

VIP Front End Management Tool

Ericsson Service-Aware Policy Controller

USER GUIDE

Copyright

© Ericsson España, S.A. 2017, 2018. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Ericsson shall have no liability for any error or damage of any kind resulting from the use of this document.

Trademark List

All trademarks mentioned herein are the property of their respective owners. These are shown in the document Trademark Information.



Contents

1	Front End Management Tool Introduction	1
2	Front End Management Tool Prerequisites	3
3	Front End Management Tool	5
3.1	Front End Management Tool Purpose	5
3.2	Front End Management Tool Parameters	5
3.3	Front End Management Tool Modes	6





1 Front End Management Tool Introduction

This instruction describes how to set up the VIP Front End Management Tool to manage the Front End Elements (FEE) of the Evolved Virtual IP (eVIP) in the SAPC.

FEEs are the elements used by VIP to communicate externally the SAPC with other nodes. During an installation, these FEEs are added by the Adapt Cluster Tool. The VIP FEEs are added by the Adapt Cluster Tool at installation phase. The VIP Front End Management Tool adds FEEs during an expansion or in case more FEEs are needed at any other point.





2 Front End Management Tool Prerequisites

Before starting this procedure, ensure that the following conditions are met:

- Good understanding and knowledge about networking and routing, as well as eVIP CBA component
- Good understanding and knowledge about the SAPC networking
- General knowledge about Linux systems and shell commands





3 Front End Management Tool

3.1 Front End Management Tool Purpose

The purpose of Front End Management Tool is to manage the FEEs of a running SAPC deployment without traffic disturbance. Only Payloads with assigned FEEs can receive Diameter Capabilities-Exchange-Request (CER) messages. Payloads with VIP FEEs have more overhead than the others so it is good to have more FEEs depending on the number of payloads in the cluster.

3.2 Front End Management Tool Parameters

Main parameters come from VIP as they are used to configure the new FEEs. Those parameters explained as "**VIP configuration parameters**" imply special VIP knowledge and in case there is a need to modify them, follow VIP documentation.

Table 1 Parameters

Parameter	Description	Example
ALB	FEEs are grouped under the same functionality using an ALB to identify it. There are several ones depending on the purpose. The tool allows the creation of new FEEs under existing ALB , not the creation of new ALB .	alb_trf
FEE	Name of the FEE to be created, deleted, or moved.	fee_1
SOURCE_NODE	Mandatory for dump, show and delete commands, it identifies the PL to which you must apply the command.	3
DESTINATION_NODE	Mandatory for move and create commands, it identifies the PL to which you must apply the command.	4
ROUTING_PROTOCOL	This parameter specifies the routing protocol for the FEE.	ospf2 static ⁽¹⁾
COMMANDS	VIP configuration parameters.	["0:iptables_fee_cmd_0", "1:iptables_fee_cmd_1", "2:iptables_fee_cmd_2", "3:iptables_fee_cmd_3", "4:iptables_fee_cmd_4", "5:iptables_fee_cmd_5"]
EXTERNAL_INTERFACE	VIP configuration parameters.	bond0.120
OSPF_DEAD_INTERVAL	VIP configuration parameters.	9
OSPF_HELLO_INTERVAL	VIP configuration parameters.	3
OSPF_LOCAL_ADDRESS	VIP configuration parameters.	192.168.216.3/27
OSPF_RETRANSMIT_INTERVAL	VIP configuration parameters.	5



Parameter	Description	Example
OSPF_ROUTER_ID	VIP configuration parameters.	192.168.216.3
OSPF_ROUTER_PRIORITY	VIP configuration parameters.	0
OSPF_SPF_DELAY	VIP configuration parameters.	500
OSPF_SPF_INTERVAL	VIP configuration parameters.	100
OSPF_TRANSMIT_DELAY	VIP configuration parameters.	1
OSPF_AREA	VIP configuration parameters.	0.0.1.1
EVIP_SUPERVISED_REMOTE_GATEWAY	VIP configuration parameters.	192.168.216.1
EVIP_SUPERVISED_REMOTE_GATEWAY2	VIP configuration parameters.	192.168.216.2
STATIC_LOCAL_ADDRESS	VIP configuration parameters.	10.3.70.226/29
STATIC_GATEWAY	VIP configuration parameters.	10.3.70.225

(1) These values are supported only.

3.3 Front End Management Tool Modes

1. Logon on in the SAPC as "root" userId, the system administrator must use:

```
Terminal: # ssh root@<OAM VIP> -p <COM Port>
```

where <OAM VIP> is the SAPC VIP OAM

and <COM Port> is normally 830

```
ssh root@10.42.118.235 -p 830
```

2. SC-X: # sapcFeeManagement <mode> <source_alb> <source_fee>
<source_node> <destination_node>

Execute the tool from the system controller which accesses the COM.

The following modes are available:

- list
- move
- dump
- create
- delete
- show



3.3.1 List Mode

Lists the available FEEs that are configured in the system. Such lists can be made in each deployment.

```
SC-1:# sapcFeeManagement list
Available fees:
Alb: alb_oam Fee: fee_1 Node: 1
Alb: alb_oam Fee: fee_2 Node: 2
Alb: alb_trf Fee: fee_1 Node: 7
Alb: alb_trf Fee: fee_2 Node: 8
```

Example 1 NSP 6.1

```
SC-1:~ # sapcFeeManagement list
Available fees:
Alb: alb_edb Fee: fee_1 Node: 3
Alb: alb_edb Fee: fee_2 Node: 5
Alb: alb_edb Fee: fee_3 Node: 7
Alb: alb_edb Fee: fee_4 Node: 9
Alb: alb_edb Fee: fee_5 Node: 4
Alb: alb_edb Fee: fee_6 Node: 6
Alb: alb_edb Fee: fee_7 Node: 8
Alb: alb_edb Fee: fee_8 Node: 10
Alb: alb_oam Fee: fee_1 Node: 1
Alb: alb_oam Fee: fee_2 Node: 2
Alb: alb_prov Fee: fee_1 Node: 1
Alb: alb_prov Fee: fee_2 Node: 2
Alb: alb_trf Fee: fee_1 Node: 3
Alb: alb_trf Fee: fee_2 Node: 5
Alb: alb_trf Fee: fee_3 Node: 7
Alb: alb_trf Fee: fee_4 Node: 9
Alb: alb_trf Fee: fee_5 Node: 4
Alb: alb_trf Fee: fee_6 Node: 6
Alb: alb_trf Fee: fee_7 Node: 8
Alb: alb_trf Fee: fee_8 Node: 10
```

Example 2 BSP 8100



```
SC-2:~ # sapcFeeManagement list
Available fees:
Alb: alb_oam Fee: fee_1 Node: 1
Alb: alb_oam Fee: fee_2 Node: 2
Alb: alb_trf Fee: fee_1 Node: 3
Alb: alb_trf Fee: fee_2 Node: 4
Alb: alb_trf Fee: fee_3 Node: 5
Alb: alb_trf Fee: fee_4 Node: 6
Alb: alb_trf Fee: fee_5 Node: 7
Alb: alb_trf Fee: fee_6 Node: 8
```

Example 3 VMware Cloud

3.3.2 Move Mode

Moves the FEE from the **<SOURCE_NODE>** to the **<DESTINATION_NODE>**. Copies all the VIP configuration parameters from one node to the other one. It can be done with traffic as there is no need to use cluster reboot for the configuration to be in place. Keep in mind though that the **<DESTINATION_NODE>** needs the external networking ready (specially important in NSP deployments).

```
SC-1:# sapcFeeManagement move alb_trf fee_1 3 7
```

Example 4 Move a Traffic FEE from PL-3 to PL-7

3.3.3 Dump Mode

Dumps the information related to the **<ALB>**, **<FEE>**, and **<SOURCE_NODE>** into a file called `sapcFeeManagement.cfg`. This file can be used as template to add a new VIP FEE.

```
SC-1:# sapcFeeManagement dump alb_trf fee_1 3
```

Example 5 Dump FEE in PL-3

3.3.4 Create Mode

Creates a FEE with the values explained in the file `sapcFeeManagement.cfg`.

This is the most complex scenario as you need to add all the values of the table, specially the configuration parameters. Normally one FEE is used as template by executing the **dump** mode.



Check that the values are correct before applying it but some hints are explained here.

- **EXTERNAL_INTERFACE**, **EVIP_SUPERVISED_REMOTE_GATEWAY** and **EVIP_SUPERVISED_REMOTE_GATEWAY2** could change depending on to which gateway the payload is connected to. But if the payload is connected to the same router as the reference one used in the dump command, these values do not change.
- **OSPF_LOCAL_ADDRESS** and **OSPF_ROUTER_ID** need spare values in the specific network where the FEE is added.
- The rest of parameters normally are equal to the values of existing FEEs.

```
SC-1:# sapcFeeManagement create
```

Example 6 Create a FEE

3.3.5

Delete Mode

Deletes an existing FEE specified by **SOURCE_ALB**, **SOURCE_FEE** and **SOURCE_NODE**.

```
SC-1:# sapcFeeManagement delete alb_trf fee_1 3
```

Example 7 Delete the "fee_1" FEE in PL-3

3.3.6

Show Mode

Similar as dump mode, but the information is shown through the console.

```
SC-1:# sapcFeeManagement show alb_trf fee_1 3
```

Example 8 Show FEE in PL-3