Configure Intel Network Cards with BootUtil Tool on Cisco UCS C240 M5

Contents

Introduction

This document describes the procedure to use the Intel BootUtil tool in order to configure Intel network cards such as x710 on Cisco UCS C240 M5 series servers. The motive of this article is to avoid the physical access & bootable USB drive requirements to use Intel BootUtility in order to configure the adapters.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- EFI shell on Cisco UCS Server
- UCS-C Network boot

Components Used

The information in this document is documented based on these hardware and software versions:

- UCS C240 M5 server
- Intel NIC x710 DA2 and DA4

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Configure

Important Links

1. bootutil.txt
https://downloadmirror.intel.com/19186/eng/bootutil.txt

2. Upgrade, Enable, or Disable Flash with the Intel® Ethernet Flash Firmware Utility, Guide:
https://www.intel.in/content/www/in/en/support/articles/000005790/software/manageability-products.html

3. Currently available download:
https://downloadcenter.intel.com/download/19186?_ga=2.121336584.1073827514.1518177765-1043234715.1518177765

Step 1.

- Download the **PREBOOT.exe file** from Link 3.
- Install the **.exe** file in any windows computer or extract it.
- In the installed folder, for example, C:\Intel22.10\APPS.
- Copy the folder **BootUtil** to desktop or anywhere.
- In Cisco UCS KVM, navigate to **Virtual Media > Create Image > Create Image from folder**.
- Source Folder: Select copied **BootUtil** folder.
- New image file name will automatically populate with .img extension.
- Click **Create Image** as shown in the image.
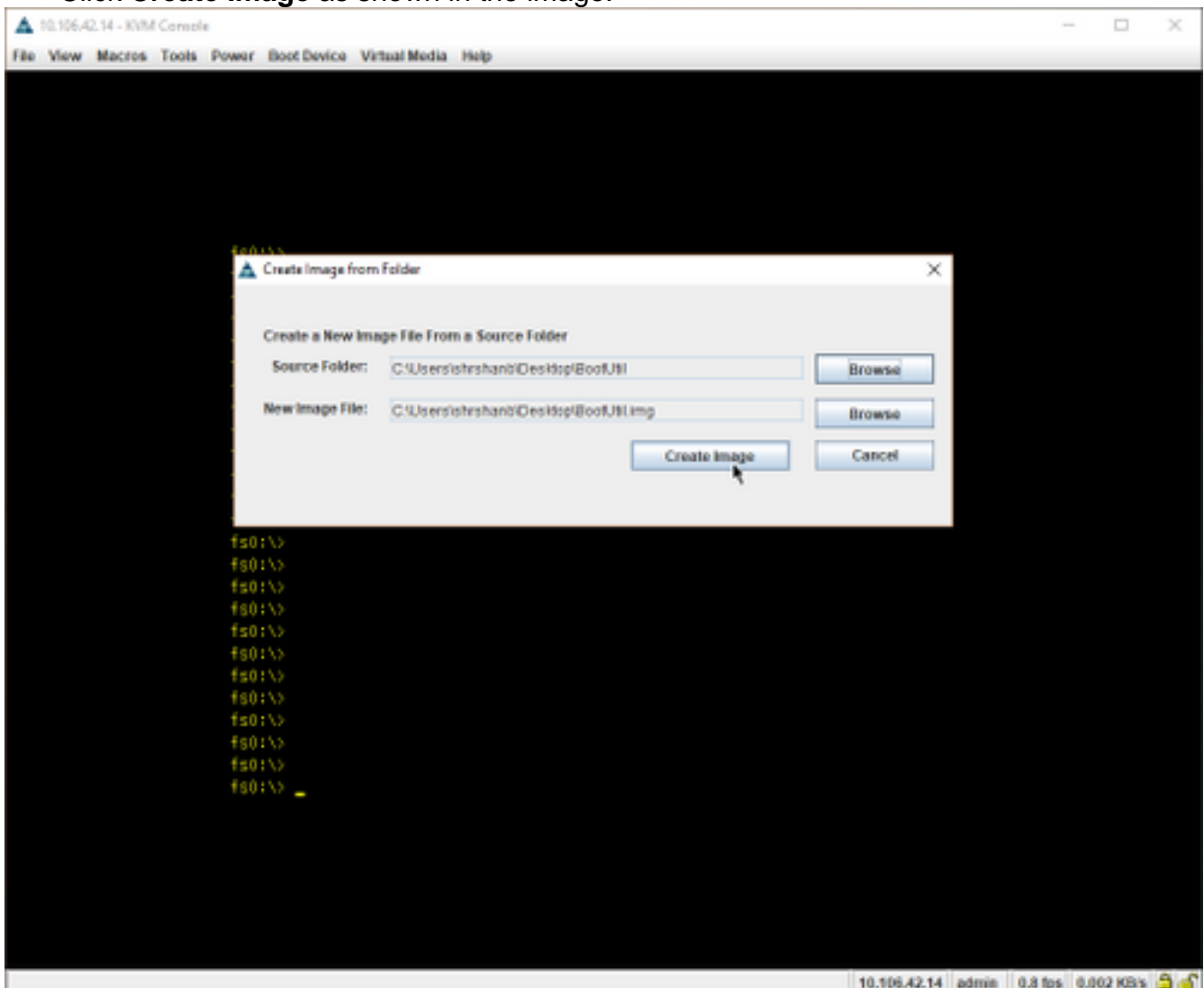
Step 2.

- Map the image. Navigate to V**irtual Media > Map Removable Disk...** as shown in the images.
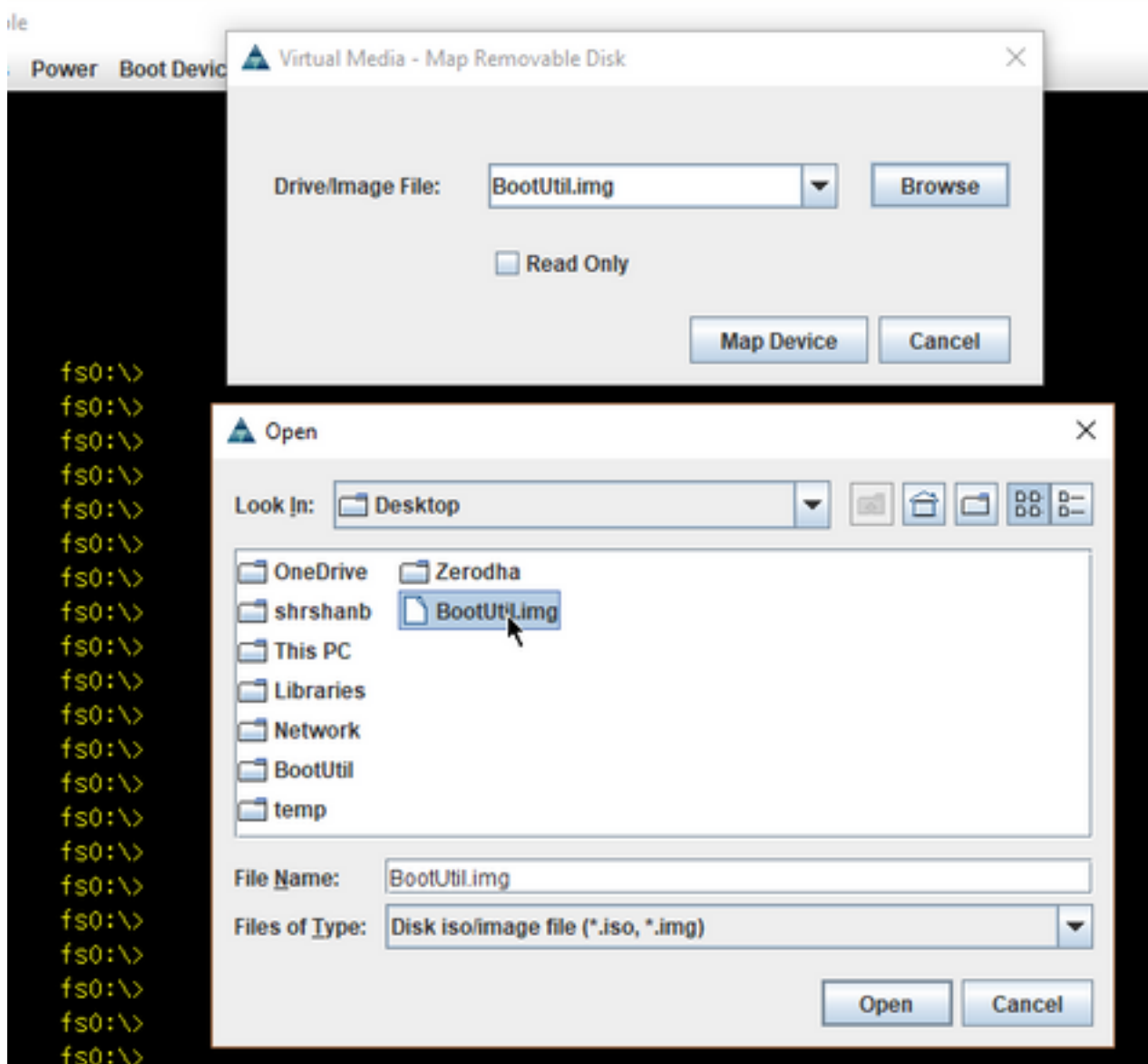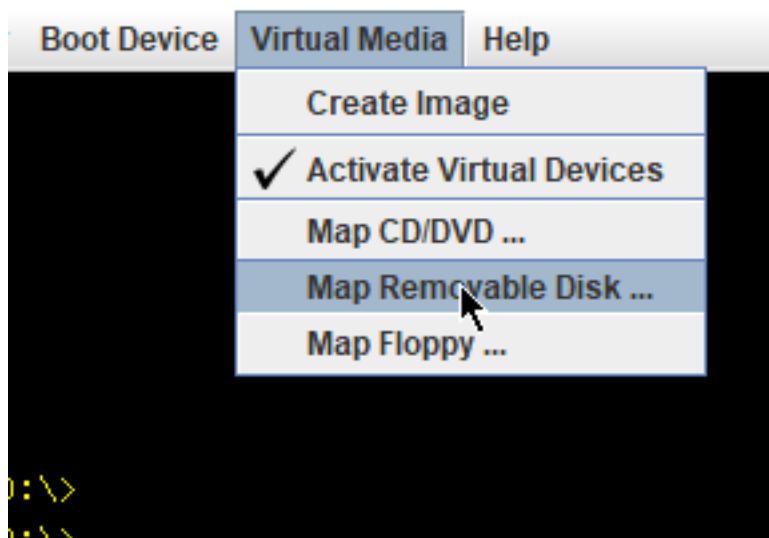
- Boot the server into **UEFI Shell** as shown in the image.

- Either run map –r in order to refresh the mounted devices to shell or find it manually. (You might need to reboot the host and boot into UEFI again.)

Step 3.

- Enter to the file system and perform these steps:

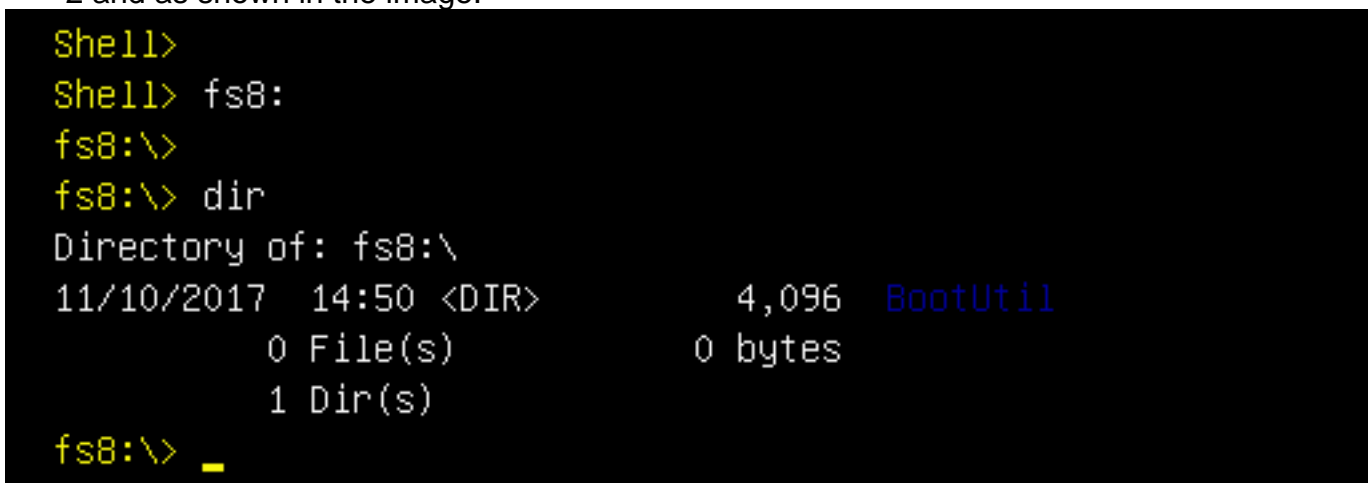```
shell > fs0: or any fs<number>:
```

```
fs0:\> dir
```

- This must show us the folder **BootUtil**.

```
fs0:\> cd BootUtil
```

```
fs0:\BootUtil> EFIx64\BOOTUTIL64E.EFI
```

- You can list the NIC card and ports, you can also see much information, review web link 1 and 2 and as shown in the image.

```
Shell> fs8:
fs8:\>
fs8:\> dir
Directory of: fs8:\
11/10/2017  14:50 <DIR>         4,096  BootUtil
         0 File(s)          0 bytes
         1 Dir(s)
fs8:\> cd BootUtil
fs8:\BootUtil\>
fs8:\BootUtil\> EFIx64\BOOTUTIL64E.EFI

Intel(R) Ethernet Flash Firmware Utility
BootUtil version 1.6.57.0
Copyright (C) 2003-2017 Intel Corporation

Type BootUtil -? for help

Port Network Address Location Series  WOL Flash Firmware                     Version
==== =============== ======== ======= === =========================== =======
   1   003A7DD38874    23:00.0 Gigabit YES UEFI,CLP,PXE Enabled,iSCSI    1.5.81
   2   003A7DD38875    23:00.1 Gigabit YES UEFI,CLP,PXE Enabled,iSCSI    1.5.81
fs8:\BootUtil\> _
```

Now, you can configure the NIC ports as per our requirement.

Example

This section is subjected to NIC cards availability in the lab, a screenshot is here from the testing/QA team as shown in the image.

The command used in this screenshot is in order to make port-1 on NIC card to be PXE Enabled:

```
fs6:\BootUtil\EFIx64\> bootutil64e.efi -nic=1 bootenable=pxe
```

```
FS6:\BootUtil\EFIx64\> BOOTUTIL64E.EFI

Intel(R) Ethernet Flash Firmware Utility
BootUtil version 1.6.57.0
Copyright (C) 2003-2017 Intel Corporation

Type BootUtil -? for help

Port Network Address Location Series  WOL Flash Firmware                      Version
==== =============== ======== ======= === ============================== =======
  1   3CFDFEB65BC8    175:00.0 40GbE   N/A UEFI,CLP,PXE,iSCSI              -------
  2   3CFDFEB65BC9    175:00.1 40GbE   N/A UEFI,CLP,PXE,iSCSI              -------
  3   3CFDFEB65BCA    175:00.2 40GbE   N/A UEFI,CLP,PXE,iSCSI              -------
  4   3CFDFEB65BCB    175:00.3 40GbE   N/A UEFI,CLP,PXE,iSCSI              -------
FS6:\BootUtil\EFIx64\> bootutil64e.efi -nic=1 ·bootenable=pxe

Intel(R) Ethernet Flash Firmware Utility
BootUtil version 1.6.57.0
Copyright (C) 2003-2017 Intel Corporation

Port Network Address Location Series  WOL Flash Firmware                      Version
==== =============== ======== ======= === ============================== =======
  1   3CFDFEB65BC8    175:00.0 40GbE   N/A UEFI,CLP,PXE Enabled,iSCSI     1.0.47
  2   3CFDFEB65BC9    175:00.1 40GbE   N/A UEFI,CLP,PXE,iSCSI             -------
  3   3CFDFEB65BCA    175:00.2 40GbE   N/A UEFI,CLP,PXE,iSCSI             -------
  4   3CFDFEB65BCB    175:00.3 40GbE   N/A UEFI,CLP,PXE,iSCSI             -------
FS6:\BootUtil\EFIx64\> _
```

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.