

How to Configure LAN Failover with OpenVMS LANCP

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1. How to Configure LAN Failover with OpenVMS LANCP

LAN failover in OpenVMS allows two network interface cards (NICs) to operate as a single logical interface. One NIC actively handles traffic while the second NIC remains in standby mode.

All network protocols (including DECnet, LAT, TCP/IP, and SCA) attach to the logical failover device and that device controls which NIC is used. In this situation, no protocols can be directly attached to the physical devices.

The logical failover device is typically named LLA0. With LAN failover enabled, protocols attach to the LLA0 logical device rather than directly to the physical interfaces.

Note

LAN failover supports DEGPA, DEGXA, and DE600 network adapters. DEGPA and DEGXA are EW devices, and DE600 adapters are EI devices.

2. Procedure

2.1 Create a LAN Failover Device

Use the following commands to define and enable the failover device.

```
$ MCR LANC  
LANCP> DEFINE DEVICE LLA0/FAILOVER=(EWA0,EWB0)  
LANCP> DEFINE DEVICE LLA0/ENABLE
```

These `DEFINE` commands create entries in the permanent LAN database, `SYSS$SYSTEM:LAN$DEVICE_DATABASE.DAT`.

2.2 Activate the LLA0 Device

Reboot the system without starting DECnet-Plus, TCP/IP, or LAT. The system will then boot using the new LLA0 device.

If all protocols can be stopped on EWA0 and EWB0 without rebooting, use `LANCP SET` commands to create and enable LLA0 dynamically.

After the next reboot, Systems Communication Architecture (SCA) will automatically attach to the LLA0 device.

2.3 Configure TCP/IP

Run the TCP/IP configuration procedure:

```
$ @SYS$COMMON:[SYSMGR] TCPIP$CONFIG.COM
```

Configure the environment as follows:

1. Select: 1 - Core environments.
 2. Select: 2 - Interfaces.
 3. Do not configure WE0 or WE1.
 4. Answer YES when prompted for LE0 (LLA0).
 5. Configure the IP address and Subnet mask.
 6. Start DECnet before starting TCP/IP.
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2.4 Configure DECnet

Use either the DECnet-Plus procedure or the DECnet Phase IV procedure, depending on the version of DECnet installed on your system.

2.4.1 DECnet-Plus

Run the DECnet-Plus advanced configuration utility:

```
$ @SYS$MANAGER:NET$CONFIGURE ADVANCED
```

Configuration steps:

1. Answer Yes to continue.
2. Select: 3 - Configure devices.
3. For EWA0 type NONE.
4. For EWB0 type NONE.
5. Select the default data link name used for LLA0 (LFO).
6. Accept the default routing circuit name of CSMACD-0 Data Link.

Note

Specifying NONE means the physical device is not configured directly. Other non-failover devices may still be configured normally.

2.4.2 DECnet Phase IV

1. Start the Network Control Program:

```
$ MCR NCP
```

2. Answer YES for all parameters:

```
PURGE LINE EWA-0
PURGE LINE EWA-1
PURGE CIRCUIT EWA-0
PURGE CIRCUIT EWA-1
DEFINE LINE LLA-0 STATE ON
DEFINE CIRCUIT LLA-0 STATE ON
```

3. Start DECnet.
4. Start TCP/IP.

.....

2.5 Configure LAT

LAT automatically starts on LLA0 unless explicit CREATE LINK LAT\$LINK commands already exist in SYSS\$MANAGER:LAT\$SYSTARTUP.COM.

Edit LAT\$SYSTARTUP.COM and add:

```
CREATE LINK LAT$LINK1/DEVICE=LLA0/NODECNET
```
