

Change Maximum Transmission Unit Size

OPERATING INSTRUCTIONS

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Change Maximum Transmission Unit Size



1 Description

The Managed Element (ME) changes of the initially set Maximum Transmission Unit (MTU) size only concerns a Network Element (NE) deployed with operating system infrastructure “LDEwS” in conjunction with the embedded Virtual IP (VIP) addressing framework referred to as “eVIP”.

There are two distinct modes of configuring MTU in an ME deployed with LDEwS and eVIP:

1. Infrastructure Mode
2. Framework Mode

This document will describe the procedure for establishing the current mode for configuring MTU in a deployed NE. That is, determining if the Infrastructure Mode procedure or Framework Mode procedure should be followed when changing MTU size.

Infrastructure Mode: For a NE deployed with MTU configured according to the Infrastructure Mode, the procedures for changing the MTU size is described in the **LDEwS Management Guide**. The **LDEwS Management Guide** should be consulted for all matters concerning MTU for a NE in the Infrastructure Mode.

Framework Mode: For a NE deployed with MTU configured for MTU management according to the Framework Mode, the procedures for changing the MTU value is described in this document. In the Framework Mode the default MTU value is set to 1452 bytes, this as the system internal IPv6 tunnels add an encapsulation overhead of 48 bytes.

In the Framework Mode, the default 1452 value works for the widest variety of available Ethernet switching infrastructure undelay and hardware and there is in general no need to deviate from this default value.

Note:

- The lowest limit for the MTU size is 1280 byte. For, example, 1452 value may be changed to 1280. A value set to 0 signifies Infrastructure Mode and must not be changed following the procedures described in this document.
- Changing the value in-service requires a cluster reboot, causing an interruption of service.



2 Procedures

2.1 Show Current MTU Configuration Mode

Determining the applicable MTU configuration mode of a NE is done by inspecting the numerical value of the **EvipParam=mtu** parameter.

Infrastructure Mode - **EvipParam=mtu** value is 0.

Framework Mode - **EvipParam=mtu** value is a non-zero value.

Prerequisites

- No documents are required.
- No tools are required.
- The following conditions must apply:
 - The user has the System Security Administrator role.
 - An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress.

Steps

1. Navigate to **EvipParam** managed object, for example:

```
>ManagedElement=NODE06ST,Transport=1,Evip=1,EvipParams=1,EvipParam=mtu
```

2. Enter Show mode:

```
(EvipParam=mtu)>show -r
```

The following example output shows the NE in Infrastructure Mode because the MTU value is 0:

```
>ManagedElement=1,Transport=1,Evip=1,EvipParams=1,EvipParam=mtu
(EvipParam=mtu)>show -r
EvipParam=mtu
  value="0"
(EvipParam=mtu)>
```

The following example output shows the NE in Framework Mode because the MTU value is 1452, a non-zero value:

```
>ManagedElement=1,Transport=1,Evip=1,EvipParams=1,EvipParam=mtu
(EvipParam=mtu)>show -r
EvipParam=mtu
  value="1452"
(EvipParam=mtu)>
```



Note: For an NE configured in the Infrastructure Mode, the parameter **EvipParam=mtu** must not be changed. That is, a zero value must not be changed.

2.2 Change Maximum Transmission Unit Size

Prerequisites

- No documents are required.
- No tools are required.
- The following conditions must apply:
 - The NE is configured in the Framework Mode, that is, the parameter **EvipParam=mtu** value must be a non-zero value, for example 1452.
 - The new MTU size is known.
 - The new known MTU size must be a non-zero value, equal or greater than 1280 bytes.
 - The new MTU size plus 48 bytes must, as payload, fit into the Ethernet frames provided by the switching infrastructure.
 - The user has the System Security Administrator role.
 - An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress.

Steps

1. Navigate to **EvipParam** managed object, for example:


```
>ManagedElement=NODE06ST,Transport=1,Evip=1,EvipParams=1,EvipParam=mtu
```
2. Enter Config mode:


```
(EvipParam=mtu)>configure
```
3. Change the MTU size, for example:


```
(config-EvipParam=mtu)>value=1280
```
4. Commit the setting:


```
(config-EvipParam=mtu)>commit
```
5. Open up a console connection to SC-1, for example:


```
ssh root@<hostname>
```
6. Perform a cluster reboot:



Attention!

Risk of system malfunction or traffic disturbance.

Service is interrupted during a cluster reboot.

SC-1:~ #cmw-cluster-reboot

The following output is shown:

```
Do you really want to reboot the entire cluster (yes/no)?
```

7. Enter yes to reboot.
8. Verify the MTU size of the traffic interface:

SC-1:~ #ifconfig alb_tr

The following is an example output:

```
alb_tr  Link encap:UNSPEC  =>
HWaddr FE-80-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
      inet addr:10.118.160.53  P-t-P:10.118.160.53  Mask:255.255.255.255
      inet6 addr: 2001:1b70:4292:8207::51/128 Scope:Global
      inet6 addr: fe80::3e19:7dff:fe0e:ab0c/64 Scope:Link
      UP POINTOPOINT RUNNING NOARP  MTU:1280  Metric:1
      RX packets:0 errors:0 dropped:0 overruns:0 frame:0
      TX packets:19954 errors:4 dropped:4 overruns:0 carrier:0
      collisions:4 txqueuelen:0
      RX bytes:0 (0.0 b)  TX bytes:9443431 (9.0 Mb)
```

9. Verify the MTU size of the authentication interface:

SC-1:~ #ifconfig alb_aut

The following is an example output:

```
alb_aut  Link encap:UNSPEC  =>
HWaddr FE-80-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
      inet addr:10.118.160.43  P-t-P:10.118.160.43  Mask:255.255.255.255
      inet6 addr: fe80::3e19:7dff:fe0e:ab0c/64 Scope:Link
      inet6 addr: 2001:1b70:4292:8207::43/128 Scope:Global
      UP POINTOPOINT RUNNING NOARP  MTU:1280  Metric:1
      RX packets:0 errors:0 dropped:0 overruns:0 frame:0
      TX packets:2 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:0
      RX bytes:0 (0.0 b)  TX bytes:232 (232.0 b)
```