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Subject: Steps to boot DCX960 EPR1 box
Date: 7 Sep 2015 15:23
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Hello Bram,

Please see the instructions below:

WARNING: Only flash zImage to specified partition on DCX960 EPR1!

1. Power on the EPR1 board and press Ctrl-C continuously to get to the SSBL> prompt on the serial console. (It is set up in auto boot mode so if you don't press Ctrl-C it will continue to boot and the MTC code will boot and load the VooDoo app.)

2. AT SSBL> prompt, type "auto" to disable auto boot mode. (You have 5 seconds to do this, otherwise it will continue to boot)

3. At SSBL> prompt, type "debug", press Enter and IMMEDIATELY press CTRL-C to interrupt the boot. (You have about 100 milliseconds to do this, otherwise it will continue to boot.) You should be at the DEBUG> prompt.
   a. **These steps have not been verified**, but, to get rid of the auto boot from the DEBUG shell:
      i. Perform ctrl-c at boot
      ii. Enter 'su' menu
      iii. Enter flash crawl submenu
      iv. Enter '1' for display of flash crawl records
      v. Enter '9' to delete a flash crawl record
      vi. Type in id for CFEV record which will be displayed during display step

      The box will auto boot into SSBL DEBUG menu but it will not jump to any image because the cfe or bolt environment will be gone so no STARTUP var will be set.
4. If you are using Tera Term for the serial console, you can use script epr1_ctrl_c.ttl to interrupt the boot.

5. The zImage (kernel) may be flashed to the EPR1 box as follows:

   Using TFTP:

   DEBUG> flash 10.50.67.30:/eos/zImage_proto2B-c flash1.PLATFORM.PING

   Using USB 2.0:

   DEBUG> usb init
   DEBUG> flash usbdisk0:zImage_proto2B-c flash1.PLATFORM.PING

   Note: Do NOT flash to any partition on the EPR1 except flash1.PLATFORM.PING.

6. Get IP address for your board:

   DEBUG> ifconfig eth0 -auto

7. Copy the rootfs_May11.tgz to Linux machine and unpack it on USB2.0 drive in ext4 format as shown below in the next step.

Preparing root file system for rootfs software:

8. **Prepare USB disk for ext4 file format:**
   Using Gparted:

1) Install "GParted" utility for formatting and creating partitions (Example from Ubuntnu):
2) # sudo apt-get install gparted
3) Insert USB memory stick into Ubuntu PC
4) Use GParted to create new ext3 partition:
5) Using the GParted GUI and choose the USB stick from the drop down list (e.g.: /dev/sdb)
6) Right click on each existing partion and choose unmount and then delete.
7) When all partitions are removed, click on the remaining "unallocated" partition.
8) Choose "Partition" menu -> "New"
9) Choose "ext4" (default option) as the File System and click Add.
10) Click the check mark icon to "Apply All Actions".
11) When finished, close GParted.
12) Remove the USB stick from the Ubuntu PC and re-insert it to automatically mount it.
13) USB stick will be auto mounted to /media/
14) File browser window will open showing empty USB stick.

Using Fdisk (Alternative method):

If you don't have Gparted utility then use Linux fdisk utility:

1. Tail –f /var/log/messages
2. Insert USB disk You will see logs for disk inserted. Note down that it is /dev/sdb1.
3. Cancel tail process
4. Wait for the USB disk to automatically mounted and note down the volume-label
5. Type 'fdisk –l' to see the current partitions. /dev/sdb1 should be for new usb disk
6. umount /media/<tab> ; tab should take you the usb volume.
7. fdisk /dev/sdb
   Select 'd' to delete the existing partition; then press 'q' to quit
8. Format the usb disk:
   sudo mkfs.ext4 /dev/sdb1
9. Remove the usb disk; insert it again and note down the volume-label
10. File browser window will open showing empty USB stick.

9. Copy rootfs_May11.tgz to the usb disk. And untar the rootfs:

```
#cd /media/<user-name>/<usb-volume-label>
#sudo tar -xzvf rootfs_May11.tgz
#sync
#umount /media/<user-name>/<usb-volume-label>
```

10. After usb disk is created with new root file system. Insert it to the usb disk into usb port on the EPR1.

11. Boot the zImage and the rootfs.

To boot the zImage from the Proto2 flash and the rootfs from ext4-formatted USB2.0:

DEBUG> boot -zimg flash1.PLATFORM.PING 'rootwait rw ip=:::::eth0:dhcp:: root=/dev/sda1'

Thanks,
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