On NX1 Linux driver install steps, refer to the README.TXT under Linux driver tar file.

Updating the Firmware Components Manually on Linux:

Provides instructions for manually updating the firmware on Broadcom Gigabit Ethernet network adapters for Linux

Download the Linux firmware upgrade utility and the Firmware images file from the corresponding Broadcom Gigabit Ethernet Adapter page 'Downloads' -> 'Firmware'

To update the adapter firmware on Linux:

1. Install the Broadcom management application programming interface for Linux - bmapilnx

rpm -ivh bmapilnx-227.0.3-0.x86_64.rpm

2. Install the Linux firmware upgrade utility

rpm -ivh lnxfwupg-226.0.30-1.x86_64.rpm (if no older version of lnxfwupg was installed in the system)

<div align="center">(or)</div>

rpm -Uvh lnxfwupg-226.0.30-1.x86_64.rpm (Update, if already older version lnxfwupg was installed)

3. List the Broadcom Gigabit Ethernet adapters using the following command:

lnxfwupg

4. Select the adapter

```
[root@dhcp-10-123-78-178 cs956993]# lnxfwupg
Broadcom Network Controller Firmware Upgrade Utility for Linux v226.0.30
Initializing...

C Brd      MAC          Drv                         Name
- ----   ------------   ---   --------------------------------------------------
0 165F  EC2A7246A7C0  Yes  NetXtreme BCM5720 Gigabit Ethernet PCIe (eno1)
1 165F  EC2A7246A7C1  Yes  NetXtreme BCM5720 Gigabit Ethernet PCIe (eno2)
2 1657  E43D1AF99440  Yes  NetXtreme BCM5719 Gigabit Ethernet PCIe rev 01 (ens2f0)
3 1657  E43D1AF99441  Yes  NetXtreme BCM5719 Gigabit Ethernet PCIe rev 01 (ens2f1)
4 1657  E43D1AF99442  Yes  NetXtreme BCM5719 Gigabit Ethernet PCIe rev 01 (ens2f2)
5 1657  E43D1AF99443  Yes  NetXtreme BCM5719 Gigabit Ethernet PCIe rev 01 (ens2f3)
0:>
```

```
[root@dhcp-10-123-78-178 tg3-3.139m]# ethtool -i eno1
driver: tg3
version: 3.139m
firmware-version: 5720-v1.43 NCSI v1.5.55.0
expansion-rom-version:
bus-info: 0000:02:00.0
supports-statistics: yes
supports-test: yes
supports-eeprom-access: yes
supports-register-dump: yes
supports-priv-flags: no
```

5. All the Firmware components are available in the corresponding folders in the downloaded Firmware image file.

Use the correct file to upgrade the respective firmware component as shown below:

The following example shows how to upgrade each firmware component on the N41T OCP adapter.

a. Upgrade Boot Code using the following command:

upgrade -bc ee5719c1.57

b. Upgrade EFI and PXE using the following command:

upgrade -mba 5719efipxe.bin

c. Upgrade CCM using the following command:

upgrade -ccm ccm2250.71

d. Upgrade NCSI Management firmware using the following command:

upgrade -mgmt nx1ncsi1.555.bin

e. Upgrade iscsi boot code using the following command:

upgrade -ib iboot2140.0

f. Verify the NVM directory contents using the following command:

dir

g. upgrade VPD if needed for N41T OCP adapter.

upgrade -vpd BCM95719N1905C.vpd

Ignore warnings message "REGION_W does not exist"

h. Exit out of the firmware upgrade utility

q

Note: commands can be executed in one line command mode with mac Address or device name to identify the device.

Example:

lnxfwupg E43D1AF99440 dir

lnxfwupg E43D1AF99440 upgrade -bc ee5719c1.57

```
[root@dhcp-10-123-78-178 tg3-3.139m]# lnxfwupg E43D1AF99440 dir
Broadcom Network Controller Firmware Upgrade Utility for Linux v226.0.30
Initializing...

Select NIC NetXtreme BCM5719 Gigabit Ethernet PCIe rev 01 (ens2f0)...
Entry Type              SRAM Addr   EEP Offset   Length    Execute Version
----- ---------------   ---------   ----------   --------  ------- -------
      BootCode          08003800    0000028C     00004D78  CPUA(2) 5719-v1.57
  0   PXE               00010000    00005004     00030004  no      21.6.4
                                                           PCI30 MBA v21.6.4
                                                           EFI x64 v21.6.77

  1   EXT DIR           --------    00035008     000000C4  no
  2   iSCSI Boot        00010000    00040BA4     0000F8B4  no      v214.0.152
  3   iSCSI CFG         --------    00050458     00000800  no      v2.00
  4   iSCSI CFG 1       --------    00050C58     00000800  no      v2.00
  5   APE Firmware[*]   --------    00052458     0000D58C  APE     NCSI 1.5.55
Extended Directory:
 80   CCM               --------    000350CC     0000BAD8  no      v225.0.71
 81   iSCSI CFG 2       --------    00051458     00000800  no      v2.00
 82   iSCSI CFG 3       --------    00051C58     00000800  no      v2.00


UnInitializing...
Program Exit Code: (0)
[root@dhcp-10-123-78-178 tg3-3.139m]# lnxfwupg EC2A7246A7C0 dir
Broadcom Network Controller Firmware Upgrade Utility for Linux v226.0.30
Initializing...

Select NIC NetXtreme BCM5720 Gigabit Ethernet PCIe (eno1)...
Entry Type              SRAM Addr   EEP Offset   Length    Execute Version
----- ---------------   ---------   ----------   --------  ------- -------
      BootCode          08003800    0000028C     000048F4  CPUA(2) 5720-v1.43
  0   PXE               00010000    0005DD44     00030004  no      21.6.4
                                                           PCI30 MBA v21.6.4
                                                           EFI x64 v21.6.77

  1   EXT DIR           --------    00034384     000000C4  no
  2   iSCSI Boot        00010000    00010658     00007A20  no      v214.0.152
  3   iSCSI CFG         --------    0004F7D4     00000800  no      v2.00
  4   iSCSI CFG 1       --------    0004FFD4     00000800  no      v2.00
  5   APE Firmware[*]   --------    00018078     0000D58C  APE     NCSI 1.5.55
Extended Directory:
 80   CCM               --------    00004B80     0000BAD8  no      v225.0.71


UnInitializing...
Program Exit Code: (0)
```