

# VIP Front End Management Tool

Ericsson Service-Aware Policy Controller

USER GUIDE

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# 1 Introduction

## 1.1 Document Purpose and Scope

The purpose of this document is to describe how to set up the VIP Front End Management Tool to create, delete, or move VIP Front End Elements (FEE) in the SAPC.

## 1.2 Revision Information

**Rev. A** This is the first release of this document.

## 1.3 Typographic Conventions

This document uses the following typographic conventions:

Table 1 Typographic Conventions

Convention	Description	Example
<b>User Input</b>	A command that you must enter in a Command-Line Interface (CLI) exactly as written.	<code>ssh root@&lt;oam-vip&gt; -t -s cli</code>
<b>Command Variables</b>	Command variables, the values of which you must supply.	<code>SC-&lt;X&gt;</code>
<b>System Elements</b>	Command and parameter names, program names, path names, URLs, and directory names	The files are located in <code>/cluster/storage/system/config/sapc</code>
<b>Output Information</b>	Text displayed by the system	Status OK





## 2 Overview

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







# 3 Prerequisites

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

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





## 4 Front End Management Tool

### 4.1 Tool Purpose

To create, move or delete front ends from a running SAPC deployment without traffic disturbance. Every traffic payload is connected to the external network, but without front ends, no traffic can be processed by the payload. Payloads with front ends have more overhead than the others so it is good to have more front ends depending on the number of payloads in the cluster.

### 4.2 Front End Management Tool Parameters

Main parameters come from VIP as they are used to configure the new front ends. 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 2 Parameters

Parameter	Description	Example
ALB	Front ends are grouped under the same functionality using an <b>ALB</b> to identify it. There are several ones depending on the purpose. The tool allows the creation of new front ends under existing <b>ALB</b> , not the creation of new <b>ALB</b> .	alb_trf
FEE	Name of the front end 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
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
OSPF_ROUTER_ID	VIP configuration parameters.	192.168.216.3
OSPF_ROUTER_PRIORITY	VIP configuration parameters.	0



Parameter	Description	Example
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

## 4.3 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 to the COM.

Five modes are available: move, dump, create, delete, and show.

### Move Mode

Moves the front end 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 1 Move a Traffic FEE from PL-3 to PL-7

### Dump Mode

Dumps the info 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 front end.



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

Example 2 Dump FEE in PL-3

### Create Mode

Creates a front end 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 front end 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 front end is added.
- The rest of parameters normally are equal to the values of existing front ends.

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

Example 3 Create a FEE

### Delete Mode

Deletes an existing front end specified by **SOURCE\_ALB**, **SOURCE\_FEE** and **SOURCE\_NODE**.

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

Example 4 Delete the "fee\_1" FEE in PL-3

### Show Mode

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



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

Example 5 Show FEE in PL-3



# Glossary

**ALB**

Abstract Load Balancer

**FEE**

Front-End Element

**PL**

PayLoad

**PNF**

Physical Network Function

**SAPC**

Ericsson Service-Aware Policy Controller

**SC**

System Controller

**VIP**

Virtual IP address

**VR**

Virtual Router