**Pre-requisite:**

Install “onie-installer-dasr800-bsp-0.1.bin" in the zip file on the device using onie-nos-install command. Once linux is installed, you can login to the device using: root/root.

1. Prepare:

* Connect device to network, by MGMT2 port.
* Get into “ONIE:rescue” mode, when you see bootup menu.
* Make sure device has got IP address from dhcp.
* Put onie-installer-dasr800-bsp-0.1.bin on tftp server.

1. Install BSP:

* Run following command on device, (example, tftp server ip address is 192.168.1.1)
* onie-nos-install tftp://192.168.1.1/onie-installer-dasr800-bsp-0.1.bin
* Wait for installation to complete, then “reboot”.

After install, you should see a new item “Ubuntu OS” in the bootup menu.

**SDK Build and Verify:**

There are two ways to build the broadcom sdk with Delta patch file "0001-bcm-sdk-for-ubuntu-16.04.patch". Build on the switch directly or Build outside of the switch.

1. The following are instructions for building on the switch.

* Login as root to device.
* Use scp to copy the “sdk-xgs-robo-6.5.4.tar.gz” and “0001-bcm-sdk-for-ubuntu-16.04.patch” to the /root.
* Decompress and patch bcm sdk.
  + - tar -xzf sdk-xgs-robo-6.5.4.tar.gz
    - cd sdk-xgs-robo-6.5.4/
    - patch -p1 < ../0001-bcm-sdk-for-ubuntu-16.04.patch
* Compile the Broadcom sdk .
  + - cd <sdk root dir>/systems/linux/user/x86-smp\_generic\_64-2\_6/
    - make

1. The following are instructions for building sdk on your linux build server.
   * Copy the “4.4.0-49-generic.tar.gz” file to /lib/modules/
   * cd to /lib/modules/ and tar xvfz 4.4.0-49-generic.tar.gz.
   * Copy “linux-headers-4.4.0-49-generic.tar.gz” to /usr/src/.
   * cd to /usr/src and tar xvfz linux-headers-4.4.0-49-generic.tar.gz
   * The above steps is to make sure that bcm drivers are compiled against the same kernel version as the BSP image.
   * Copy the “sdk-xgs-robo-6.5.4.tar.gz” and “0001-bcm-sdk-for-ubuntu-16.04.patch” to your home directory on server.
   * Decompress and patch bcm sdk.
     + tar -xzf sdk-xgs-robo-6.5.4.tar.gz
     + cd sdk-xgs-robo-6.5.4/
     + patch -p1 < ../0001-bcm-sdk-for-ubuntu-16.04.patch
   * Compile the Broadcom sdk .
     + Add the following lines to the top of the <sdk root dir>/make/Makefile. linux-x86-smp\_generic\_64-2\_6.

*KERNDIR = /lib/modules/4.4.0-49-generic/build*

*LINUX\_INCLUDE = $(KERNDIR)/include*

* + - cd <sdk root dir>/systems/linux/user/x86-smp\_generic\_64-2\_6/
    - make

Once you build the sdk, you should see the following binaries <sdk root dir>/systems/linux/user/x86-smp\_generic\_64-2\_6/

*bcm.user*

*linux-kernel-bde.ko*

*linux-user-bde.ko*

*netserve*

1. Verify the sdk:
   * Kill the bcm.user and netserve processes on the device.
     + Pkill bcm.user
     + Pkill netserve
   * copy or transfer the above binaries to /opt/dni-drv/bcm/ in the device.
   * Reboot
   * Login to the device and get into Broadcom shell to verify the ports.

*root@dasr800-ubuntu:/root# telnet 127.0.0.1 5531*

*BCM.0> ps*

*ena/ speed/ link auto STP lrn inter max cut loop*

*port link Lns duplex scan neg? state pause discrd ops face frame thru? back*

*ce0( 1) down 4 100G FD SW No Forward None FA CR4 9412 No*

*……..*

*BCM.0>*