

# Add Virtual IP Address

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## OPERATING INSTRUCTIONS

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# Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Prerequisites	1
<b>2</b>	<b>Procedure</b>	<b>3</b>



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# 1 Introduction

This document describes how to add a Virtual IP (VIP) address to an Abstract Load Balancer (ALB). For example, to add an extra VIP address to an ALB with an existing VIP address.

The purpose of adding an extra VIP address is to achieve one or both of the following objectives:

- Traffic separation along different paths in the external Data Communication Network (DCN) by routing on different IP addresses. For example, used for “shared fate paths” diversity arrangements typically used with the SCTP. This requires the configuration of routing policies in the Customer-Premises Equipment (CPE) of the External Network to achieve the desired separation.
- Traffic separation inside the Network Element (NE) based on different VIP destination addresses. For example, TCP connections to a specific VIP address to be handled by a specific set of processing units in the NE. This requires that “flow policies”, which match the specific VIP addresses, are configured in the ALB. The added extra VIP address facilitates traffic separation based on the destination IP address. For example, when a VIP address is used as a destination address for addressing servers of application services in the NE.

When the reason of adding VIP addresses is to achieve traffic separation in an external DCN, the CPE is configured accordingly to achieve the expected separation of paths in the DCN.

When static routing is used to connect to the CPE, for example, external routers, the CPE is reconfigured for the new IP address.

When the Open Shortest Path First (OSPF) routing is used to the CPE, the default behavior is that the new VIP address is automatically announced to the CPE after adding a VIP address. The new address is directly ready for service.

**Note:** If the described default behavior to announce the new VIP address automatically after configuration is not to be used by a specific application, then the specific application in question will if needed provide instructions for the explicit activation of the VIP address.

## 1.1 Prerequisites

This section describes the prerequisites, which must be fulfilled before using the procedure.



### 1.1.1 Conditions

The following conditions must apply:

- The ALB is known.
- The IP address used for the new VIP address is a routable IP address, selected in accordance with the address plan of the External Network.
- No VIP equivalent source address is configured in the ALB. This is required to achieve good traffic separation of TCP or UDP outgoing connections in the DCN. That is, all VIP addresses in the ALB are configured with attribute `equivSrcAddr="no"`. The reason for this is that a VIP equivalent source address can replace any VIP address in the ALB as source address, leading to cases of ambiguous paths selection.
- One or more flow policies in the ALB that matches the new VIP address are configured in the ALB before adding the new VIP address.
- An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress.



## 2 Procedure

To add a VIP address:

1. Navigate to the *EvipVips* Managed Object (MO), for example:

```
>dn ManagedElement=NODE06ST,Transport=1,Evip=1,EvipAlbs=1,EvipAlb=NetworkPartnerVPN_01,EvipVips=1
```

2. Enter Config mode:

```
(EvipVips=1) >configure
```

3. Set the new VIP address to be used for incoming traffic to address servers of the application, for example:

```
(config-EvipVips=1) >EvipVip=10.1.1.4
```

4. Allow the new VIP address to be used for an alias IP address for outgoing connections:

```
(config-EvipVip=10.1.1.4) >equivSrcAddr="no"
```

**Note:** This is required, as this is an ordinary VIP address and not a VIP equivalent source address. This VIP address does not automatically replace any other VIP address as source IP address for outgoing TCP or UDP connections if another VIP address in the ALB consumes all its ephemeral port numbers.

5. Commit the settings:

```
(config-EvipVip=10.1.1.4) >commit
```

6. Navigate to the *EvipVips* MO:

```
(EvipVip=10.1.1.4) >up
```

7. Verify the settings:

```
(EvipVips=1) >show -r
```

The following is an example output:

```
EvipVips=1
  EvipVip=10.1.1.1
    equivSrcAddr="no"
  EvipVip=10.1.1.4
    equivSrcAddr="no"
```