# Installing Linux Device Drivers for CCL

Communication Controller for Linux
on zSeries – CDLC Connectivity

# Table of Contents

# Installing CDLC Devices

**SuSE Linux Enterprise Server 8 – CDLC**

CDLC support, as required by Communications Controller for Linux on the z9 Server  will not be  supported on SuSE Linux Enterprise Server 8.

If you are using SuSE Linux Enterprise Server 8 and require CDLC support, you will need to migrate to SuSE Linux Enterprise Server 9.

**Red Hat Enterprise Server 4 – CDLC - Static Commands**

1. Verify you have the following RPMs installed (or later versions)

```
kernel-2.6.9-29.EL.s390x.rpm

kernel-debuginfo-2.6.9-29.EL.s390x.rpm

kernel-devel-2.6.9-29.EL.s390x.rpm

redhat-release-4AS-3.4.s390x.rpm

udev-039-10.12.EL4.s390x.rpm
```

2. Add the following statement to the modprobe.conf

```
alias osn0 qeth
```

3. Create the ifcfg-osn0 script

```
# IBM QETH

DEVICE=osn0

BOOTPROTO=static

NETTYPE=qeth

ONBOOT=yes

SUBCHANNELS=0.0.f808,0.0.f809,0.0.f80a

TYPE=Ethernet
```

4. Reboot your  system and verify the device is online.

**Red Hat Enterprise Server 4 – CDLC – Dynamic Commands**

1. Load the QETH device driver

```
modprobe qeth
```

2. Create a new QETH device by grouping the CCW devices

```
echo              0.0.f808,0.0.f809,0.0.f80a              >
/sys/bus/ccwgroup/drivers/qeth/group
```

3. Bring the QETH device online

```
echo 1 > /sys/devices/qeth/0.0.f808/online
```

4. Find the interface number for the OSN device

```
ls -Al /sys/class/net/*/device
```

5. Activate the network interface

```
ifconfig osnx up
```

5. Define the QETH device by creating the script
/etc/sysconfig/hardware/ hwcfg-qeth-bus-ccw-0.0.f808. F808
is the read device for the QETH device.

```
#!/bin/sh

STARTMODE="auto"

MODULE="qeth"

MODULE_OPTIONS=""

MODULE_UNLOAD="yes"

# Scripts to be called for the various events.

SCRIPTUP="hwup-ccw"

SCRIPTUP_ccw="hwup-ccw"

SCRIPTUP_ccwgroup="hwup-qeth"

SCRIPTDOWN="hwdown-ccw"

# CCW_CHAN_IDS sets the channel IDs for this device

# The first ID will be used as the group ID

CCW_CHAN_IDS="0.0.f808 0.0.f809 0.0.f80a"

# CCW_CHAN_NUM set the number of channels for this device

# Always 3 for an qeth device

CCW_CHAN_NUM=3

# CCW_CHAN_MODE sets the port name for an OSA-Express device

CCW_CHAN_MODE="GIGEF800"
```

6. Define the network interface by creating the script /etc/sysconfig/network/ifcfg-qeth-bus-ccw-0.0.f808.

```
BOOTPROTO="static"

UNIQUE=""

STARTMODE="onboot"
```

7. Reboot the system.

8. After the system reboots, issue the ifconfig command and verify the device is active.

NOTE: You may need to verify the /etc/sysconfig/hardware/scripts/hwup-ccw script has been updated to include the following statement:

```
    1731/01|1731/05|1731/06)

        # OSA/Express or Guest LAN

        CCW_CHAN_NAME="qeth"

        CCW_CHAN_NUM=3

        ;;
```

If your SLES9 system in not at the .243 kernel version (or above), you may need to add "1731/06" to the hwup-ccw script.

**SuSE Linux Enterprise Server 9 – CDLC – Dynamic Commands**

6. Load the QETH device driver

```
modprobe qeth
```

7. Create a new QETH device by grouping the CCW devices

```
echo            0.0.f808,0.0.f809,0.0.f80a            >
/sys/bus/ccwgroup/drivers/qeth/group
```

8. Bring the QETH device online

```
echo 1 > /sys/devices/qeth/0.0.f808/online
```

9. Find the interface number for the OSN device

```
ls -Al /sys/class/net/*/device
```

10. Activate the network interface

```
ifconfig osnx up
```