

CCBoot

Diskless Boot WinXP/Win2003/Vista/Win2008

with iSCSI

www.ccboot.com

Quick Start

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2 System Requirements

- Server Requirements

1. Windows Server 2000 / 2003 / 2008, Windows 2000 Professional or Windows XP Professional
2. Latest service packs should be installed on the server

- Client Requirements

1. PXE 2.x compliant network adapter
2. Windows XP, Windows Server 2003 32-bit / x64, Standard or Enterprise, R2, or Windows Storage Server (Service Pack 1), or Windows Server 2008

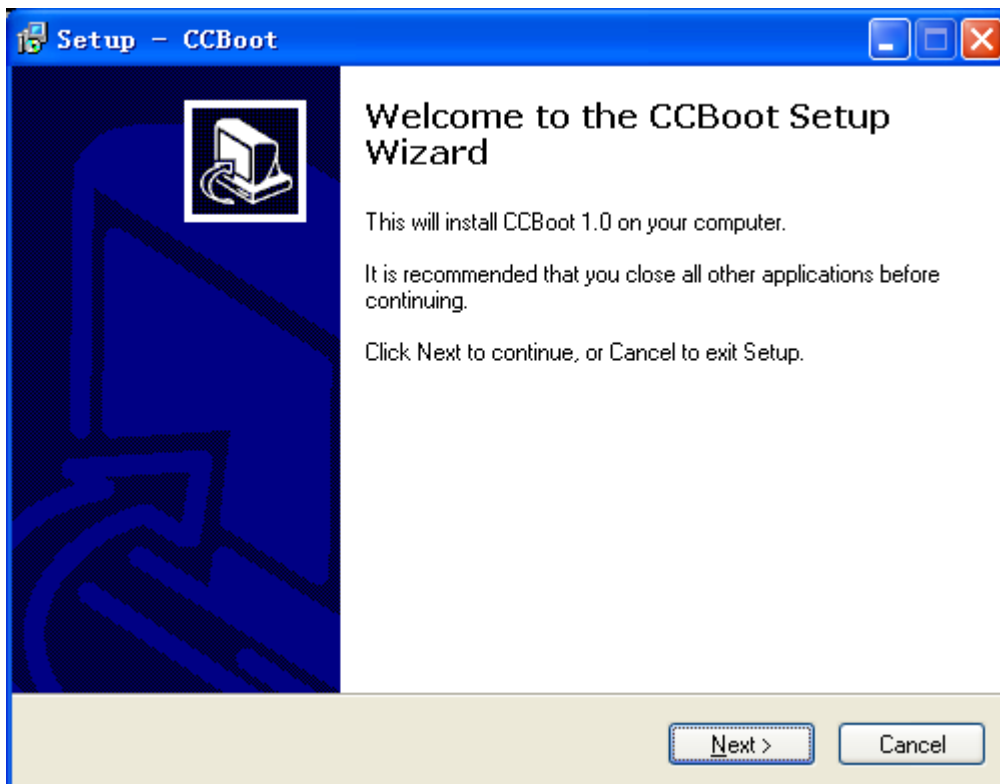
3 Quick Start

3.1 Install CCBoot

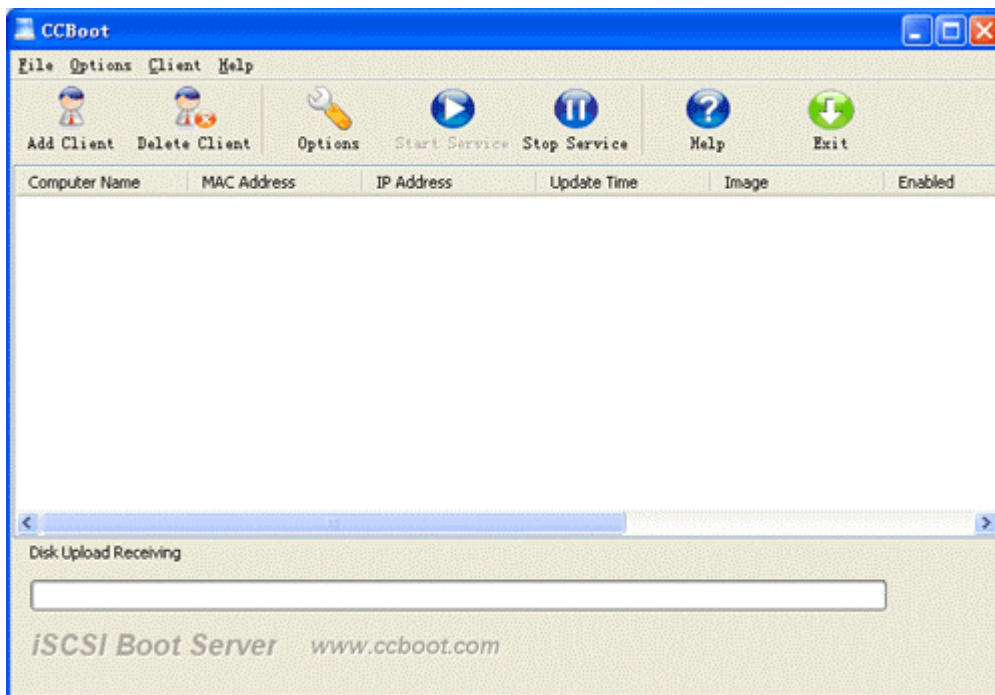
Download CCBoot installation package from:

<http://www.ccboot.com/download/ccbootsetup.exe> (the trail version can be used for 15 days).

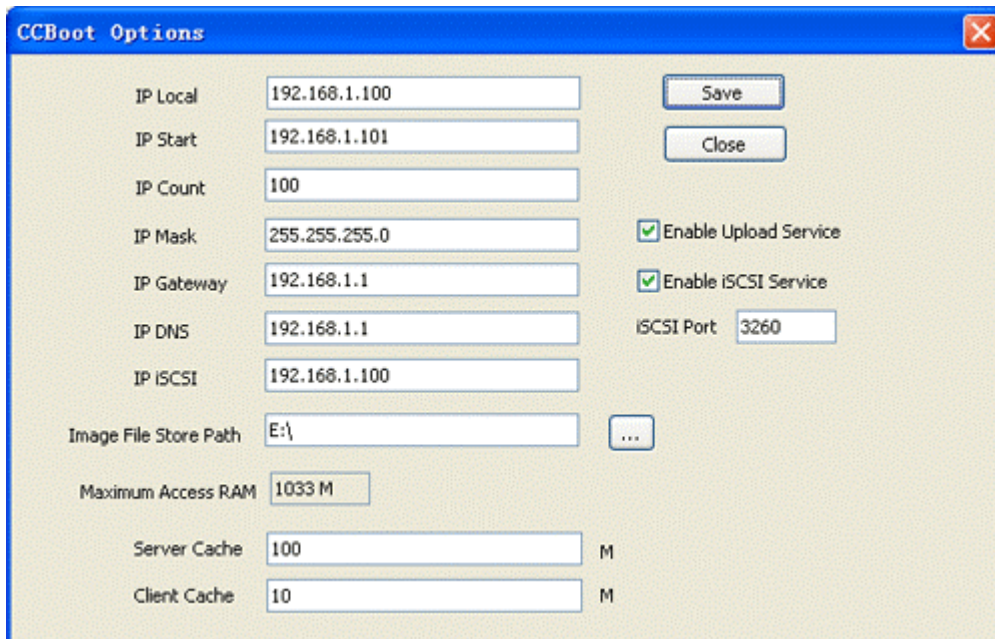
Launch ccbootsetup.exe on the server and keep press next button to end.



3.2 Launch CCBoot



Click button “Options”:



Suppose the server IP is 192.168.1.100.

Set IP Local: 192.168.1.100, IP Start: 192.168.1.101, IP Count: 100, IP Mask: 255.255.255.0, IP Gateway: 192.168.1.1, IP DNS: 192.168.1.1, IP iSCSI: 192.168.1.100, Image File Store Path: E:\.

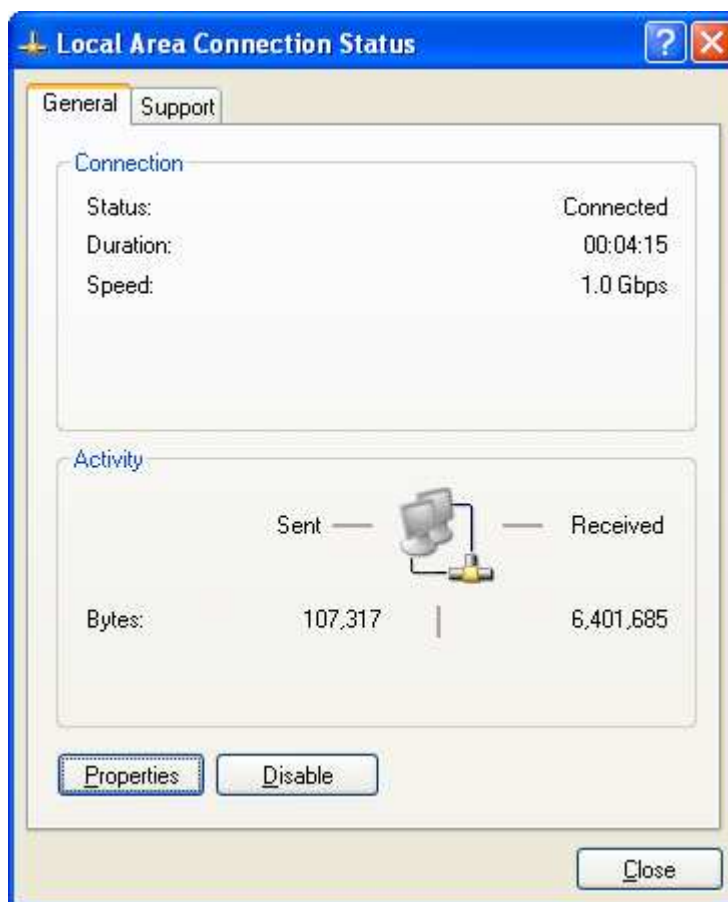
Notes: the Image File Store Path should have enough free disk space. Client will upload the

boot image to this directory.

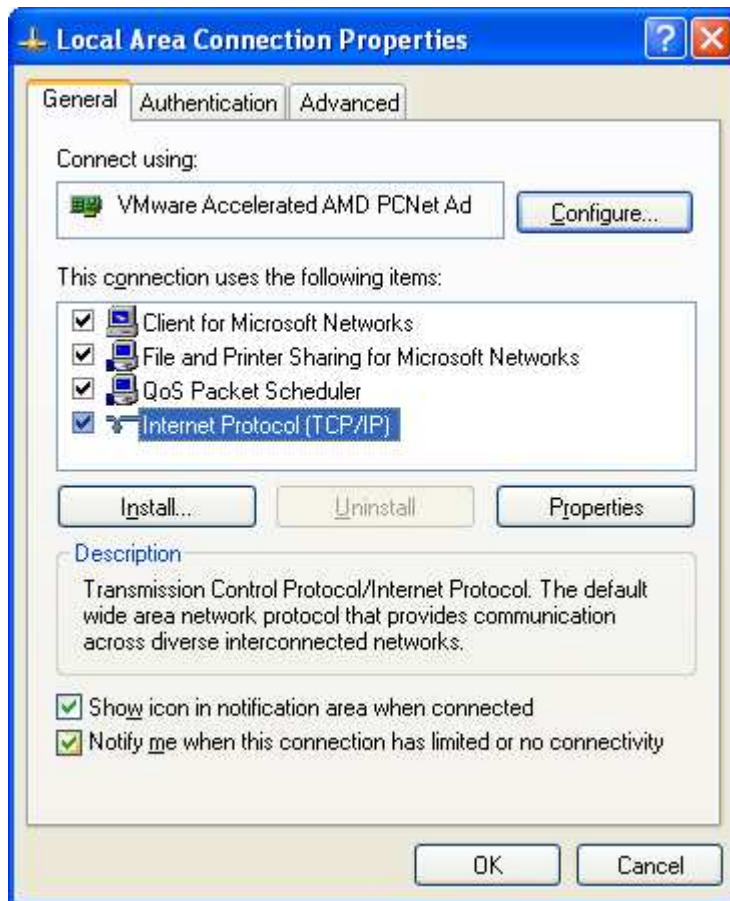
Press “Save” button.

3.3 Create Boot Image

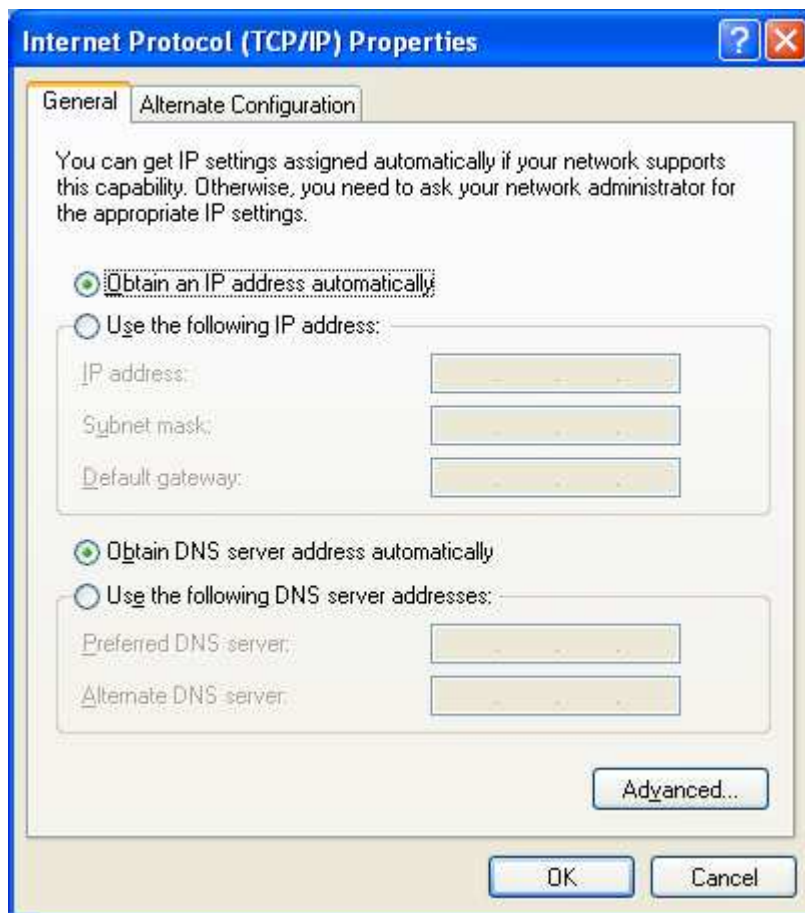
1. Choose another PC as client prepare to install Windows system. (WinXP, 2003, Vista, Windows 7 or Win2008).
2. Format the hard disk.
3. Install Windows.
4. Install the latest package of Windows (WinXP SP2, 2003 SP1, Vista SP1).
5. Open the local area connection network property



Click “Properties” button.



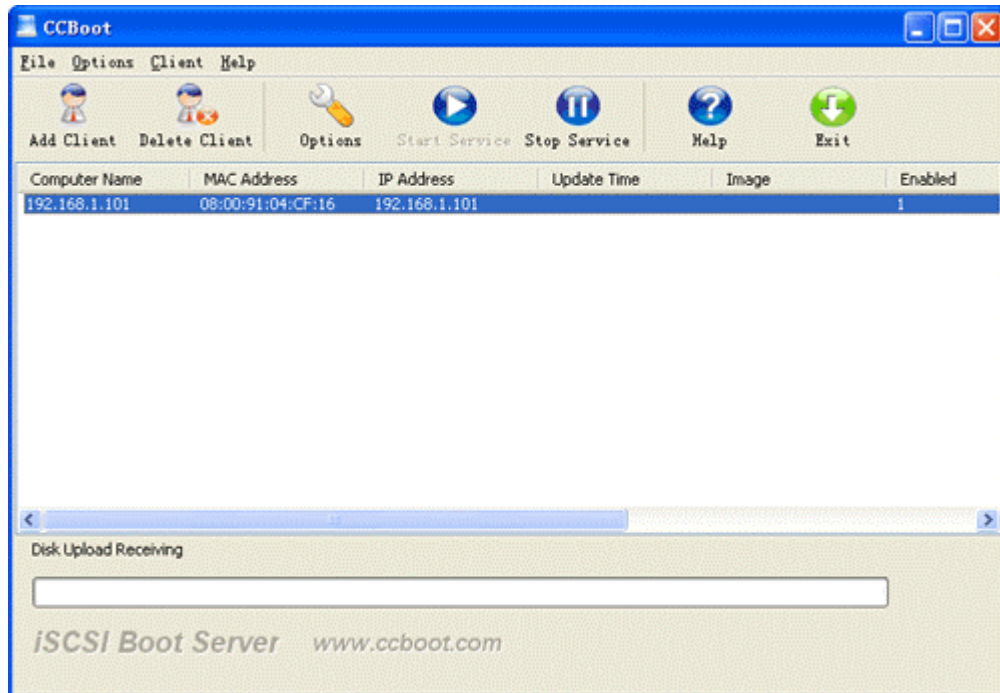
Select "Internet Protocol (TCP/IP)" and click "Properties" button.



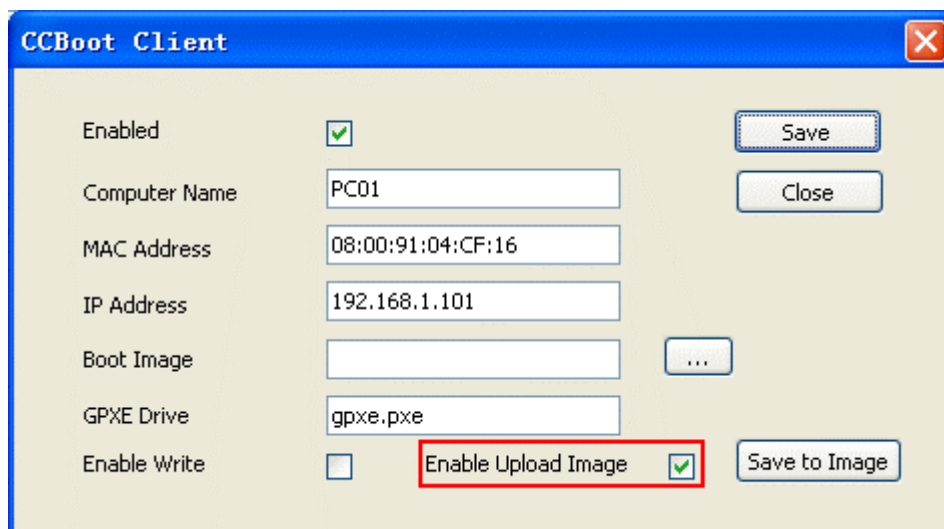
Select “Obtain an IP address automatically” and “Obtain DNS server address automatically”, click “OK”.

6. Download iSCSI boot client from: <http://www.ccboot.com/download/iscsibootclient.exe>.
If your system is 64-bit, please download it from:
<http://www.ccboot.com/download/iscsibootclient64.exe>.
7. Install iSCSI boot client with all default settings.
8. If the system is Windows XP, you need to install a package called "sanbootconf" which configures your XP installation to boot via iSCSI. You can download “sanbootconf” from <http://www.ccboot.com/download/sanbootconf.zip>, unzip scanbootconf.zip to C:\ and run setup.bat.
9. Run `iscsibcg /verify /fix` in cmd window. (Skip this step if the system is WinXP)
10. Configure the `iscsibcg` utility to run automatically when a computer shuts down (Skip this step if the system is WinXP)
 - a) Click Start, click Run, type `gpedit.msc`, and then click OK.
 - b) In the Group Policy window, expand Computer Configuration.
 - c) Expand Windows Settings.
 - d) Expand Scripts (Startup/Shutdown).
 - e) In the Scripts (Startup/Shutdown) pane, double-click Shutdown.
 - f) In the Shutdown Properties dialog box, click Add, locate the `iscsibcg` utility in the Script Name field (i.e. “C:\WINDOWS\system32\iscsibcg.exe”), and then type `/verify /fix` in the Script Parameters field.

11. Make sure that there are no other DHCP servers on the LAN. Now, go to server and you will find a new list item in CCBoot.

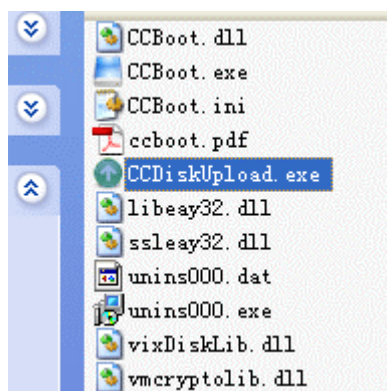


Double click this item:

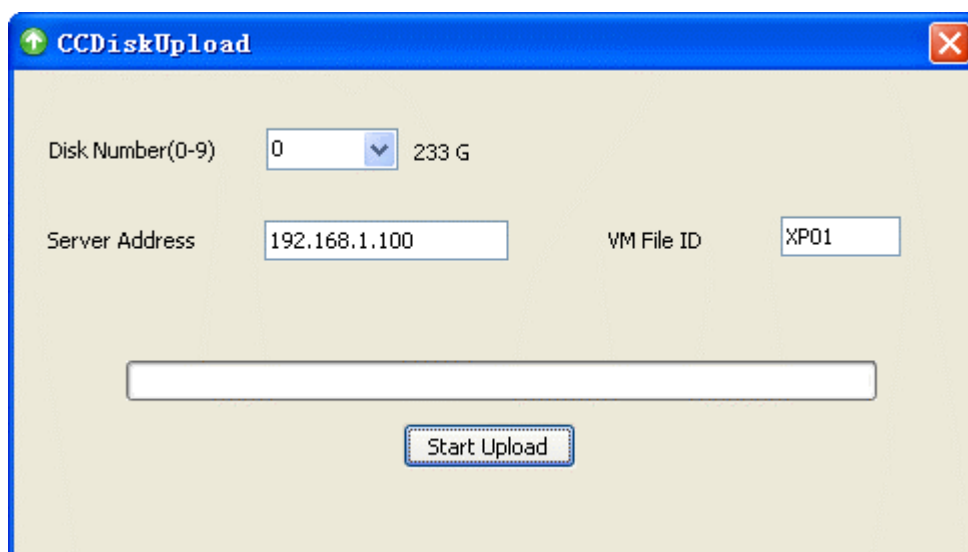


Select "Enable Upload Image" and you can change the "Computer Name" as you like. Click "Save" button to save the client's properties.

12. Open "C:\CCBoot" and you will find a file named "CCDiskUpload.exe". Copy this file to the client.



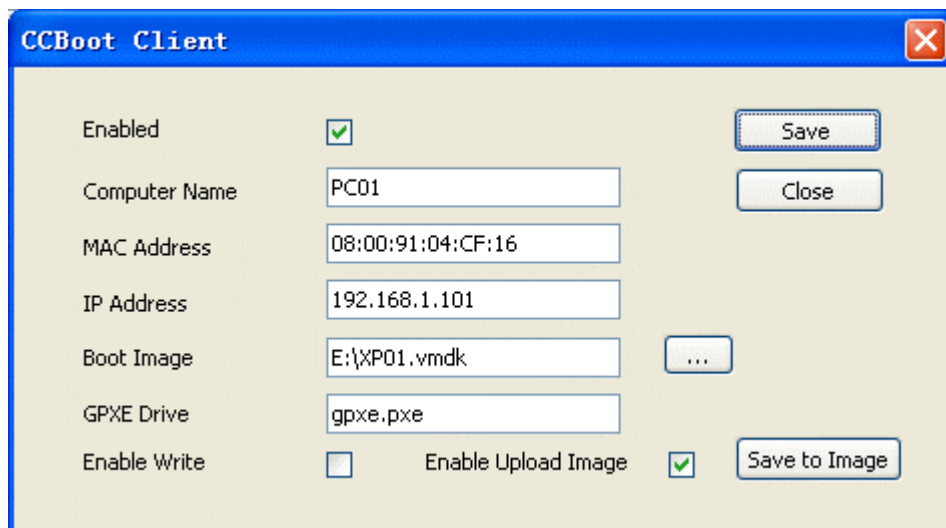
13. Turn back to client. Launch CCDiskUpload.exe.



Select Disk Number: 0, Server Address: 192.168.1.100, VM File ID: XP01, click “Start Upload” button. Now CCDiskUpload will create boot image and upload it to the server. After finished, CCDiskUpload will popup a dialog box and shows “Finished”. CCBoot will create a VMDK file in the “Image File Store Path”. “VM File ID” is the prefix of the VMDK file. In this case, CCBoot will create a file named “XP01.vmdk” in “E:\”.

3.4 Set Diskless Boot Property

At server, select the list item in CCBoot and double click it.



Set Boot Image: E:\XP01.vmdk.

3.5 Diskless Boot Client

Now, you can set boot from network in the client's BIOS and boot Windows with iSCSI even plug the hard disk.

After finished the configuration, you will see the following steps in the screen.

1) PXE DHCP

```
Network boot from VMware VMXNET
Copyright (C) 2003-2005 VMware, Inc.
Copyright (C) 1997-2000 Intel Corporation

CLIENT MAC ADDR: 00 0C 29 01 F9 A0 GUID: 564DE121-42D8-A0EA-45CB-7453FB01F9A0
DHCP.._
```

2) gPXE DHCP

```
Network boot from VMware VMXNET
Copyright (C) 2003-2005 VMware, Inc.
Copyright (C) 1997-2000 Intel Corporation

CLIENT MAC ADDR: 00 0C 29 01 F9 A0 GUID: 564DE121-42D8-A0EA-45CB-7453FB01F9A0
CLIENT IP: 192.168.1.101 MASK: 255.255.255.0 DHCP IP: 192.168.1.201
GATEWAY IP: 192.168.1.1
PXE->EB: PXENU* at 9E9F:00D0, !PXE at 9E9F:0070, entry point at 9E9F:0106
        UNDI code segment 9E9F:0A9E, data segment 9C3F:2600 (624-638kB)
        UNDI device is PCI 00:11.0
        638kB free base memory after PXE unload

gPXE 0.9.3+ -- Open Source Boot Firmware -- http://etherboot.org
Features: HTTP DNS TFTP iSCSI AoE bzlImage ELF Multiboot PXE PXEXT

net0: 00:0c:29:01:f9:a0 on UNDI-PCI00:11.0 (open)
  [Link:up, TX:0 TXE:0 RX:0 RXE:0]
Waiting for link-up on net0... ok
DHCP (net0 00:0c:29:01:f9:a0).. ok
net0: 192.168.1.101/255.255.255.0 gw 192.168.1.1
Booting from root path "iscsi:192.168.1.201:::"
iSCSI booting from iscsi:192.168.1.201:::
```

3) Win XP boot (if the boot image is Win XP)



4) Win 2003 boot (if the boot image is Win 2003)



Why I cannot boot Windows from CCBoot?

1. Please make sure that there is only one DHCP server on the LAN. Diskless will broadcast the DHCP request on the LAN and it will use the first DHCP response. If the LAN has multiple DHCP servers, there would be confusion.
2. Maybe the default gpxe drive cannot support your clients' NIC.
3. If you know your NIC type clear, please go to <http://rom-o-matic.net/gpxe/gpxe-git/gpxe.git/contrib/rom-o-matic/> and choose your clients' NIC type, select output format as "PXE bootstrap loader format ROM Image (.pxe) and click the "Get ROM" button. Save the download file as gpxe.pxe. Please copy the gpxe.pxe to your ccboot installation folder.
4. If you do not know your NIC type, you can found out it in the screen when you boot with CCBoot. Here is an example -

```
CLIENT MAC ADDR: 00 16 E6 6B E1 EE GUID: 000...  
...  
634KB free base memory after PXE unload  
r8169.c: Found r8169-8168B, Vendor=10EC Device=8169  
Invalid PCI region size(s), aborting  
r8169-8168b: 1000Mbps Full-duplex operation, TBI Link OK!  
WARNING: Using legacy NIC wrapper on 04:ca:04:4b:1c:4b
```

In this case, r8169-8168b is your NIC type. Please note `r8169.c: Found r8169-8168B, Vendor=10EC Device=8169`. That's to say, gPXE has found your NIC, but use a wrong device. You can go to <http://rom-o-matic.net/gpxe/gpxe-git/gpxe.git/contrib/rom-o-matic/> and choose a similar drive. There are two drives: r8169:10ec8168 – [10ec,8168] and r8169:10ec8169 – [10ec,8169] similar to r8169-8168b. In this case, r8169:10ec8168 – [10ec,8168] is the correct drive. Choose this drive as NIC type, select output format as "PXE bootstrap loader format ROM Image (.pxe) and click the "Get ROM" button. Save the download file as gpxe.pxe. Please copy the gpxe.pxe to your ccboot installation folder.

4 Contact



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