab-b143-48ac | delete executions time > 30             | Completed |
2020-05-18T23:53:23Z | 2020-05-18T23:53:23Z |           |
|                    | days:DeleteExecutions                   |
|                      |                       |           |
+--------------------+-----------------------------------------+-----------
+----------------------+----------------------+-----------+
--- Time Elapsed: 80.76863ms ---
```

efa tenant execution show-event

The following example shows **efa tenant execution show-event** command.

```
# efa tenant execution show-event
+----------------+------+---------+-------+--------+--------------+----------------
+---------+-------+
| EXECUTION UUID | DATE | SERVICE | EVENT | DEVICE | MESSAGE-TYPE | MESSAGE-OBJECT |
MESSAGE | ERROR |
+----------------+------+---------+-------+--------+--------------+----------------
+---------+-------+
+----------------+------+---------+-------+--------+--------------+----------------
+---------+-------+
--- Time Elapsed: 77.863544ms ---
```

efa tenant execution delete[**--days** *value*]

--days

Delete execution entries older than the specified days.

The following example shows **efa tenant execution delete** command.

```
# efa tenant execution delete --days 20
```

efa tenant po configure

Configures a port channel.

Syntax

efa tenant po configure [**--name** | **--tenant** | **--help**]

Parameters

--name

Specifies the name of the port channel.

--tenant

Specifies the name of the tenant.

--help

Provides help for the selected command.

efa tenant po create

Creates a port channel.

Syntax

efa tenant po create [**--name** | **--tenant** | **--speed** | **--negotiation** < *active* | *passive* | *static* > | **--port** | **--number** |**--lacp-timeout** < *long* | *short* > | **--help**]

Parameters

--name

Specifies the port channel name.

--tenant

Specifies the tenant name.

--speed

Configures the speed for the port channel and its member ports. Valid values are 100Mbps, 1Gbps, 10Gbps, 25Gbps, 40Gbps, and 100Gbps.

--negotiation

Configures LACP Negotiation mode for a port channel. Valid values are active, passive, and static.

--port

Specifies the device IP address and Ethernet port details. Example: SW1_IP[0/1],SW2_IP[0/5]

--number

Specifies the port channel interface number generated by the service.

--lacp-timeout

Specifies the length of the timeout. Valid values are short and long.

--help

Displays help for create.

Examples

```
# efa tenant po create --name pob1 --port 10.20.49.119[0/11],10.20.49.118[0/11] --speed
10Gbps --negotiation active --lacp-timeout short --tenant t4

PortChannel created successfully.
--- Time Elapsed: 3.7572288s ---
```

efa tenant po delete

Deletes a portchannel.

Syntax

efa tenant po delete [**--name** |**--force** |**--tenant** |**--help**]

Parameters

--name

Specifies portchannel name or comma-separated portchannel names. Ex: po1 or po1,po2,po3.

--force

Forces the portchannel deletion if the option is provided.

--tenant

Specifies the tenant name.

--help

Displays help for delete.

Examples

```
efa tenant po delete --name po1115,po1215,po1315 --tenant tenant11
```

efa tenant po show

Specifies the port channel of all tenants, a given tenant, or a given port channel.

Syntax

efa tenant po show [**--name** |**--tenant** | **--help**]

Parameters

--name

Specifies the port channel name.

--tenant

Specifies the tenant name.

--help

Displays help for show.

Examples

```
(efa:root)root@admin1-00:~/sam# efa tenant po show
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| Name  | Tenant | ID | Speed  | Negotiation |         Ports        | LacpTimeout |
State    |  Dev-State  |    App-State    |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| posv1 | sv1    | 2  |        | active      | 10.20.49.118[0/21]   | short       | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.49.119[0/21]   |
|           |             |                 |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| posv2 | sv1    | 3  |        | active      | 10.20.49.119[0/22]   | short       | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.49.118[0/22]   |
|           |             |                 |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| posv3 | sv1    | 4  |        | active      | 10.20.49.118[0/23-24] | short       | po-
created | provisioned | cfg-in-sync     |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| posv4 | sv1    | 4  |        | active      | 10.20.49.119[0/23-24] | short       | po-
created | provisioned | cfg-in-sync     |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| pob1  | t4     | 8  |        | active      | 10.20.49.118[0/11]   | short       | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.49.119[0/11]   |
|           |             |                 |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| pob2  | t4     | 9  |        | active      | 10.20.49.118[0/12]   | long        | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.49.119[0/12]   |
|           |             |                 |
```

```
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| pob3  | t4     | 10 |        | active      | 10.20.49.118[0/13]   | long        | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.49.119[0/13]   |
|           |             |                 |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| pov21 | tv1    | 1  | 10Gbps | active      | 10.20.61.90[0/31-32] | long        | po-
created | provisioned | cfg-in-sync     |
|       |        |    |        |             | 10.20.61.91[0/31-32] |
|           |             |                 |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
| pov31 | tv1    | 2  | 10Gbps | active      | 10.20.61.91[0/21:1]  | long        | po-
created | provisioned | cfg-refresh-err |
+-------+--------+----+--------+-------------+----------------------+-------------
+------------+-------------+-----------------+
PortChannel Details

--- Time Elapsed: 815.140487ms ---
(efa:root)root@admin1-00:~/sam#
```

efa tenant po update

Updates a PortChannel. A portChannel can be updated from input CLI parameters such as name, operation, mgmtIP and port.

Syntax

efa tenant po update [**--name** *po-name* |**--tenant** *tenant-name* | **--operation** *< port-add | port-delete | lacp-timeout >* | **--port** *port-list* |**--lacp-timeout** *< long | short >*| **--help**]

Parameters

--name

Specifies portchannel.

--tenant

Specifies tenant name.

--operation

Adds or deletes operation on the ports. Valid options are port-add | port-delete | lacp-timeout.

--port *value*

Specifies device ip along with ethernet port details. Example: SW1_IP [0/1], SW2_IP[0/5]

--lacp-timeout

Specifies lacp timeout configuration. Valid values are short | long.

--help

Help for update.

Examples

```
efa tenant po update --name po1115 --tenant tenant11 --operation port-add --port
10.24.85.76[0/15]
efa tenant po update --name po1115 --tenant tenant11 --operation port-delete --port
10.24.85.76[0/15]
```

efa tenant service bgp peer configure

Configures BGP Service Instance.

Syntax

efa tenant service bgp peer configure [**--help** | **--name** | **--tenant**]

Parameters

--help

Provides help for the selected commands.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

efa tenant service bgp peer create

Creates a BGP neighbor for a VRF on the fabric device.

Syntax

efa tenant service bgp peer create [**--description** | **--help** | **--ipv4-uc-dyn-nbr** < *device-ip,vrf-name:ipv4-listen-range,peer-group-name,listen-limit* > |**--ipv4-uc-nbr** < *device-ip,vrf-name:ipv4-neighbor,remote-as* > | **--ipv4-uc-nbr-bfd** < *device-ip,vrf-name:ipv4-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier* > | **--ipv4-uc-nbr-next-hop-self** < *device-ip,vrf-name:ipv4-neighbor,next-hop-self* > | **--ipv4-uc-nbr-update-source-ip** < *device-ip,vrf-name:ipv4-neighbor,update-source-ip* > | **--ipv6-uc-dyn-nbr** < *device-ip,vrf-name:ipv6-listen-range,peer-group-name,listen-limit* > | **--ipv6-uc-nbr** < *device-ip,vrf-name:ipv6-neighbor,remote-as* > | **--ipv6-uc-nbr-bfd** < *device-ip,vrf-name:ipv6-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier* > | **--ipv6-uc-nbr-next-hop-self** < *device-ip,vrf-name:ipv6-neighbor,next-hop-self(true/false/always)* > | **--ipv6-uc-nbr-update-source-ip** < *device-ip,vrf-name:ipv6-neighbor,update-source-ip* > | **--name** | **--tenant**]

Parameters

--description

Displays service BGP description.

--help

Displays help for create.

--ipv4-uc-dyn-nbr

Specifies the IPv4 Unicast Dynamic Neighbor in the format device-ip,vrf-name:ipv4-listen-range,peer-group-name,listen-limit. listen-limit is optional.

--ipv4-uc-nbr

Specifies the IPv4 Unicast Neighbor in the format device-ip,vrf-name:ipv4-neighbor,remote-as.

--ipv4-uc-nbr-bfd

Specifies the IPv4 Unicast Neighbor BFD in the format device-ip,vrf-name:ipv4-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier.

--ipv4-uc-nbr-next-hop-self

Specifies the IPv4 Unicast Neighbor next hop self in the format device-ip,vrf-name:ipv4-neighbor,next-hop-self(true/false/always).

--ipv4-uc-nbr-update-source-ip

Specifies the IPv4 Unicast Neighbor update source IP in the format device-ip,vrf-name:ipv4-neighbor,update-source-ip.

--ipv6-uc-dyn-nbr

Specifies the IPv6 Unicast Dynamic Neighbor in the format device-ip,vrf-name:ipv6-listen-range,peer-group-name,listen-limit. listen-limit is optional.

--ipv6-uc-nbr

Specifies the IPv6 Unicast Neighbor in the format device-ip,vrf-name:ipv6-neighbor,remote-as.

--ipv6-uc-nbr-bfd

Specifies the IPv6 Unicast Neighbor BFD in the format device-ip,vrf-name:ipv6-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier.

--ipv6-uc-nbr-next-hop-self

Specifies the IPv6 Unicast Neighbor next hop self in the format device-ip,vrf-name:ipv6-neighbor,next-hop-self(true/false/always).

--ipv6-uc-nbr-update-source-ip

Specifies the IPv6 Unicast Neighbor update source IP in the format device-ip,vrf-name:ipv6-neighbor,update-source-ip.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

```
# efa tenant service bgp peer create --name bgpb20 --tenant tb --ipv4-uc-nbr
10.20.61.91,vrfb20:60.1.1.1,69000 --ipv4-uc-nbr-bfd 10.20.61.91,vrfb20:60.1.1.1,true,
123,456,3 --ipv4-uc-nbr-next-hop-self 10.20.61.91,vrfb20:60.1.1.1,true --ipv6-uc-nbr-
update-source-ip 10.20.61.91,vrfb20:60.1.1.1,9.9.9.9

# efa tenant service bgp peer create --name bgpb28 --tenant tb --ipv6-uc-nbr
10.20.61.91,vrfb20:6000::6,69000 --ipv6-uc-nbr-bfd 10.20.61.91,vrfb20:6000::6,true,
120,456,3 --ipv6-uc-nbr-next-hop-self 10.20.61.91,vrfb20:6000::6,true --ipv6-uc-nbr-
update-source-ip 10.20.61.91,vrfb20:6000::6,9999:9::9:9
```

efa tenant service bgp peer delete

Deletes the BGP neighbors for a given VRF on the fabric device.

Syntax

efa tenant service bgp peer delete [**--force** | **--help** | **--name** *service-name* |**--tenant** *tenant-name*]

Parameters

--force

Forces BGP service deletion when set to true.

--help

Displays help for delete.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

Examples

The following example deletes the BGP neighbors for a given VRF on the fabric device.

```
efa tenant service bgp peer delete --name bgpservice1 --tenant tenant1
```

efa tenant service bgp peer show

Displays the BGP neighbors for a given VRF on the fabric device.

Syntax

efa tenant service bgp peer show [**--help** | **--name** |**--tenant**]

Parameters

--help

Displays help for show.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

Examples

The following example displays the BGP neighbors for a given VRF on the fabric device.

```
efa tenant service bgp peer show
================================================================================================
================================================================
Name    :  bgpservice1
Tenant  :  tenant1
State   :  bs-state-created
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+---------------+-------------+-------------+
|  Device IP   | VRF | AFI  |  SAFI   |  REMOTE IP  | REMOTE ASN | BFD Enabled | BFD
Interval | BFD Rx | BFD Multiplier |  Dev-state  |  App-state  |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+---------------+-------------+-------------+
| 10.24.80.134 | red | ipv4 | unicast | 10.20.30.40 | 5000       | false       |
0            | 0      | 0              | provisioned | cfg-in-sync |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+---------------+-------------+-------------+

================================================================================================
================================================================
```

efa tenant service bgp peer update

Updates BGP neighbours for a given VRF on the fabric device. Updates can be either addition or deletion of a peer.

Syntax

efa tenant service bgp update [**--description** | **--help** | **--ipv4-uc-dyn-nbr** < *device-ip,vrf-name:ipv4-listen-range,peer-group-name,listen-limit* > |**--ipv4-uc-nbr** < *device-ip,vrf-name:ipv4-neighbor,remote-as* > | **--ipv4-uc-nbr-bfd** < *device-ip,vrf-name:ipv4-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier* > | **--ipv4-uc-nbr-next-hop-self** < *device-ip,vrf-name:ipv4-neighbor,next-hop-self* > | **--ipv4-uc-nbr-update-source-ip** < *device-ip,vrf-name:ipv4-neighbor,update-source-ip* > | **--ipv6-uc-dyn-nbr** < *device-ip,vrf-name:ipv6-listen-range,peer-group-name,listen-limit* > | **--ipv6-uc-nbr** < *device-ip,vrf-name:ipv6-neighbor,remote-as* >| **--ipv6-uc-nbr-bfd** < *device-ip,vrf-name:ipv6-neighbor,bfd-enable(true/false),bfd-interval,bfd-min-rx,bfd-multiplier* >| **--ipv6-uc-nbr-next-hop-self** < *device-ip,vrf-name:ipv6-neighbor,next-hop-self* > | **--ipv6-uc-nbr-update-source-ip** < *device-ip,vrf-name:ipv6-neighbor,update-source-ip* > | **--name** | **--Operation** < peer-add | peer-delete | desc-update > |**--tenant**]

Parameters

--description

Displays service BGP description.

--help

Displays help for update.

--ipv4-unicast-neighbor

IPv4 Unicast Neighbor in the format "device-ip,vrf-name:ipv4-neighbor,remote-as,bfd-enable(true/false),bfd-interval,bfd-rx,bfd-multiplier" for "peer-add" operation, "device-ip,vrf-name:ipv4-neighbor" for "peer-delete" operation. BFD params are optional for "peer-add" and should not be provided for "peer-delete"

--ipv6-unicast-neighbor

IPv6 Unicast Neighbor in the format "device-ip,vrf-name:ipv6-neighbor,remote-as,bfd-enable(true/false),bfd-interval,bfd-rx,bfd-multiplier" for "peer-add" operation, "device-ip,vrf-name:ipv6-neighbor" for "peer-delete" operation. BFD params are optional for "peer-add" and should not be provided for "peer-delete"

`--name`

Name of the BGP Service Instance

`--operation`

Operation code peer-add | peer-delete | desc-update

`--tenant`

Name of the tenant

Examples

The following example adds peers to the BGP neighbours for a given VRF on the fabric device.

```
efa tenant service bgp update --name bgpservice1 --tenant tenant1 --operation peer-add --
ipv6-unicast-neighbor 10.24.80.134,red:10::40,5000,true,100,200,7

efa tenant service bgp show
================================================================================================
================================================================
Name    :  bgpservice1
Tenant  :  tenant1
State   :  bs-state-created
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
|  Device IP   | VRF | AFI  |  SAFI   |  REMOTE IP  | REMOTE ASN | BFD Enabled | BFD
Interval | BFD Rx | BFD Multiplier |  Dev-state  |  App-state  |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
| 10.24.80.134 | red | ipv6 | unicast | 10::40      | 5000       | true        |
100          | 200    | 7              | provisioned | cfg-in-sync |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
| 10.24.80.134 | red | ipv4 | unicast | 10.20.30.40 | 5000       | false       |
0            | 0      | 0              | provisioned | cfg-in-sync |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
================================================================================================
================================================================
```

The following example deletes peers from the BGP neighbours for a given VRF on the fabric device.

```
efa tenant service bgp update --name bgpservice1 --tenant tenant1 --operation peer-delete
--ipv4-unicast-neighbor 10.24.80.134,red:10.20.30.40

efa tenant service bgp show

================================================================================================
================================================================
Name    :  bgpservice1
Tenant  :  tenant1
State   :  bs-state-created
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
|  Device IP   | VRF | AFI  |  SAFI   |  REMOTE IP  | REMOTE ASN | BFD Enabled | BFD
Interval | BFD Rx | BFD Multiplier |  Dev-state  |  App-state  |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
| 10.24.80.134 | red | ipv6 | unicast | 10::40      | 5000       | true        |
100          | 200    | 7              | provisioned | cfg-in-sync |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
================================================================================================
================================================================
```

efa tenant service bgp peer-group configure

Configures a BGP neighbor for a VRF on the fabric device.

Syntax

```
efa tenant service bgp peer-group configure [ --help | --name | --
   tenant ]
```

Parameters

--help

Displays help for create.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

efa tenant service bgp peer-group create

Creates a BGP neighbor for a VRF on the fabric device.

Syntax

efa tenant service bgp peer-group create [**--description** | **--help** | **--name** | **--pg-asn** < *device-ip,peer-group-name:remote-asn* > |**--pg-bfd** < *device-ip,peer-group-name:bfd-interval,bfd-min-rx,bfd-multiplier* > | **--pg-bfd-enable** < *device-ip,peer-group-name:bfd-enable(true/false)* > | **--pg-name** < *device-ip:peer-group-name* > | **--pg-next-hop-self** < *device-ip,peer-group-name:next-hop-self(true/false/always)*> | **--pg-update-source-ip** < *device-ip,peer-group-name:update-source-ip* > | **--tenant**]

Parameters

--description

Displays BGP Peer Group Instance description.

--help

Displays help for create.

--name

Specifies the name of the BGP service instance.

--pg-asn

Specifies the BGP peer-group ASN in the format device-ip,peer-group-name:remote-asn.

--pg-bfd

Specifies the BGP peer-group BFD Properties in the format device-ip,peer-group-name:bfd-interval,bfd-min-rx,bfd-multiplier.

--pg-bfd-enable

Enables BGP peer-group BFD in the format device-ip,peer-group-name:bfd-enable(true/false).

--pg-name

Specifies the BGP peer-group name in the format device-ip:peer-group-name.

--pg-next-hop-self

Specifies the BGP peer-group next-hop-self in the format device-ip,peer-group-name:next-hop-self(true/false/always).

--pg-update-source-ip

Specifies the BGP peer-group update source IP in the format device-ip,peer-group-name:update-source-ip.

--tenant

Specifies the name of the tenant.

```
# efa tenant service bgp peer-group create  --name pgb30 --tenant tb  --pg-name
10.20.61.90:peerb30 --pg-asn 10.20.61.90,peerb30:4294967295 --pg-bfd
```

```
10.20.61.90,peerb30:30000,30000,50 --pg-bfd-enable 10.20.61.90,peerb30:true --pg-next-hop-
self 10.20.61.90,peerb30:true --pg-update-source-ip 10.20.61.90,peerb30:2.3.3.3
```

efa tenant service bgp peer-group delete

Deletes the BGP neighbors for a given VRF on the fabric device.

Syntax

efa tenant service bgp peer-group delete [**--force** | **--help** | **--name** *service-name* |**--tenant** *tenant-name*]

Parameters

--force

Forces BGP service deletion when set to true.

--help

Displays help for delete.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

Examples

The following example deletes the BGP neighbors for a given VRF on the fabric device.

```
efa tenant service bgp peer delete --name bgpservice1 --tenant tenant1
```

efa tenant service bgp peer-group show

Displays the BGP neighbors for a given VRF on the fabric device.

Syntax

efa tenant service bgp peer-group show [**--help** | **--name** |**--tenant**]

Parameters

--help

Displays help for show.

--name

Specifies the name of the BGP service instance.

--tenant

Specifies the name of the tenant.

Examples

The following example displays the BGP neighbors for a given VRF on the fabric device.

```
efa tenant service bgp peer show
================================================================================================
================================================================
Name    :  bgpservice1
Tenant  :  tenant1
State   :  bs-state-created
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
|  Device IP   | VRF | AFI  |  SAFI   |  REMOTE IP  | REMOTE ASN | BFD Enabled | BFD
Interval | BFD Rx | BFD Multiplier |  Dev-state  |  App-state  |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+
| 10.24.80.134 | red | ipv4 | unicast | 10.20.30.40 | 5000       | false       |
0            | 0      | 0              | provisioned | cfg-in-sync |
+--------------+-----+------+---------+-------------+------------+-------------
+--------------+--------+----------------+-------------+-------------+

================================================================================================
================================================================
```

efa tenant service bgp peer-group update

Updates BGP peer group neighbours for a given VRF on the fabric device. Updates can be either addition or deletion of a peer.

Syntax

efa tenant service bgp peer update [**--description** | **--help** | **--operation** *< peer-group-add | peer-group-delete | desc-update >* |**--pg-asn** *< device-ip,peer-group-name:remote-asn >* | **--pg-bfd** *< device-ip,peer-group-name:bfd-interval,bfd-min-rx,bfd-multiplier >* | **--pg-bfd-enable** *< device-ip,peer-group-name:bfd-enable(true/false) >* | **--pg-name** *< device-ip:peer-group-name >* | **-pg-next-hop-self** *< device-ip:peer-group-name,next-hop-self(true/false/always) >* | **--pg-update-source-ip** *< device-ip,peer-group-name:update-source-ip >*|**--tenant**]

Parameters

--description

Displays service BGP description.

--help

Displays help for update.

--operation

Specifies the operation code. Valid values are peer-group-add | peer-group-delete | desc-update.

--pg-asn

Specifies the BGP peer-group ASN in the format device-ip,peer-group-name:remote-asn.

--pg-bfd

Specifies the BGP peer-group BFD Properties in the format device-ip,peer-group-name:bfd-interval,bfd-min-rx,bfd-multiplier.

--pg-bfd-enable

Enables the BGP peer-group BFD in the format device-ip,peer-group-name:bfd-enable(true/false).

--pg-name

Specifies the BGP peer-group name in the format device-ip:peer-group-name.

--pg-next-hop-self

Specifies the BGP peer-group next-hop-self in the format device-ip:peer-group-name,next-hop-self(true/false/always).

--pg-update-source-ip

Specifies the BGP peer-group update source IP in the format device-ip,peer-group-name:update-source-ip.

--name

Specifies the name of the BGP Service Instance

`--tenant`

Specifies the name of the tenant.

efa tenant show

Displays the tenant details.

Syntax

efa tenant show [**--name** |**--help**]

Parameters

--name

Specifies the name of the tenant.

--help

Displays help for show.

Examples

This example shows the output of the command:

```
# efa tenant show
+------+-------------+-------------+------------+-----------+-----------+---------
+--------------------------------+
| Name | L2VNI-Range | L3VNI-Range | VLAN-Range | VRF-Count | Enable-BD |  Type
|             Ports              |
+------+-------------+-------------+------------+-----------+-----------+---------
+--------------------------------+
| sv1  |             |             |            | 0         | False     | shared  |
10.20.50.208[0/21-30]          |
|      |             |             |            |           |           |         |
10.20.50.209[0/21-30]          |
|      |             |             |            |           |           |         |
10.20.49.118[0/21-25]          |
|      |             |             |            |           |           |         |
10.20.49.119[0/21-25]          |
+------+-------------+-------------+------------+-----------+-----------+---------
+--------------------------------+
| t3   | 10000-20000 | 1000-3000   | 2-4090     | 1024      | False     | private |
10.20.49.118[0/1-10,0/56:1-2]  |
|      |             |             |            |           |           |         |
10.20.50.206[0/1-10]           |
|      |             |             |            |           |           |         |
10.20.50.214[0/1-10]           |
|      |             |             |            |           |           |         |
10.20.50.205[0/1-10]           |
|      |             |             |            |           |           |         |
10.20.49.119[0/1-10,0/56:1-2]  |
+------+-------------+-------------+------------+-----------+-----------+---------
+--------------------------------+
| t4   | 30000-40000 | 4000-6550   | 2-4090     | 1024      | True      | private |
10.20.49.118[0/11-20,0/56:3-4] |
|      |             |             |            |           |           |         |
10.20.49.119[0/11-20,0/56:3-4] |
+------+-------------+-------------+------------+-----------+-----------+---------
+--------------------------------+
Tenant Details

--- Time Elapsed: 462.815224ms ---
```

efa tenant update

Allows changes to be made to a tenant after it has been created.

Syntax

efa tenant update [**--name** *tenant-name* | **--description** *tenant-description* | **--l2-vni-range** | **--l3-vni-range** | **--vlan-range** | **--vrf-count** | **--enable-bd** |**--operation** *desc-update* | *vni-update* | *port-add* | *port-delete* | *vlan-add* | *vlan-delete* | *vlan-update* | *num-vrf-update* | *enable-bd-update* |**--port** |**--force** | **--help**]

Parameters

--name *tenant-name*

Specifies name of tenant.

--description *tenant-description*

Describes the tenant.

--l2-vni-range

Specifies the contiguous range of Layer 2 VNIs in ascending order that are reserved for the tenant within the scope of a fabric.

--l3-vni-range

Specifies the contiguous Range of L3 VNIs in ascending order will be reserved for the tenant within the scope of a fabric.

--vlan-range

Specifies the range of Vlans to be reserved for the tenant.

--vrf-count int

Specifies the number of VRFs tobe reserved for the tenant.

--enable-bd

Enables BD capability for networks created under this tenant.

--operation

Specifies operation code. Valid values are desc-update, vni-update, port-add, port-delete, vlan-add, vlan-delete, vlan-update, num-vrf-update, and enable-bd-update.

--port

Lists physical ports of devices which will be reserved for the asset. Example: SW1_IP[0/1],SW2_IP[0/5]

--force

Forces the deletion on the Tenant if the option is provided.

--help

Displays help for update.

Examples

```
# efa tenant update --name t3 --port 10.20.50.205[0/1-10],10.20.50.206[0/1-10] --
operation port-add
Tenant updated successfully.
# efa tenant update --name tenant4 --operation vlan-add --vlan-range 201-300
Tenant updated successfully.

--- Time Elapsed: 402.8272ms ---
$ efa tenant show
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
|  Name   | L2VNI-Range | L3VNI-Range |   VLAN-Range   | VRF-Count | Enable-BD |  Type
|         Ports         |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant1 | 10002-14190 | 14191-14200 | 2-100,200-4000 | 10        | False     | private
| 10.24.48.131[0/21-24] |
|         |             |             |                |           |           |
| 10.24.51.135[0/21-24] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant2 |             |             | 2-99           | 10        | False     | private
| 10.24.51.131[0/26-28] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant4 |             |             | 101-300        | 10        | False     | private
| 10.24.51.131[0/23-25] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
Tenant Details
# efa tenant update --name tenant4 --operation vlan-delete --vlan-range 201-300
Tenant updated successfully.

--- Time Elapsed: 408.9277ms ---
$ efa tenant show
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
|  Name   | L2VNI-Range | L3VNI-Range |   VLAN-Range   | VRF-Count | Enable-BD |
Type|         Ports         |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant1 | 10002-14190 | 14191-14200 | 2-100,200-4000 |10| False     | private |
10.24.48.131[0/21-24] ||||||||| 10.24.51.135[0/21-24] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant2 ||| 2-99           |10| False     | private | 10.24.51.131[0/26-28] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
| tenant4 ||| 101-200,350    |10| False     | private | 10.24.51.131[0/23-25] |
+---------+-------------+-------------+----------------+-----------+-----------+---------
+-----------------------+
```

efa tenant vrf create

Creates the tenant VRF.

Syntax

efa tenant vrf create [**--name** *vrf-name* | **--tenant** *tenant-name* | **--rt-type** { **both | import | export** }| **--rt** *value* |**--local-asn** *local-asn* | **--ipv4-static-route-bfd** *route* | **--ipv6-static-route-bfd** *route* | **--ipv4-static-route-next-hop** *route* | **--ipv6-static-route-next-hop** *route* | **--max-path** *unit* |**--redistribute** { **static | connected**} | **--rh-max-path** { **8 | 16 | 64** }| **--rh-ecmp-enable=** {**true | false** }|**--help**]

Parameters

--name *vrf-name*

Specifies the name of the VRF.

--tenant *tenant-name*

Specifies the name of the tenant.

--rt-type { **both | import | export** }

Specifies the route's target VPN community. Valid values are both, import, or export.

--rt *value*

Specifies the unique number for forming the Route Target and the Route Distinguisher.

--local-asn *local-asn*

Specifies the local ASN for the VRF.

--ipv4-static-route-bfd *route*

Specifies the IPv4 static route BFD in the following format: device IP, destination IPv4 address, source IPv4 address[interval,min-rx,multiplier]. For example: `10.25.25.100,1.1.1.1,2.2.2.2,123,456,3`.

--ipv6-static-route-bfd *route*

Specifies the IPv6 static route BFD in the following format: device IP, destination IPv6 address, source IPv6 address[interval,min-rx,multiplier]. For example: `10.25.25.100,1::1,2::2,300,300,3`.

--ipv4-static-route-next-hop *route*

Specifies the IPv4 static route next hop in the following format: device IP, IPv4 static route network, next hop IP, and route distance separated by commas. For example: `10.25.25.100,20.0.0.0/24,16.0.0.2,3`. Valid values for the route distance are 1 through 254.

--ipv6-static-route-next-hop *route*

Specifies the IPv4 static route next hop in the following format: device IP, IPv6 static route network, next hop IP, and route distance separated by commas. For example: `10.25.25.100,2001:1::/64,3001::2,3`. Valid values for the route distance are 1 through 254.

--max-path *unit*

Specifies the number of load-sharing paths for the VRF. Valid values are 1 through 64.

--redistribute { **static | connected**}

Specifies the redistribute type for routes. Valid values are static or connected.

--rh-max-path { **8 | 16 | 64** }

Specifies the maximum number of resilient hashing paths allowed per tenant VRF. Valid values are 8, 16, or 64.

--rh-ecmp-enable= {**true | false** }

Enables or disables resilient hashing for a tenant VRF. Valid values are true or false.

--help

Provides help for the command.

Usage Guidelines

The **--max-path** and **--rh-max-path** parameters can co-exist.

You cannot choose the specific devices on which to configure resilient hashing. Configuration applies to all SLX devices in the tenant VRF.

Examples

This example creates vrfb31 for tenant t4.

```
# efa tenant vrf create --name vrfb31 --tenant t4 --local-asn 65234
--ipv4-static-route-next-hop 0.0.0.0/24,16.0.0.2 --ipv6-static-route-next-hop
3000:330::/120,4000:330::2 --ipv6-static-route-bfd 200::2,200::3,123,455,5
--ipv4-static-route-bfd 16.0.0.2,16.0.0.3,123,456,3
```

This example creates vrf1 for tenant1 and the associated endpoint groups (EPG).

```
# efa tenant vrf create --name vrf1 --tenant tenant1

# efa tenant epg create --name ten1epg1 --tenant tenant1
--port 10.24.80.134[0/11],10.24.80.135[0/11] --switchport-mode trunk --ctag-range 11
--vrf vrf1 --anycast-ip 11:10.10.11.1/24

# efa tenant epg create --name ten1epg2 --tenant tenant1
--port 10.24.80.134[0/12],10.24.80.135[0/12] --switchport-mode trunk --ctag-range 12
--vrf vrf10 --anycast-ip 12:10.10.12.1/24
```

This example creates vrf1 with a static redistribution type.

```
# efa tenant vrf create --name vrf1 --tenant tenant1 --redistribute static
```

This example creates a VRF, enables resilient hashing, and defines the maximum number of resilient hashing paths.

```
efa tenant vrf create --name vrf1 --tenant tenant2 --rh-ecmp-enable=true
--rh-max-path 16
```

efa tenant vrf delete

Deletes a VRF.

Syntax

efa tenant vrf delete [**--name** *vrf name* |**--tenant** *tenant name*]

Parameters

--name *vrf name*

Specifies the name of the VRF.

--tenant *tenant name*

Specifies the name of the tenant.

Examples

```
efa tenant vrf delete --name red21 --tenant tenant21
efa tenant vrf delete --name blue11,red11 --tenant tenant11
```

efa tenant vrf show

Displays the VRF information of all tenants, a selected tenant, or a selected VRF.

Syntax

efa tenant vrf show [**--name** *vrf name* | **--tenant** *tenant name* | **--help**]

Parameters

--name *vrf name*

Specifies the name of the VRF.

--tenant *tenant name*

Specifies the name of the tenant.

--help

Displays help for show.

Examples

```
# efa tenant vrf show --name red --tenant tenant11
================================================================================================
=======
Name : red
Tenant Name : tenant11
L3 VNI :
Route Target :
Static Route : Switch-IP, Network->Nh1[distance],Nh2[distance],..
: 10.24.80.134, 22.0.0.0/24->13.0.0.1[2],13.0.0.2,13.0.0.3,13.0.0.4 10.24.80.135,
23.0.0.0/24->13.0.0.1,13.0.0.2,13.0.0.3,13.0.0.4
10.24.80.134, 2000::/64->1001::2,1002::2,1003::2,1004::2
10.24.80.135, 2001::/64->1001::2[4],1002::2,1003::2,1004::2
Local Asn :
================================================================================================
=======
```

efa tenant vrf update

Updates the tenant VRF for various operations and parameters, such as ASN and IPv6 static route.

Syntax

efa tenant vrf update [**--name** *vrf-name* | **--tenant** *tenant-name* | **--operation** *code* |**--local-asn** *local-asn* | **--ipv4-static-route-bfd** *route* | **--ipv6-static-route-bfd** *route* | **--ipv4-static-route-next-hop** *route* | **--ipv6-static-route-next-hop** *route* | **--max-path** *unit* |**--redistribute** {**static | connected**} | **--rh-max-path** {**8 | 16 | 64**}| **--rh-ecmp-enable=** {**true | false**}|**--help**]

Parameters

--name *vrf-name*

Specifies the VRF name.

--tenant *tenant-name*

Specifies the tenant name

--operation *code*

Identifies the operation you want to perform. Valid values are local-asn-add, local-asn-delete, static-route-bfd-add, static-route-bfd-delete, static-route-add, static-route-delete, max-path-add, max-path-delete, redistribute-add, redistribute-delete, rh-max-path-add, rh-max-path-delete, and rh-ecmp-update.

--local-asn *locl-asn*

Specifies the local ASN for the VRF.

--ipv4-static-route-bfd *route*

Specifies the IPv4 static route BFD in the following format: device IP, destination IPv4 address, source IPv4 address[interval,min-rx,multiplier]. For example: `10.25.25.100,1.1.1.1,2.2.2.2,123,456,3`.

--ipv6-static-route-bfd *route*

Specifies the IPv6 static route BFD in the following format: device IP, destination IPv6 address, source IP address[interval,min-rx,multiplier]. For example: `10.25.25.100,1::1,2::2,300,300,3`.

--ipv4-static-route-next-hop *route*

Specifies the IPv4 static route next hop in the following format: device IP, IPv4 static route network, next hop IP, and route distance separated by commas. For example: `10.25.25.100,20.0.0.0/24,16.0.0.2`. Valid values for the route distance are 1 through 254.

--ipv6-static-route-next-hop *route*

Specifies the IPv4 static route next hop in the following format: device IP, IPv6 static route network, next hop IP, and route distance separated by commas. For example: `10.25.25.100,2001:1::/64,3001::2,3`. Valid values for the route distance are 1 through 254.

--max-path *unit*

Specifies the number of load-sharing paths for the VRF. Valid values are 1 through 64.

--redistribute { **static | connected**}

Specifies the redistribute type for routes. Valid values are static or connected.

--rh-max-path { **8 | 16 | 64** }

Specifies the maximum number of resilient hashing paths allowed per tenant VRF. Valid values are 8, 16, or 64.

--rh-ecmp-enable= {**true | false** }

Enables or disables resilient hashing for a tenant VRF. Valid values are true or false.

--help

Provides help for the command.

Usage Guidelines

The **--max-path** and **--rh-max-path** parameters can co-exist.

You cannot chose the specific devices on which to configure resilient hashing. Configuration applies to all SLX devices in the tenant VRF.

This example configures a maximum of 13 paths for VRF 10.

```
# efa tenant vrf update --name vrf10 -tenant tenant1 --operation max-paths-add
--max-path 13
```

This example changes the operation type and the redistribution type for a new tenant VRF.

```
# efa tenant vrf create --name vrf1 --tenant tenant1 --redistribute static
# efa tenant vrf create --name vrf10 --tenant tenant1

# efa tenant epg create --name ten1epg1 --tenant tenant1
--port 10.24.80.134[0/11],10.24.80.135[0/11] --switchport-mode trunk --ctag-range 11
--vrf vrf1 --anycast-ip 11:10.10.11.1/24

# efa tenant epg create --name ten1epg2 --tenant tenant1
--port 10.24.80.134[0/12],10.24.80.135[0/12] --switchport-mode trunk --ctag-range 12
--vrf vrf10 --anycast-ip 12:10.10.12.1/24

# efa tenant vrf update --name vrf10 --tenant tenant1 --operation redistribute-add
--redistribute static
```

This example configures a maximum number of resilient hashing paths for vrf10.

```
efa tenant vrf update --name vrf10 --tenant tenant1 --operation rh-max-path-add
--rh-max-path 16
```

This example enables resilient hashing for vrf10.

```
efa tenant vrf update --name vrf10 --tenant tenant1 --operation rh-ecmp-update
--rh-ecmp-enable=true
```

efa vcenter debug

A set of debug commands for troubleshooting EFA vCenter issues. This command also sets configuration parameters for vCenter tenants.

Syntax

efa vcenter debug tenant show --host *string*

efa vcenter debug event show --host *string* { **--page** *int32* | **--page-size** *int32* }

efa vcenter debug setting show

efa vcenter debug setting update { **--poll-requency** *string* | **--dead-link-clearing-time** *string* }

efa vcenter debug set --level { *info* | *debug* }

Command Default

This command has no defaults.

Parameters

tenant show

Shows a list of tenants for a particular VMware vCenter Server host.

event show

Shows a list of events recorded for a particular VMware vCenter Server host.

setting show

Shows the different settings configured on the VMware vCenter Server host. These settings are global in nature and are applicable to all VMware vCenter Server hosts registered with this EFA vCenter Service instance.

setting update

Updates the different settings for the added VMware vCenter Server hosts registered with this EFA vCenter Service instance. These settings are applicable to all the VMware vCenter Server hosts.

set

Sets the debug level for this instance of EFA vCenter service. Debug levels can be set to receiving information level messages or complete debugging messages.

--host *string*

IP address or hostname of the VMware vCenter Server to connect to.

--page *int32*

Events are fetched for the page number specified in this parameter. When this parameter is not passed, page number 1 is always fetched by default.

--page-size *int32*

The number of events to display per page. When this parameter is not passed, twenty (20) records are shown per page.

--poll-requency *string*

The poll duration in hours. The EFA vCenter Service polls all the VMware vCenter Servers registered with it after this time duration has expired.

--dead-link-clearing-time *string*

The time duration in days. This is the time duration for which dead links are removed from the EFA vCenter service database.

--level { *info* | *debug* }

Sets the debug level for this EFA vCenter Service instance. Can be one of *info* or *debug*. Use *info* to view only messages of the level *info*. Use *debug* to view all debug messages.

Examples

The following example shows the debug information for tenant creation failure for a VMware vCenter Server with IP 10.24.85.111. It also displays other errors if they have been reported.

```
$ efa vcenter debug tenant --host 10.24.85.111
Tenant Configuration Details for vCenter 10.24.85.111
+----------------------+-------+--------+-----------------
+-------------------------------------------------------------+
| Tenant Name          | Ports | VLANs  | Status          |
Reason                                                    |
+----------------------+-------+--------+-----------------
+-------------------------------------------------------------+
| vcenter-10.24.85.111 |       | 2-4089 | Creation Failed | Tenant vcenter-10.24.85.111
is missing the                    |
|                      |       |        |                 | following interfaces:
10.25.225.46="ethernet-0/5"             |
|                      |       |        |                 | 10.24.82.20="ethernet-0/11"
10.24.81.10="ethernet-0/10"       |
|                      |       |        |                 | 10.24.85.76="ethernet-0/10"
10.25.225.11="ethernet-0/5"       |
+----------------------+-------+--------+-----------------
+-------------------------------------------------------------+
Tenant Details

EPG Configuration Details for vCenter 10.24.85.111
+-----------------------------------------------------+-------------------+-----
+-----------------+-------+-----------------
+-----------------------------------------------------+
| EPG Name                                            | Ports             | POs |
Switchport Mode | VLANS | Status          |
Reason                                                |
+-----------------------------------------------------+-------------------+-----
+-----------------+-------+-----------------
+-----------------------------------------------------+
| vCenter_10.24.85.111_10.24.82.20_vSwitch1_VMNetwork2  | 10.24.82.20[0/11] |     |
trunk           | 101   | Creation Failed | EPG cannot be created for a tenant having no
ports |
+-----------------------------------------------------+-------------------+-----
+-----------------+-------+-----------------
+-----------------------------------------------------+

Endpoint Group Details
```

```
--- Time Elapsed: 381.0047ms ---
```

This example shows the output for the `efa vcenter debug setting show` command.

```
$ efa vcenter debug setting show

vCenter service settings
+----------------------+------------------------------+
| Poll Frequency Hours | Dead Link Clearing Time Days |
+----------------------+------------------------------+
| 4                    | 3                            |
+----------------------+------------------------------+
Setting Details
--- Time Elapsed: 11.409207ms ---
```

This example shows the output for the **`efa vcenter debug tenant`** command.

```
$ efa vcenter debug tenant --host 10.24.85.111

+----------------------+-------+--------+----------------------+--------+
|     Tenant Name      | Ports | VLANs  |        Status        | Reason |
+----------------------+-------+--------+----------------------+--------+
| vcenter-10.24.85.111 |       | 2-4089 | Created Successfully |        |
+----------------------+-------+--------+----------------------+--------+
Tenant Details

EPG Configuration Details for vCenter 10.24.85.111
+----------+-------+-----+-----------------+-------+--------+--------+
| EPG Name | Ports | POs | Switchport Mode | VLANS | Status | Reason |
+----------+-------+-----+-----------------+-------+--------+--------+
Endpoint Group Details
--- Time Elapsed: 429.0076ms ---
```

This example shows the output for the **`efa vcenter debug event`** command.

```
$ efa vcenter debug event --host 10.24.85.111

+-----------------------------------------------------------------+--------------------
+-------------------------------+---------------------+--------+
| Task: Update network configuration                              | 10.24.81.10        |
ESXi Host                     | 2020.03.03 23:44:25 | 188872 |
+-----------------------------------------------------------------+--------------------
+-------------------------------+---------------------+--------+
| dvPort group VM network 200-220 in SRA-Dev-DC                   | VM network 200-220 |
Distributed Virtual Portgroup | 2020.03.03 16:23:26 | 188569 |
| was reconfigured.      Modified:                                |
|                               |                     |        |
| config.defaultPortConfig.vlan: (inherited = false, vlanId       |
|                               |                     |        |
| = 200) -> (inherited = false, vlanId = ((start = 0, end =       |
|                               |                     |        |
| 200)));    Added:     Deleted:                                  |
|                               |                     |        |
+-----------------------------------------------------------------+--------------------
+-------------------------------+---------------------+--------+
| Task: Update network configuration                              | 10.24.82.20        |
ESXi Host                     | 2020.03.03 16:21:10 | 188565 |
+-----------------------------------------------------------------+--------------------
```

```
+------------------------------+--------------------+--------+
| dvPort group VM network 200-220 in SRA-Dev-DC                | VM network 200-220 |
Distributed Virtual Portgroup | 2020.03.03 16:19:04 | 188564 |
| was reconfigured.      Modified:                             |
|                              |                    |        |
| config.defaultPortConfig.vlan: (inherited = false, vlanId =  |
|                              |                    |        |
| ((start = 200, end = 220))) -> (inherited = false, vlanId =  |
|                              |                    |        |
| 200);    Added:     Deleted:                                 |
|                              |                    |        |
+--------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
Events Details
--- Time Elapsed: 507.006ms ---
```

The following is an example of the `efa vcenter debug tenant` command.

```
$ efa vcenter debug tenant --host 10.24.85.111

Tenant Configuration Details for vCenter 10.24.85.111
+----------------------+-------+--------+----------------------+--------+
|     Tenant Name      | Ports | VLANs  |        Status        | Reason |
+----------------------+-------+--------+----------------------+--------+
| vcenter-10.24.85.111 |       | 2-4089 | Created Successfully |        |
+----------------------+-------+--------+----------------------+--------+
Tenant Details

EPG Configuration Details for vCenter 10.24.85.111
+----------+-------+-----+-----------------+-------+--------+--------+
| EPG Name | Ports | POs | Switchport Mode | VLANS | Status | Reason |
+----------+-------+-----+-----------------+-------+--------+--------+
Endpoint Group Details
--- Time Elapsed: 429.0076ms ---
```

```
$ efa vcenter debug event --host 10.24.85.111

vCenter Events Total Count (4) for host 10.24.85.111
+--------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
|                          Description                         |       Target
|          Target Type         |        Time        |   ID   |
+--------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
| Task: Update network configuration                           | 10.24.81.10        |
ESXi Host                     | 2020.03.03 23:44:25 | 188872 |
+--------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
| dvPort group VM network 200-220 in SRA-Dev-DC                | VM network 200-220 |
Distributed Virtual Portgroup | 2020.03.03 16:23:26 | 188569 |
| was reconfigured.      Modified:                             |
|                              |                    |        |
| config.defaultPortConfig.vlan: (inherited = false, vlanId    |
|                              |                    |        |
| = 200) -> (inherited = false, vlanId = ((start = 0, end =    |
|                              |                    |        |
| 200)));    Added:     Deleted:                               |
|                              |                    |        |
+--------------------------------------------------------------+--------------------
```

```
+------------------------------+--------------------+--------+
| Task: Update network configuration                          | 10.24.82.20        |
ESXi Host                    | 2020.03.03 16:21:10 | 188565 |
+-------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
| dvPort group VM network 200-220 in SRA-Dev-DC               | VM network 200-220 |
Distributed Virtual Portgroup | 2020.03.03 16:19:04 | 188564 |
| was reconfigured.      Modified:                            |
|                              |                     |        |
| config.defaultPortConfig.vlan: (inherited = false, vlanId =  |
|                              |                     |        |
| ((start = 200, end = 220))) -> (inherited = false, vlanId =  |
|                              |                     |        |
| 200);    Added:     Deleted:                                |
|                              |                     |        |
+-------------------------------------------------------------+--------------------
+------------------------------+--------------------+--------+
Events Details
--- Time Elapsed: 507.006ms ---
```

This command sets the polling frequencty to 5 minutes.

```
$ efa vcenter debug setting update --poll-frequency=5

vCenter service settings updated successfully
--- Time Elapsed: 366.992ms ---
```

This example command sets the `dead-link-cleaning-time` value to 4 days.

```
$ efa vcenter debug setting update --dead-link-clearing-time=4

vCenter service settings updated successfully
--- Time Elapsed: 381.2133ms ---
```

This example sets the log level to debug for this EFA instance.

```
$ efa vcenter debug set --level=debug

Level debug set successfully.
--- Time Elapsed: 12.0073ms ---
```

efa vcenter delete

Deletes the VMware vCenter Server registered as a tenant with this EFA instance. When the *--cleanup-tenants* parameter is supplied, removes the registered ESXi hosts and EPGs for this VMware vCenter Server tenant.

Syntax

efa vcenter delete --host *string* [**--cleanup-tenants**]

Parameters

--host *string*

IP address or hostname of the VMware vCenter Server tenant to delete.

--cleanup-tenants

When included, the tenants and EPGs associated to the VMware vCenter Server are deleted. When not included, the tenants and EPGs associated with the VMware vCenter Server are retained when the server is removed.

Examples

This example deletes the VMware vCenter Server with host IP 10.24.85.111 while retaining the associated tenants and EPGs.

```
$ efa vcenter delete --host 10.24.85.111
```

This example deletes the VMware vCenter Server with host IP 10.24.85.111 and removes the associated tenants and EPGs.

```
$ efa vcenter delete --host 10.24.85.111 --cleanup-tenants
```

efa vcenter links

Displays the links for VMware vCenter server tenants and their ESXi hosts. For VMware vCenter server tenants, physical and unconnected links are displayed. For ESXi hosts, physical, unconnected, and virtual links are displayed.

Syntax

efa vcenter links { **physical** | **unconnected** } { **--host** *string* | **--esxi** *string* }

efa vcenter links virtual --esxi *string*

Parameters

physical

Displays the physical links for the selected device. Device can be a VMware vCenter Server or an ESXi server.

unconnected

Displays the unconnected (unused) links for the selected device. Device can be a VMware vCenter Server or an ESXi server.

virtual

Displays the virtual links created on a ESXi server.

--host

The IP address or host name of the VMware vCenter Server for which to view the physical and unconnected (unused) links.

--esxi

The IP address or host name of the ESXi tenant for which to view the physical, virtual, and unconnected (unused) links.

Examples

This example is list of ESXi device managed by the VMware vCenter Server with the IP 10.24.85.111.

```
$ efa vcenter links physical --host 10.24.85.111
Physical Links for vCenter 10.24.85.111
+--------------+--------+--------+------------------+---------------+-----------
+---------+--------------+---------+--------------+
| ESXi Host    | PNIC   | Driver | PNIC MAC          | Interface     | PO Number | PO
Name | Device       | Missing | Missing Time |
+--------------+--------+--------+------------------+---------------+-----------
+---------+--------------+---------+--------------+
| 10.24.81.10  | vmnic3 | ntg3   | 40:f2:e9:bb:4c:83 | Ethernet 0/10 |
|         | 10.9.9.20    |         |              |
+--------------+--------+--------+------------------+---------------+-----------
+---------+--------------+---------+--------------+
| 10.24.82.20  | vmnic2 | ntg3   | 40:f2:e9:bb:58:b2 | Ethernet 0/10 |
|         | 10.9.9.30    |         |              |
+--------------+--------+--------+------------------+---------------+-----------
+---------+--------------+---------+--------------+
```

```
| 10.24.83.30  | vmnic3 | ntg3   | 40:f2:e9:bb:58:b3 | Ethernet 0/10 |
|         | 10.9.9.40    |        |                   |
+--------------+--------+--------+-------------------+---------------+-----------
+---------+--------------+---------+--------------+
Physical Link Details
--- Time Elapsed: 359.1528ms ---
```

This example is a list of virtual machines and their virtual links on the ESXi host with the IP 10.24.81.10.

```
$ efa vcenter links virtual --esxi 10.24.81.10
Virtual Links for ESXi server 10.24.81.10
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| Virtual Machine | vNIC              | MAC               | VLAN | Port Group |
vSwitch        | Distributed |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| 20200221 v1     | Network adapter 1 | 00:50:56:9c:75:29 | 3048 | VM Network |
vSwitch0       | false       |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| test_vm2        | Network adapter 2 | 00:50:56:9c:7e:83 | 3048 | VM Network |
vSwitch0       | false       |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| 20200221 v1     | Network adapter 2 | 00:50:56:9c:f6:13 | 3048 | VM Network |
vSwitch0       | false       |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| vMotionVm       | Network adapter 1 | 00:50:56:9c:8f:fd | 10   | DPortGroup | Real-DV-
Switch | true        |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
| test_vm2        | Network adapter 1 | 00:50:56:9c:1d:09 | 10   | DPortGroup | Real-DV-
Switch | true        |
+-----------------+-------------------+-------------------+------+------------
+----------------+-------------+
vNIC Link Details
--- Time Elapsed: 500.4792ms ---
```

efa vcenter list

Lists the VMware vCenter servers registered as tenants. When the *--host* parameter is supplied, lists the ESXi hosts for that VMware vCenter Server.

Syntax

efa vcenter list [**--host** *string*]

Parameters

--host *string*

IP address or hostname of the VMware vCenter Server to connect to.

Examples

This example lists a VMware vCenter Server that has just been added as a tenant with this EFA instance.

```
$ efa vcenter list
+--------------+----------------------+---------+---------------------------
+-------------------+------------+----------+
| Host Name    | Name                 | Version | Discovery Status           |
Datacenters Count | Host Count | VM Count |
+--------------+----------------------+---------+---------------------------
+-------------------+------------+----------+
| 10.24.85.111 | VMware vCenter Server | 6.7.0   | Pending Complete Discovery |
1                 | 1          | 0        |
+--------------+----------------------+---------+---------------------------
+-------------------+------------+----------+
```

This example lists a VMware vCenter Server with its status updated to this EFA instance.

```
$ efa vcenter list
+--------------+----------------------+---------+-----------------+------------------
+------------+----------+
| Host Name    | Name                 | Version | Discovery Status | Datacenters Count |
Host Count | VM Count |
+--------------+----------------------+---------+-----------------+------------------
+------------+----------+
| 10.24.85.111 | VMware vCenter Server | 6.7.0   | Update Completed | 5                 |
4          | 13       |
+--------------+----------------------+---------+-----------------+------------------
+------------+----------+
```

This example lists the ESXi devices managed by the VMware vCenter Server with IP address 10.24.85.111.

```
$ efa vcenter list --host 10.24.85.111
```

efa vcenter register

The command to register VMware vCenter server as a tenant with the EFA instance. Tenant details must be registered before running this command.

Syntax

efa vcenter register --host *string* **--username** *string* **--password** *string* **--tenant** *string*

Command Default

This command has no defaults.

Parameters

--host *string*

IP address or hostname of the VMware vCenter Server to connect to.

--username *string*

Username to connect to the VMware vCenter Server.

--password *string*

Password to connect to the VMware vCenter Server.

--tenant *string*

Tenant associated with the VMware vCenter Server host.

Examples

This example registers a VMware vCenter Server as a tenant with EFA vCenter service.

```
$ efa vcenter register --host 10.24.85.111 --username administrator@vmvcenter.local
      --password 'aBc123#' --tenant tenant-10.24.85.111
```

efa vcenter update

Updates the local database with configuration changes made to the VMware vCenter Server and the ESXi servers managed by it.

Syntax

efa vcenter update --host *string* **--username** *string* **--password** *string*

Command Default

This command has no defaults.

Parameters

--host *string*

IP address or Hostname of the VMware vCenter Server from which the local EFA vCenter service database needs to be updated.

--username *string*

Username to connect to the VMware vCenter Server.

--password *string*

Password to connect to the VMware vCenter Server.

Examples

This example updates the local EFA vCenter service database with the latest state of the VMware vCenter Server with the IP address 10.24.85.111.

```
$ efa vcenter update --host 10.24.85.111 --username administrator@vmvcenter.local --
password 'aBc123#'
```

efa version

Displays the version of EFA installed.

Syntax

efa version

Examples

The following example shows typical output for the command

```
# efa version
Version : 2.2.0
Build: 41
Time Stamp: 20-06-03:03:15:47
Mode: Insecure
Deployment Type: single-node
Deployment Platform: SERVER
--- Time Elapsed: 8.986817ms ---
```

efa-change-hostname

Changes the host name in the EFA system after EFA is deployed.

Syntax

efa-change-hostname *old-host-name*

Parameters

old-host-name

Specifies the host name that you are changing.

Usage Guidelines

Host name changes are supported in single-node and multi-node deployments.

Running this command by itself does not change the host name. For the complete procedure, see the "Change the Host Name or IP Address" topic in the "System Management" section of the *Extreme Fabric Automation Administration Guide, 2.2.0*.

Run this command as a root user or as a user with sudo privileges.

In a TPVM deployment, run this command from `/apps/bin/`.

In a single-node deployment, EFA is not operational while this command is running. In a multi-node deployment, EFA remains operational if the command is running on the standby node. EFA is not operational if the command is running on the active node.

Examples

This example shows standard output for the command.

```
$ sudo efa-change-hostname <old-host-name>

Reading host name of the system
Restarting mariadb service
Restarting k3s service
Checking k3s for the new host name
Host is in ready state in k3s
Setting current host as active node
Deleting old host name references
Waiting for EFA containers to start
Successfully updated host name in EFA
```

efa-change-ip

Changes the IP address after EFA is deployed.

Syntax

efa-change-ip

Usage Guidelines

IP address changes are supported in single-node deployments.

Run this command as a root user or as a user with sudo privileges.

In a TPVM deployment, run the command from `/apps/bin/`.

EFA is not operational while this command is running.

After the IP address is changed, either run `source /etc/profile` or open a new EFA session to log in.

Examples

This example shows standard output for the command.

```
$ sudo efa-change-ip

Updating IP in EFA
Restarting k3s service
Updating all files with new IP
Deleting EFA services: gonotification-service gofabric-service gotenant-service
goauth-service gorbac-service goinventory-service goopenstack-service
govcenter-service gohyperv-service goraslog-service efa-api-docs gosystem-service
Waiting for EFA containers to start
Successfully updated IP in EFA
```

efa-change-vip

Changes the virtual IP address (VIP) after EFA is deployed.

Syntax

efa-change-vip *new-vip*

Parameters

new-vip

Specifies the new VIP for the multi-node deployment.

Usage Guidelines

VIP changes are supported in multi-node deployments.

Run this command as a root user or as a user with sudo privileges.

In a TPVM deployment, run this command from `/apps/bin/`.

EFA is not operational while this command is running.

After the VIP is changed, run `source /etc/profile` or open a new EFA session to log in.

Examples

This example shows standard output for the command.

```
$ sudo efa-change-vip <new vip>

Updating all files with new VIP.
Restarting services on nodes
Waiting for EFA containers to start
Updating services with new VIP
Waiting for EFA containers to start
Successfully updated VIP for the installation.
```

efactl

Starts, stops, restarts, and displays the status services for EFA.

Syntax

efactl start

efactl stop

efactl restart

efactl start-service *name of the service*

efactl restart-service *name of the service*

efactl clean

efactl status

Examples

The following example starts all services.

```
# efactl start
Are you sure you want to start all services? [Y/n]
Y
gosystem-service has been started
goauth-service has been started
gorbac-service has been started
godb-service has been started
gonotification-service has been started
goinventory-service has been started
gofabric-service has been started
gotenant-service has been started
goopenstack-service has been started
gohyperv-service has been started
govcenter-service has been started
goswitch-service has been started
goraslog-service has been started
efa-api-docs has been started
rabbitmq has been started
Services have been started
```

The following example stops all services.

```
# efactl stop
Are you sure you want to stop all services? [Y/n]
Y
gosystem-service has been stopped
goauth-service has been stopped
gorbac-service has been stopped
godb-service has been stopped
gonotification-service has been stopped
goinventory-service has been stopped
gofabric-service has been stopped
gotenant-service has been stopped
goopenstack-service has been stopped
gohyperv-service has been stopped
govcenter-service has been stopped
goswitch-service has been stopped
```

```
goraslog-service has been stopped
efa-api-docs has been stopped
rabbitmq has been stopped
Services have been stopped
root@administrator-08:~#
```

The following example restarts all services.

```
efactl restart
Are you sure you want to restart all services? [Y/n]
Y
gosystem-service has been stopped
goauth-service has been stopped
gorbac-service has been stopped
godb-service has been stopped
gonotification-service has been stopped
goinventory-service has been stopped
gofabric-service has been stopped
gotenant-service has been stopped
goopenstack-service has been stopped
gohyperv-service has been stopped
govcenter-service has been stopped
goswitch-service has been stopped
goraslog-service has been stopped
efa-api-docs has been stopped
rabbitmq has been stopped
Services have been stopped
gosystem-service has been started
goauth-service has been started
gorbac-service has been started
godb-service has been started
gonotification-service has been started
goinventory-service has been started
gofabric-service has been started
gotenant-service has been started
goopenstack-service has been started
gohyperv-service has been started
govcenter-service has been started
goswitch-service has been started
goraslog-service has been started
efa-api-docs has been started
rabbitmq has been started
Services have been started
All services have been restarted
```

The following example starts one service.

```
# efactl start-service gofabric-service
Are you sure you want to start gofabric-service? [Y/n]
y
gofabric-service has been started
```

The following example stops one service.

```
# efactl stop-service gorbac-service
Are you sure you want to stop gorbac-service? [Y/n]
y
gorbac-service has been stopped
```

The following example restarts one service.

```
# efactl restart-service rabbitmq
Are you sure you want to restart rabbitmq? [Y/n]
Y
```

```
rabbitmq has been stopped
rabbitmq has been started
rabbitmq has been restarted
```

The following example deletes all logs.

```
# efactl clean
This will delete all logs.  Are you sure [Y/n]?
Y
Cleaning efa Logs...
Cleaned logs
```

The following example shows EFA status.

```
# efactl status
NAME                STATUS   ROLES    AGE   VERSION        LABELS
administrator-08    Ready    master   14h   v1.18.2+k3s1   beta.kubernetes.io/
arch=amd64,beta.kubernetes.io/os=linux,keepalived=active,kubernetes.io/
arch=amd64,kubernetes.io/hostname=administrator-08,kubernetes.io/os=linux,node-
role.kubernetes.io/master=true
NAME                                          READY   STATUS    RESTARTS   AGE
IP             NODE               NOMINATED NODE   READINESS GATES
pod/gosystem-service-6d7b88bcf8-4vvdw         1/1     Running   0          3m19s
10.21.88.128   administrator-08   <none>           <none>
pod/goswitch-service-5646dd59b4-n6dtj         1/1     Running   0          3m15s
10.42.0.28     administrator-08   <none>           <none>
pod/godb-service-0                            1/1     Running   0          3m18s
10.42.0.23     administrator-08   <none>           <none>
pod/efa-api-docs-f5d4c9f6-c7nrk               1/1     Running   0          3m14s
10.42.0.32     administrator-08   <none>           <none>
pod/goopenstack-service-85bc8bb6f6-d2shq      1/1     Running   0          3m16s
10.42.0.27     administrator-08   <none>           <none>
pod/rabbitmq-0                                1/1     Running   0          3m14s
10.42.0.30     administrator-08   <none>           <none>
pod/gonotification-service-658f99657b-87bwx   1/1     Running   1          3m17s
10.21.88.128   administrator-08   <none>           <none>
pod/gorbac-service-5f5f58f474-5fr72           1/1     Running   4          3m18s
10.42.0.22     administrator-08   <none>           <none>
pod/govcenter-service-cd5755577-xq4wg         1/1     Running   4          3m15s
10.42.0.25     administrator-08   <none>           <none>
pod/gofabric-service-58d57686fb-kb8lt         1/1     Running   4          3m17s
10.42.0.31     administrator-08   <none>           <none>
pod/goauth-service-7d677d6b9f-gvqzp           1/1     Running   4          3m18s
10.42.0.21     administrator-08   <none>           <none>
pod/gohyperv-service-57cf444776-nvw4v         1/1     Running   4          3m16s
10.42.0.24     administrator-08   <none>           <none>
pod/gotenant-service-77cccb9cd9-sfblm         1/1     Running   4          3m16s
10.42.0.29     administrator-08   <none>           <none>
pod/goinventory-service-696596b65f-wtf4q      1/1     Running   4          3m17s
10.42.0.26     administrator-08   <none>           <none>
pod/goraslog-service-5b455774b-d6sp5          1/1     Running   0          3m14s
10.21.88.128   administrator-08   <none>           <none>

NAME                             TYPE        CLUSTER-IP      EXTERNAL-IP
PORT(S)                          AGE   SELECTOR
service/db-service               NodePort    10.43.69.174    <none>        5432:30432/
TCP                   14h   app=godb-service
service/gofabric-service         ClusterIP   10.43.90.92     <none>        8081/
TCP                          14h   app=gofabric-service
service/goinventory-service      ClusterIP   10.43.233.180   <none>        8082/
TCP                          14h   app=goinventory-service
service/gotenant-service         ClusterIP   10.43.39.65     <none>        8083/
TCP                          14h   app=gotenant-service
service/efa-api-docs             ClusterIP   10.43.114.116   <none>        80/
```

```
TCP                          14h   app=efa-api-docs
service/gonotification-service   ClusterIP   10.43.206.168   <none>        8088/
TCP                          14h   app=gonotification-service
service/goauth-service           ClusterIP   10.43.61.186    <none>        8080/
TCP                          14h   app=goauth-service
service/gorbac-service           ClusterIP   10.43.56.156    <none>        8089/
TCP                          14h   app=gorbac-service
service/rabbitmq                 NodePort    10.43.232.144   <none>        15672:31672/
TCP,5672:30672/TCP   14h   app=rabbitmq
service/goopenstack-service      NodePort    10.43.205.212   <none>        8085:30085/
TCP                  14h   app=goopenstack-service
service/govcenter-service        ClusterIP   10.43.49.249    <none>        8086/
TCP                          14h   app=govcenter-service
service/gohyperv-service         ClusterIP   10.43.38.199    <none>        8087/
TCP                          14h   app=gohyperv-service
service/gosystem-service         ClusterIP   10.43.114.115   <none>        8090/
TCP                          14h   app=gosystem-service
service/goswitch-service         ClusterIP   10.43.145.26    <none>        8084/
TCP                          14h   app=goswitch-service

NAME                                     READY   UP-TO-DATE   AVAILABLE   AGE
CONTAINERS               IMAGES                  SELECTOR
deployment.apps/gosystem-service         1/1     1            1           14h
gosystem                 gosystem:2.2.0          app=gosystem-service
deployment.apps/goswitch-service         1/1     1            1           14h
goswitch                 goswitch:2.2.0          app=goswitch-service
deployment.apps/efa-api-docs             1/1     1            1           14h   efa-api-
docs             efa-api-docs:2.2.0     app=efa-api-docs
deployment.apps/goopenstack-service      1/1     1            1           14h
openstack                goopenstack:2.2.0       app=goopenstack-service
deployment.apps/gonotification-service   1/1     1            1           14h
gonotification-service   gonotification:2.2.0   app=gonotification-service
deployment.apps/gorbac-service           1/1     1            1           14h   go-
rbac                  gorbac:2.2.0            app=gorbac-service
deployment.apps/govcenter-service        1/1     1            1           14h
vcenter                  govcenter:2.2.0         app=govcenter-service
deployment.apps/gofabric-service         1/1     1            1           14h   gofabric-
service         gofabric:2.2.0          app=gofabric-service
deployment.apps/goauth-service           1/1     1            1           14h   go-
auth                  goauth:2.2.0            app=goauth-service
deployment.apps/gohyperv-service         1/1     1            1           14h
hyperv                   gohyperv:2.2.0          app=gohyperv-service
deployment.apps/gotenant-service         1/1     1            1           14h   gotenant-
service         gotenant:2.2.0          app=gotenant-service
deployment.apps/goinventory-service      1/1     1            1           14h
goinventory-service      goinventory:2.2.0       app=goinventory-service
deployment.apps/goraslog-service         1/1     1            1           14h   goraslog-
service         goraslog:2.2.0          app=goraslog-service

NAME                                              DESIRED   CURRENT   READY   AGE
CONTAINERS               IMAGES                   SELECTOR
replicaset.apps/gosystem-service-6d7b88bcf8       1         1         1       14h
gosystem                 gosystem:2.2.0           app=gosystem-service,pod-template-
hash=6d7b88bcf8
replicaset.apps/goswitch-service-5646dd59b4       1         1         1       14h
goswitch                 goswitch:2.2.0           app=goswitch-service,pod-template-
hash=5646dd59b4
replicaset.apps/efa-api-docs-f5d4c9f6             1         1         1       14h   efa-
api-docs             efa-api-docs:2.2.0     app=efa-api-docs,pod-template-hash=f5d4c9f6
replicaset.apps/goopenstack-service-85bc8bb6f6    1         1         1       14h
openstack                goopenstack:2.2.0        app=goopenstack-service,pod-template-
hash=85bc8bb6f6
replicaset.apps/gonotification-service-658f99657b   1         1         1       14h
gonotification-service   gonotification:2.2.0   app=gonotification-service,pod-template-
```

```
hash=658f99657b
replicaset.apps/gorbac-service-5f5f58f474          1         1         1       14h   go-
rbac                  gorbac:2.2.0           app=gorbac-service,pod-template-
hash=5f5f58f474
replicaset.apps/govcenter-service-cd5755577        1         1         1       14h
vcenter               govcenter:2.2.0        app=govcenter-service,pod-template-
hash=cd5755577
replicaset.apps/gofabric-service-58d57686fb        1         1         1       14h
gofabric-service      gofabric:2.2.0         app=gofabric-service,pod-template-
hash=58d57686fb
replicaset.apps/goauth-service-7d677d6b9f          1         1         1       14h   go-
auth                  goauth:2.2.0           app=goauth-service,pod-template-
hash=7d677d6b9f
replicaset.apps/gohyperv-service-57cf444776        1         1         1       14h
hyperv                gohyperv:2.2.0         app=gohyperv-service,pod-template-
hash=57cf444776
replicaset.apps/gotenant-service-77cccb9cd9        1         1         1       14h
gotenant-service      gotenant:2.2.0         app=gotenant-service,pod-template-
hash=77cccb9cd9
replicaset.apps/goinventory-service-696596b65f     1         1         1       14h
goinventory-service   goinventory:2.2.0      app=goinventory-service,pod-template-
hash=696596b65f
replicaset.apps/goraslog-service-5b455774b         1         1         1       14h
goraslog-service      goraslog:2.2.0         app=goraslog-service,pod-template-
hash=5b455774b

NAME                            READY   AGE   CONTAINERS     IMAGES
statefulset.apps/godb-service   1/1     14h   godb           postgres-db:2.2.0
statefulset.apps/rabbitmq       1/1     14h   rabbitmq-efa   rabbitmq:2.2.0
```