Using TFTP Server in windows

- Install Tfptd32/Tftpd64 in Windows PC. For Windows 32 bit: <u>http://tftpd32.jounin.net/download/Tftpd32_SE-4.50-setup.exe</u> For Windows 64 bit: <u>http://tftpd32.jounin.net/download/Tftpd64_SE-4.50-setup.exe</u>
- 2. Once the Tftpd32 program is open, click on Settings button.

	C:\images\tftpboot	:	 <u>B</u>rowse 	
erver interfaces	127.0.0.1	Software L	Show Dir	
Tftp Server Log	g viewer			
peer	file	start time	progress	

3. Put a check mark only to TFTP Server option. Remove checkmark from all other options.

Tftpd32: Settings					23
GLOBAL TFTP C	HCP SY	rslog			
Charles in the					
TETP Server					
TFTP Client					
SNTP server					
Syslog Server					
DHCP Server					
DNS Server					
Enable IPv6					
ок	<u>D</u> efault		<u>H</u> elp	Cancel	

- Create a TFTP Directory in your computer and copy the files which you want to transfer to board or any Other PC. This TFTP directory is the Base directory for your TFTP server. (IN My PC C:\images\tftpboot is Base Directory).
- 5. Click on TFTP tab, the window will look as shown below.

Pasa Diractoru		
C:\images\tftpb	oot	Browse
TFTP Securityー C None G Standard C High C Read Only	TFTP configuration Timeout (seconds) Max Retransmit Tftp port local ports pool	3 6 69
 PXE Compai PXE Compai Show Progre Translate Ur Bind TFTP to Allow "\'As v Use anticipa Hide Window Create md5 	ibility iss bar in file names o this address 192.168.1.81 rirtual root tion window of 0 Byte wat startup it'' files iles	1

- 6. Click on Browse button to specify Base Directory. You need to specify the Base Directory of the TFTP Server. Select TFTP folder in your laptop/PC as the Base Directory. Remember that all the files transferred using TFTP Server will be placed in this folder.
- Ex: place the 'root.ubi' in this folder suppose if it need to copy from PC to NAND flash of board
- 7. Under TFTP Security, select the option None.
- 8. Here comes a very important step. Now we are going to bind an IP address to the TFTP Server. To set the IP address for TFTP server, please select the option Bind TFTP to this address then select the IP address available for you. I select 192.168.1.81 here as it was the only option

available to me. You may get a different IP address, please use the IP address available in the drop down window.

Base Directory		
C:\images\tftpboot	3	Browse
FTP Security • None C Standard	TFTP configuration Timeout (seconds)	3
C High C Read Only	Max Hettansmit Tftp port local ports pool	69
 PXE Compatibility Show Progress b Translate Unix fill Bind TFTP to thi Allow '\' As virtual Use anticipation Hide Window at Create "dir.txt" fill Create md5 files 	y bar s address 192.168.1.81 al root window of 0 Bytes startup les	

9. Select all options which are selected in below snap.

10. Once you have performed all the above steps, Click on OK. Now you will receive a window asking to restart Tftpd32 to apply the new settings. Click on OK.



- 11. Note: Please remember that the Tftpd32 application should be running when any TFTP related job is done. If you close this application, TFTP server will be terminated. If you closed automatically please Reopen Tftpd32 application.
- 12. Once the programs opens, just ensure that you selected same IP address for Server Interface.

Current Directo	ory [C:\imag	ges\tftpboot		-	Browse
Server interfac	:e [192.16	8.1.81		• 9	Show Di
Tftp Server	Tftp	Client	DHCP server S	yslog server	Log viewe	er
peer			file	start time	progres	s

13. Then Click on ShowDir, It will show your files (Which you want to transfer). If the file is not exist then click on Explorer button then copy that from your PC to TFTP Base directory.

oot.tgz	4/19/201423869684
oot.ubi	4/19/201433947648

14. After successfully completed the above all steps. Then go to BOARD Terminal and give below command to get the file by using TFTP Server.

Note: Ethernet Cable should connect to board and host PC.

15. To copy images to NAND being in bootloader follow the steps

while booting board press 'enter' and stop at barebox prompt as follows

<pre>Board: Phytec phyBOARD-WEGA-AM335x comap-hsmmc omap4-hsmmc0: registered as omap4-hsmmc0 mci0: registered disk0 cpsw cpsw0: detected phy mask 0x3 mdio_bus: milbus0: probed eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI flash detected nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	P COM4 - PuTTY			23	J
Board: Phytec phyBOARD-WEGA-AM335x omap-hsmmc omap4-hsmmc0: registered as omap4-hsmmc0 mci0: registered disk0 cpsw cpsw0: detected phy mask 0x3 mdio_bus: milbus0: probed eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI param page 0 valid nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/				-]
<pre>bomap-hsmmc omap4-hsmmc0: registered as omap4-hsmmc0 mci0: registered disk0 cppw cpsw0: detected phy mask 0x3 mdio_bus: mlibus0: probed eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI param page 0 valid nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	Board: Phytec phyBOARD-WEGA-AM335x				
<pre>cpsw cpsw0: detected phy mask 0x3 mdio_bus: milbus0: probed eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI param page 0 valid nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	omap-hsmmc omap4-hsmmc0: registered as omap4-hsmmc0 mci0: registered disk0				
<pre>mdio_bus: miibus0: probed eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI param page 0 valid nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	cpsw cpsw0: detected phy mask 0x3				
<pre>eth0: got preset MAC address: D0:FF:50:E6:71:1E i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth hand: ONFI param page 0 valid hand: ONFI flash detected hand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	mdio_bus: miibus0: probed				
<pre>i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz probe buswidth nand: ONFI param page 0 valid nand: ONFI flash detected nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	eth0: got preset MAC address: D0:FF:50:E6:71:1E				
<pre>probe buswidth hand: ONFI param page 0 valid hand: ONFI flash detected hand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	i2c-omap i2c-am33xx0: bus 0 rev0.11 at 100 kHz				
<pre>hand: ONFI param page 0 valid hand: ONFI flash detected hand: ONFI flash detected hand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	probe buswidth				
<pre>hand: ONFI flash detected hand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	nand: ONFI param page 0 valid				ii.
<pre>hand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F1G08ABADAH4), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	nand: ONFI flash detected				
<pre>), 128MiB, page size: 2048, OOB size: 64 malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>	nand: NAND device: Manufacturer ID: 0x2c, Chip ID: 0xf1 (Micron MT29F)	G08.	ABADA	H4	
<pre>malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB) running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/</pre>), 128MiB, page size: 2048, OOB size: 64				
running /env/bin/init Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/	malloc space: 0x83ff4000 -> 0x87ff3fff (size 64 MiB)				
Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/	running /env/bin/init				
Hit m for menu or any other key to stop autoboot: 3 type exit to get to the menu barebox@Phytec phyBOARD-WEGA-AM335x:/ barebox@Phytec phyBOARD-WEGA-AM335x:/				=	
type exit to get to the menu parebox@Phytec phyBOARD-WEGA-AM335x:/ parebox@Phytec phyBOARD-WEGA-AM335x:/	Hit m for menu or any other key to stop autoboot: 3				
parebox@Phytec phyBOARD-WEGA-AM335x:/ parebox@Phytec phyBOARD-WEGA-AM335x:/	type exit to get to the menu				
parebox@Phytec phyBOARD-WEGA-AM335x:/	barebox@Phytec phyBOARD-WEGA-AM335x:/				
	barebox@Phytec phyBOARD-WEGA-AM335x:/				
barebox@Phytec phyBOARD-WEGA-AM335x:/	barebox@Phytec phyBOARD-WEGA-AM335x:/				
carebox@Phytec phyBOARD-WEGA-AM335x:/	barebox@Phytec phyBOARD-WEGA-AM335x:/			-	

- 16. Enter the commands as
 - → 'ifup eth0' for enabling the port eth0
 - → 'devinfo eth0'- which shows the device information



NOTE: Make sure that 'server ip' which is your host ip should be same as <192.168.1.81>

- 17. Now enter
 - ➔ tftp root.ubi





This copies the image 'root.ubi' from the 'tftp server' to RAM memory of the board

18. you can see by giving 'ls' command



- 19. Now to copy the same 'root.ubi' to NAND flash, first erase that particular partition by entering
 - → erase /dev/nand0.root.bb

Following command copies the file from RAM to NAND in that particular partition

→ cp root.ubi /dev/nand0.root.bb

barebox@Phytec barebox@Phytec	phyBOARD phyBOARD	-WEGA-AM335x -WEGA-AM335x	:/ :/ ls			
		dev	env	mnt	root.ubi	
tmp						
barebox@Phytec	phyBOARD	WEGA-AM335x	:/			
barebox@Phytec	phyBOARD	WEGA-AM335x	:/			
barebox@Phytec	phyBOARD-	WEGA-AM335x	:/ erase /d	ev/nand0.	root.bb	=
barebox@Phytec	phyBOARD	WEGA-AM335x	:/ cp root.	ubi /dev/	nand0.root.bb	
barebox@Phytec	phyBOARD	-WEGA-AM335x	:/			*

20. Now reset the board, so that it will take the new root file system which was copied.

References Links:

- 1. <u>http://tftpd32.jounin.net/tftpd32_download.html</u>
- 2. <u>http://www.tricksguide.com/how-to-setup-a-tftp-server-tftpd32-windows.html</u>