



About BootMania

BootMania is tool for NetBoot and NetInstall.

- What is NetBoot?

Using NetBoot, you can be booting OS from OS image file put on Mac that becomes a server via network.

- What is NetInstall?

Using NetInstall, you can be installing OS from the OS image file put on Mac that becomes a server via network.

OS supported by BootMania

BootMania supports the following OS.

NetBoot

- Mac OS 9.2
- Mac OS X (10.3/10.4)
- Darwin (7.X/8.X)
- OpenDarwin (7.X)
- Bootable Tool CD (Mac OS X 10.3/10.4) TechTool/Drive Genius etc.

- The image of Mac OS 9.2 cannot be made with BootMania.
- We are not checking all bootable CD tool. You need to check by yourself.

NetInstall

- Mac OS X (10.3/10.4)
- Darwin (7.X/8.X)
- OpenDarwin (7.X)
- Linux (Fedora/Debian/YellowDog/Ubuntu/OpenSUSE/CentOS)
- BSD (NetBSD/OpenBSD)

- The image of Linux and BSD becomes download from the Internet. The installation source after it boots it uses the Internet or the ISO image downloaded beforehand.

System Requirements

The following are necessary for NetBoot/NetInstall.

Network Environment

Network environment of 100Mb or more high-speed. Equipment to connect server such as switching hubs with Mac of client. The client side cannot use a wireless interface to do NetBoot. Client can be booting from built-in cable ether port.

NetBoot Server Mac

- OSX 10.4.7 or later (Tiger).
- 100Mb ethernet interface or more high-speed.
- Enough hard disk space to create NetBoot/NetInstall images.

Please install BootMania in Mac that becomes a NetBoot server.

Netboot Client Mac

Mac that becomes NetBoot client. Mac can be classified into two kinds of the following.

NetBoot1 Mac

- iBook (Clam-shell models/Part of before Dual USB)
- iMac (Tray-loading drives)
- Macintosh Server G3 (Blue and White)
- Power Macintosh G3 (Blue and White)
- Power Mac G4 (PCI Graphics)
- PowerBook G3 (Bronze Keyboard)

NetBoot2 Mac

- Later models from NetBoot1 Mac.

- Please update the firmware to the latest one. It is possible to download it on the webpage of the Apple Co..

Memory

- 64MB (Booting Mac OS 9/Linux/BSD)
- 128MB (Booting Mac OS X/Darwin/OpenDarwin)

DHCP Server

It is a server to allot IP-Address to each client automatically. When booting, the client needs the IP-Address allocation by DHCP. This function is installed in the equipment of the connection of the Internet such as ADSL modems usually. In the environment for which DHCP cannot be used, the DHCP function of BootMania can be used. When booting NetBoot1 Mac, the DHCP function of BootMania should be made effective.

NOTE:Please do not make the DHCP function effective without consulting the network administrator. There is a possibility that it causes the network trouble.

When Creating NetBoot Image

BootMania create the NetBoot image from OS installed on hard disk. The image cannot be made from startup disk and the network volume. A partition or a drive different from the startup disk is necessary. NetBoot image can be made by using the disk image made from the hard disk that can be booting.

When Creating NetInstall Image

OS installation Media CD/DVD or Disk Images. Details are as follows.

Mac OS X 10.3

Installation CD or Disk Image

Mac OS X 10.4

Installation CD/DVD or Disk Image.

Darwin 7.X/8.X and OpenDarwin 7.X

Installation CD or Disk Image

Linux/BSD

Installation ISO image is necessary when installing Linux/BSD by LAN environment.

- We verified operation about installation CD/DVD of Mac OSX package version.

Installation

Copy BootMania onto the Applications folder.



Uninstallation

- Put the BootMania in the trash.
- Put this folder in the trash.
"/Library/NetBoot" folder on startup disk
- And do empty trash.

About the limitation of the trial version

The trial version has following limitations.

- After service begins, service will be compulsorily ended in about seven minutes.
- When creating the boot image, compressed image files cannot be creating.

NOTE:

Please stop Mac of the client before service stops.

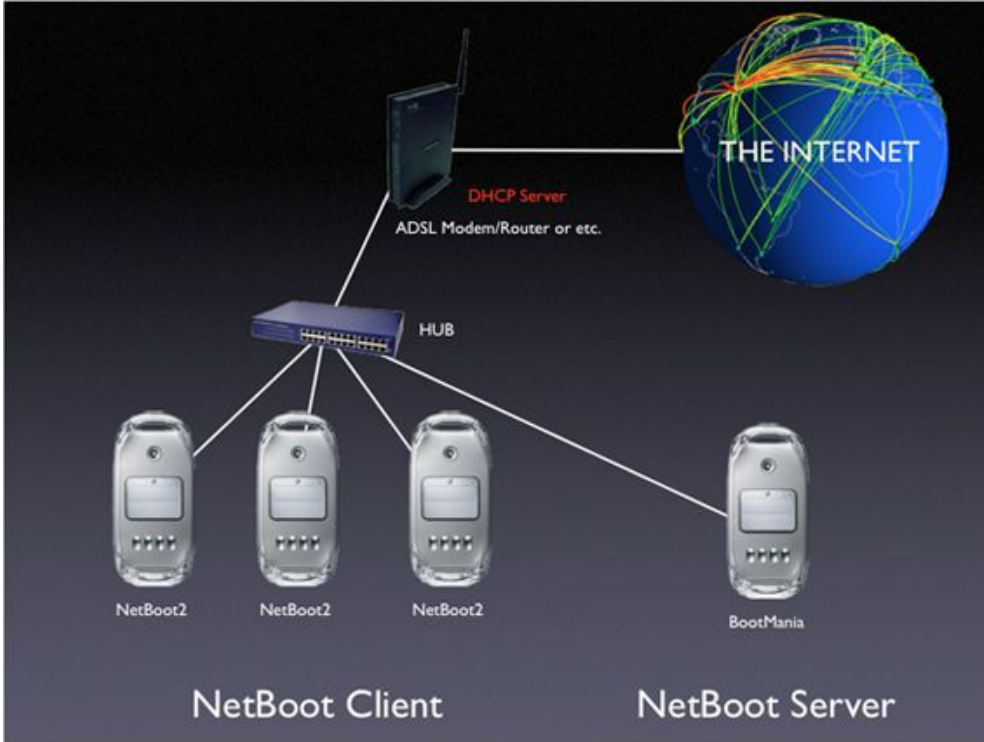
BootMania General Procedure

- Verifying Network Settings
- Executing BootMania
- Configuration
- Creating Image Files and Downloading Files
- Starting Service
- Booting Clients
- Clients operation situation and control
- Shutdown Clients
- Stopping Service
- Quitting BootMania

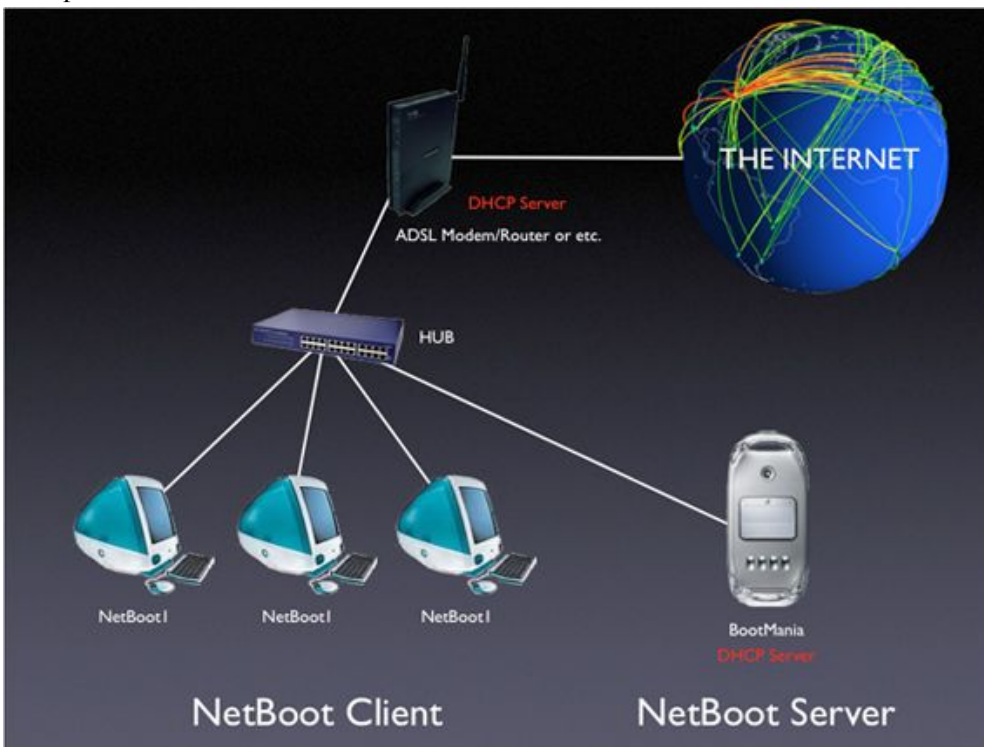
Verifying Network Settings

Image of network environment

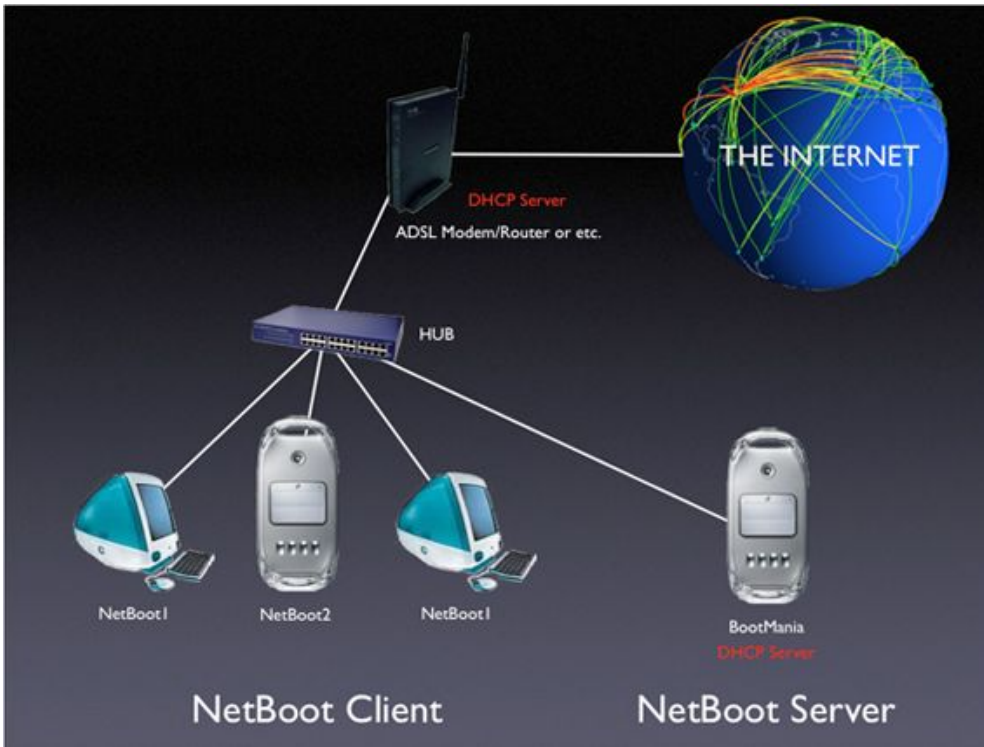
- Example #1 Existing DHCP server with NetBoot2 clients.



- Example #2 DHCP server on BootMania with NetBoot1 clients.

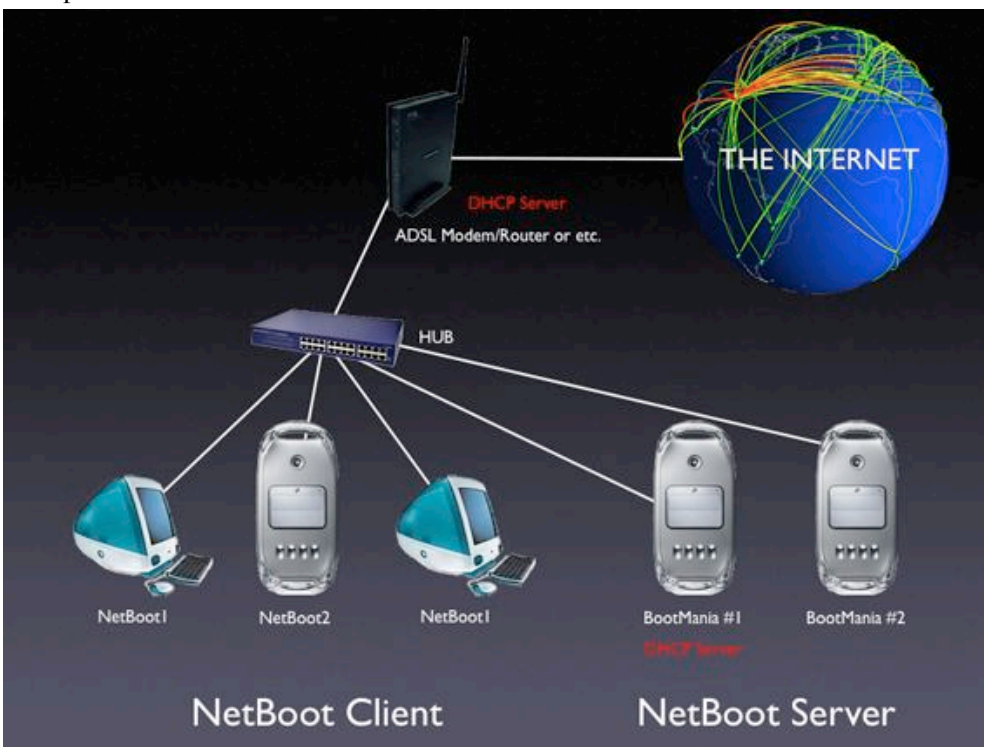


- Example #3 Two DHCP servers with NetBoot1/2 clients.



NOTE:DHCP IP-Address allocation range should set for it not to overlap.

- Example #4 Two BootMania with NetBoot1/2 clients.



Executing BootMania

Double click BootMania icon.

In first time executing, BootMania ask for your password.



Please select the PREFERENCES tab.

The screenshot shows the BootMania configuration window with the 'PREFERENCES' tab selected. The interface includes a 'START SERVICE' button, a status bar with 'CNF TFT NFS AFP BTP' indicators, and a 'QUIT' button. The 'PREFERENCES' tab is active, showing two main sections: 'DHCP' and 'SERVICE'. The 'DHCP' section has a checked 'Invoke DHCP Server' checkbox and fields for Subnet Name (BootMania), Network (192.168.1.0), IP Address (Start: 192.168.1.101, End: 192.168.1.199), Mask (255.255.255.0), Router (192.168.1.200), and Domain Name Server (192.168.0.1). The 'SERVICE' section has a dropdown for Network Interface (en0) with IP 192.168.1.201, Number of clients (4), Clients Name (NetBoot), checked 'Connection Sound' (BootMania), and checked 'Automatically delete shadow file.'. A 'DOWNLOAD' section at the bottom has a 'File transfer timeout' of 120 seconds.

• DHCP Section

Invoke DHCP Server

To invoke DHCP service, select this checkbox.

If you plan to use NetBoot1 clients in your network, should choose this option.

Subnet Name

It is "BootMania" fixation. It is not revokable.

Network

Set subnet address.

ex.

Range of IP addresses:192.168.1.1 - 192.168.1.254

Network:192.168.1.0.

IP Address(START/END)

Set range of IP addresses to be issued to DHCP clients.

ex.

Range of IP addresses:192.168.1.1 - 192.168.1.254

START:192.168.1.1

END:192.168.1.254

Mask

Set subnet mask.

ex.

Range of IP addresses:192.168.1.1 - 192.168.1.254

Mask:255.255.255.0

Router

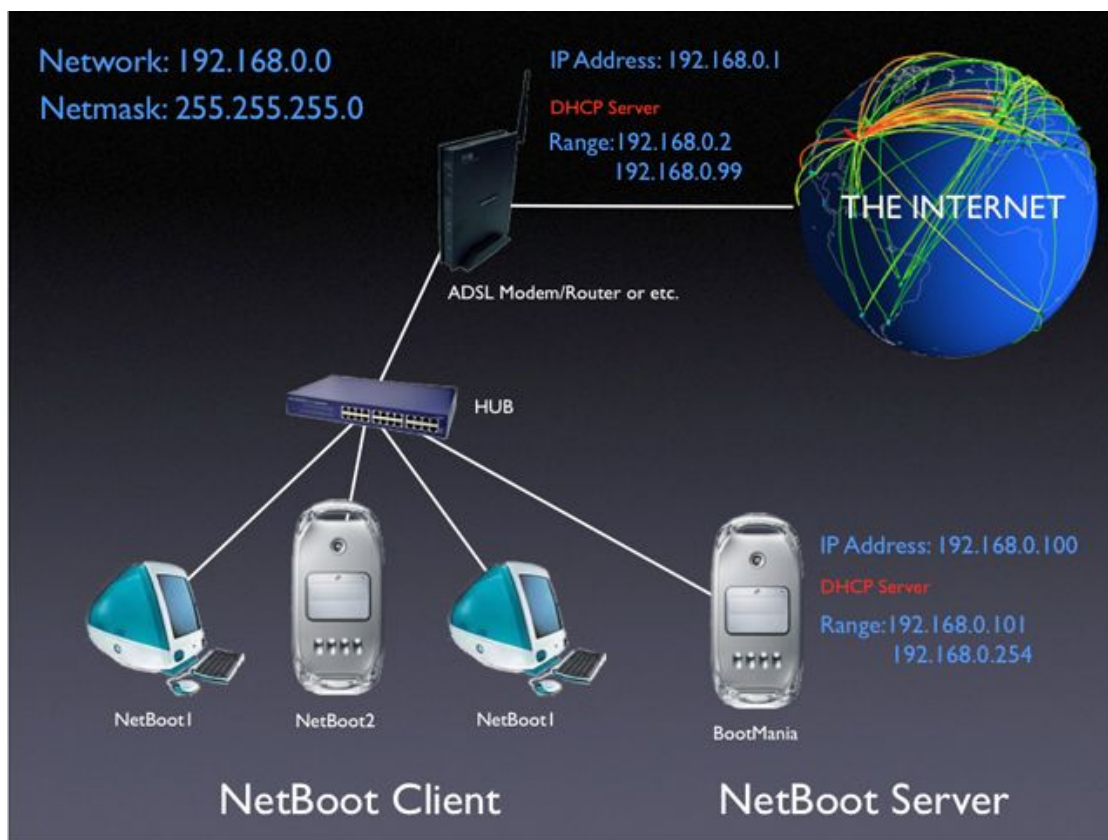
Default gateway IP address to be used by DHCP clients.

Please empty it when not using it.

Domain Name Server

Default DNS IP address to be used by DHCP clients.
Please empty it when not using it.

Example of configuring DHCP



Network	192.168.0.0
IP Address(START/END)	192.168.0.101-192.168.0.254
Mask	255.255.255.0
Router	192.168.0.1
Domain Name Server	192.168.0.1

• SERVICE Section

Network Interface

Select the network interface used by the NetBoot service.
The name that is called "BSD Device Name" is displayed in the list.
This name can be confirmed on System Profiler.

Number of clients

Maximum number of clients which may be connected.

Clients Name

Used to generate a unique name to each NetBoot client. The specified name is reflected in the computer name and the host name. When NetBoot is specified, the name is named like NetBoot001, NetBoot002, and NetBoot003, etc. You can access each client by using the name of NetBoot001.local instead of IP Address.

Connection Sound

When the client connected, the sound can be sounded.

Automatically delete shadow file.

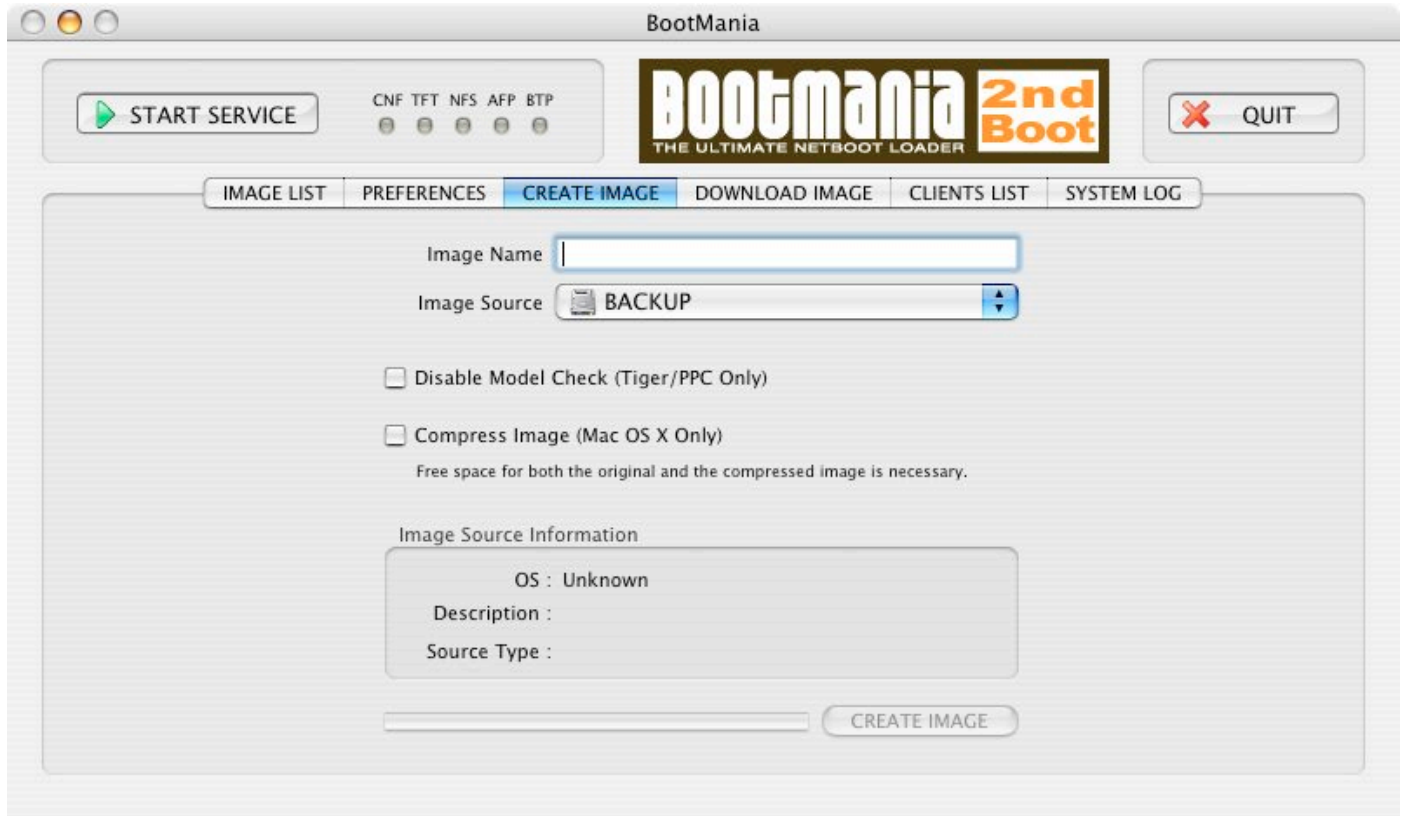
The temporary file that the client uses is called shadow file, it is stored on NetBoot Server. File etc. that the client updated are stored in this file. This file becomes unnecessary after service stops. Specify whether to delete it automatically.

- **DOWNLOAD Section**

File Transfer timeout

It is used for the function of DOWNLOAD IMAGE. In slow Internet connection environment, please increase this value.

• Creating Image



Select CREATE IMAGE tab.

Input the name of the image, select image source. Partition other than CD/DVD/DiskImage and the startup disk can be specified for the image source. Please confirm information of the selected image source.

Disable Madel Check(Tiger Only)

It is an option for dropped Mac from the support of Mac OSX 10.4. Able to install Mac OS X 10.4 by checking it when creating NetInstall image for old Mac, like a bondi blue iMac. We verified this option with bondi blue iMac. We hope following old Mac can be able to working with Mac OS X 10.4. However, it is not guaranteed by Apple Co..

- Original iMac
- Original iBook
- Lombard Powerbook

Compress Image(Mac OS X Only)

Because the image of the NetBoot/NetInstall consumes a large amount of capacity of the disk, the function to compress the image is provided. Please check to save the capacity of the disk.

Begins creating image when pushing CREATE IMAGE button.

If you selected CD or CD DiskImage as Image Souce, BootMania will demand to do mount 2nd media while creating image. If you selected CD DiskImage, can be create NetInstall image without interrupting by doing all DiskImage mount beforehand.

- **Downloading Image**



Select DOWNLOAD IMAGE tab.

Please select OS from OS/image Name and select download site in Image Source.

Begins downloading image when pushing DOWNLOAD IMAGE button.

- **About The Storage Place Of BootImages**

BootImage created/downloaded is stored in the following places.

Startup Disk `"/Library/NetBoot/NetBootSP0"`

File name with the extension of .nbi is BootImages.

NOTE:

Please don't rename BootImage names on the Finder. If you rename the file, there is a possibility that the BootImage cannot be used. When it is necessary to rename the BootImage name, it is possible to rename the BootImage name in IMAGE LIST of BootMania.

The storage place of the Shadow files is the following directories.

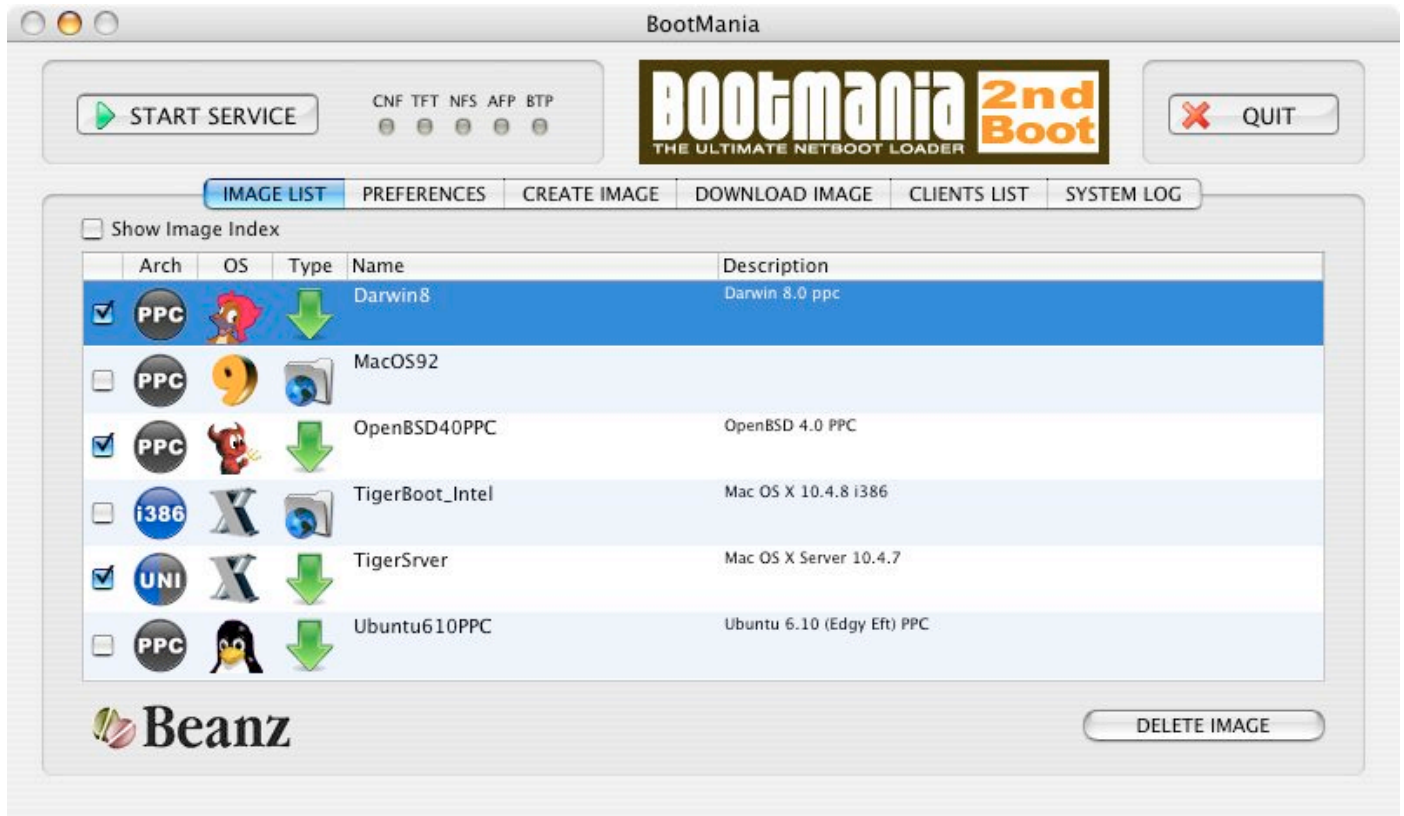
Startup Disk `"/Library/NetBoot/NetClients0"`

Shadow file is made because of each client one by one.

NFS export directory is the following places.

Startup Disk `"/Library/NetBoot/Export"`

Please store the ISO image file of installation CD in the above-mentioned directory when you install Linux/BSD in your local network. When it is possible to install it via NFS in the Linux/BSD installer, please specify this directory.



Please select IMAGE LIST tab.

Image that is created or downloaded is displayed in the list.

Client can boot by using the image by checking it. Icon that shows the kind of OS is displayed in the column of OS.

Show Image Index

The index number of the image is displayed by checking it. This index number is a number to identify the image. It is not necessary to consider it because it is usually added automatically though it should be unique in the entire image. When existing on the network where the boots server of two nets or more is the same, the load-balancing is automatically done. The index number is revokable by double-clicking.

- o 1 .. 4095 Image is local to this server.
- o 4096 .. 65535 Image is global and may appear on multiple servers, used for load-balancing.

Arch

The icon that shows the machine architecture that each image targets is displayed.

- o PPC: Image for PowerPC Mac
- o i386: Image for Intel Mac
- o UNI: Image for both Mac

OS

Shows the kind of OS.(OS9/OSX/Darwin/Linux/BSD)

Type

Downward arrow shows NetInstall, and the folder shows NetBoot.

Name

It should be a unique name. You can change the name by mouse double-clicking. However, image of Linux/BSD cannot change the name by the specification.

Description

It is explanation of an image. The contents can be changed by mouse double clicking.

DELETE IMAGE

The image can be deleted by pushing the deletion button of the image with the image selected.

Service can begin by pushing the START SERVICE button in the upper part.

Please confirm "System Preferences/Startup Disk" on other Mac connected with the network when service begins. If the image made active is not displayed, there is a problem in the environment on the network or the mistake might be found in the setting of BootMania.

NOTE: In "System Preferences/Startup disk", Darwin/Linux/BSD are displayed like OSX. Because we originally improved the specification of Apple Computer Inc..

Booting Clients

Three methods of NetBoot the client are as follows.

- **Setup "System Preferences/Startup Disk"**

You can set computer to start up from a specific NetBoot image by changing "System Preferences/Startup Disk" in Mac OS X. You need to set "System Preferences/Startup Disk" only once. Any subsequent changes you make to the disk image take effect the next time the computer start up.

NOTE: The image of Dawin/Linux/BSD is displayed like OSX.

- **Press N during startup**

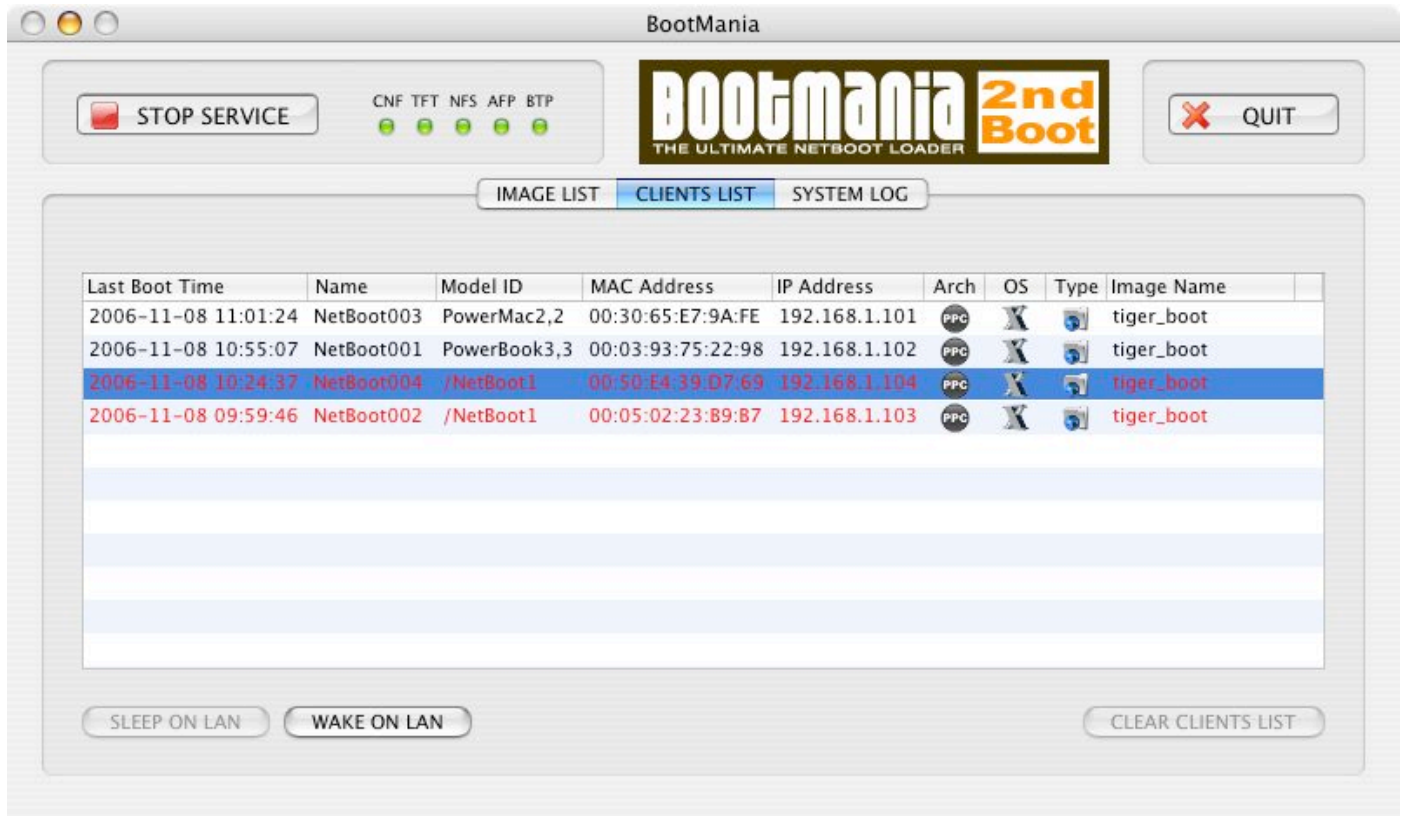
To bypass the default startup volume in favor of BootMania, press the N key at startup. Please adjust the image made effective on BootMania only to one when you want to start the client by and this method.

- **Press option-key during startup**

Start the computer while holding down the Option key. At bootup, select the bootable NetBoot Image, then click on the arrow to continue booting from BootMania. This method cannot be done with some old Mac.

Please adjust the image made effective on BootMania only to one when you want to start the client by and this method.

Please select CLIENTS LIST tab.



An active client and the client that has been connected before are displayed. It is shown that Mac displayed in the black is active. Red is in the state of the sleep or it is shown that it is a state of the switch-off.

Last Boot Time

The last boot time or time which had the image chosen by the client.

Name

Client name.

Model ID

Macintosh model ID.

MAC Address

Media Access Control address.

IP Address

Internet Protocol address.

Arch

The icon that shows the machine architecture that each image targets is displayed.

- o PPC: Image for PowerPC Mac
- o i386: Image for Intel Mac
- o UNI: Image for both Mac

OS

Shows the kind of OS.(OS9/OSX/Darwin/Linux/BSD)

Type

Downward arrow shows NetInstall, and the folder shows NetBoot.

Image Name

Boot image name.

SLEEP ON LAN

The Mac chosen by "Remote Apple Events" can be changed into a sleep state. "Remote Apple Events" of "System Preferences/sharing/Services tab" of clients Mac, needs to be started in order to use this function. "Remote Apple Events" should create a boot image in the effective state. Please enter Administrator ID and the password of client Mac after pushing a button.

WAKE ON LAN

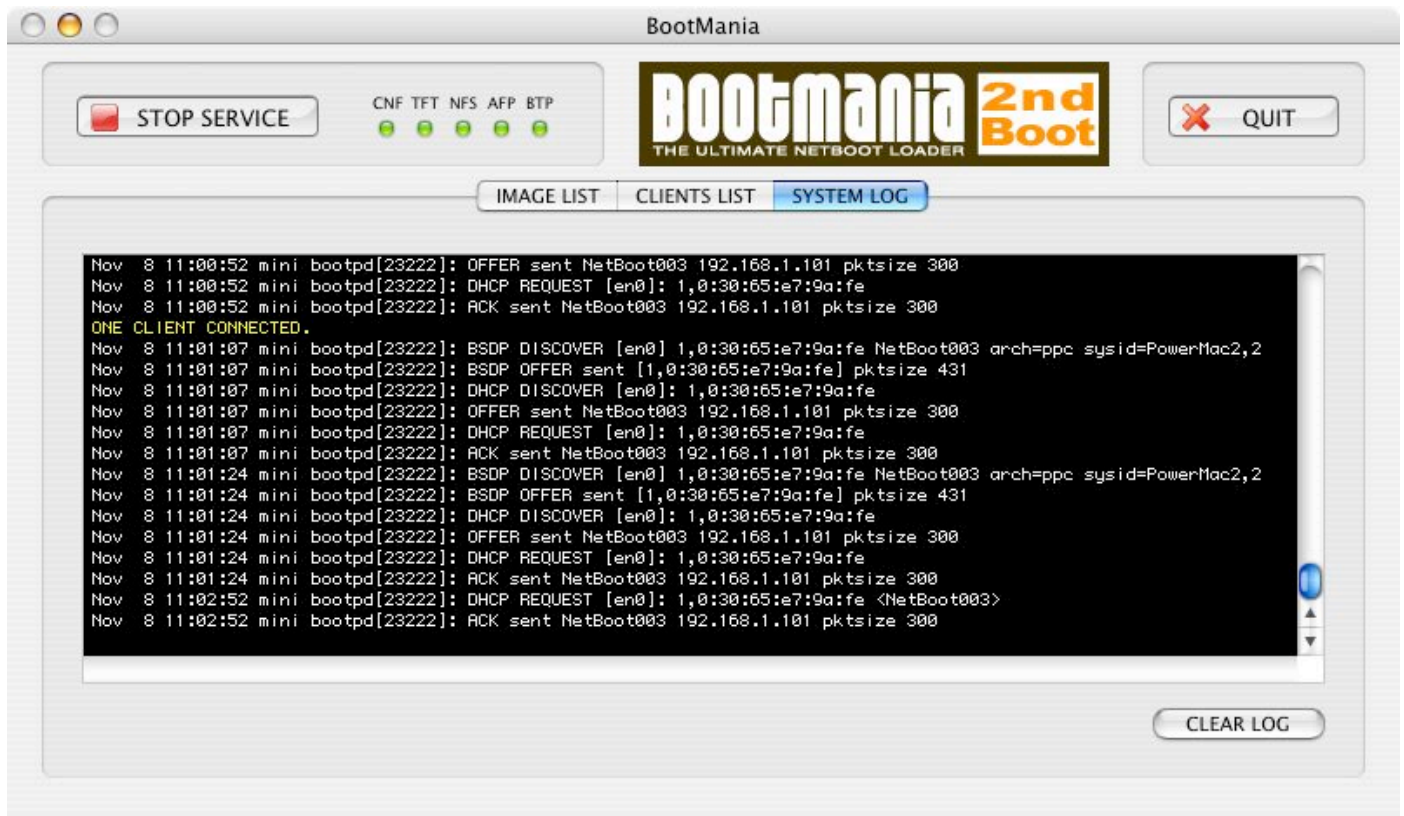
It can awake from a sleep state. "Wake for Ethernet network administrator access" of "System Preferences/Energy Saver/Options tab" of clients Mac, needs to be effective in order to use this function. This option should create a boot image in the effective state.

CLEAR CLIENTS LIST

The client list is cleared. In the following cases, you should clear.

- When you want to change a client name in the PREFERENCES tab of BootMania, and to reflect it.
- When you want to reset the selection state of the NetBoot image which each client uses by the default.
- When you want to adjust the client assignment between the NetBoot servers.

Please select SYSTEM LOG tab.



The situation of connection with a client is displayed.

CLEAR LOG

Displayed log is cleared.

Shutdown Clients

Choosing Shutdown from the Apple menu.

Stopping Service



Please push "STOP SERVICE" button.

Quitting BootMania



Please push "QUIT" button.

NOTES

- Please try the Zap the PRAM when the NetBoot doesn't work well.

Zap the PRAM. Parameter RAM contains settings which are stored while your Mac is turned off. Sometimes this corrupts and causes problems. To clear the PRAM back to factory settings, start up your Mac (not a restart – the Mac should be off) and immediately hold down the Command, Option, P and R keys. After a few seconds the Mac will restart. Keep the keys down until the Mac has restarted about 2 times, then release the keys. This will clear the PRAM.

- Please do not change the name of the boot image on Finder.

The problem such as not working of the boot image well occurs when the name is changed. You can change the name by using BootMania.

- Please do not use BootMania together with another NetBoot Tools.

There is a possibility that the influence occurs in the function of BootMania. Please do not use another tools at the same time to avoid the trouble.

- About the interchangeability of the boot image.

A part of net boot image is not compatible with another NetBoot Tools. Please do not exchange the net boot images mutually.

- BootMania cannot be used simultaneously with "Internet Sharing" function of Mac OSX.

Because a part of function as service overlaps, it is not possible to use it.

- When BootMania is started, it is necessary to stop "Personal File Sharing" function temporarily.

if service begins on BootMania, "Personal File Sharing" function can be used.

- About using the tftpd/nfsd/dhcp(bootp) function of Mac OS X together.

The function of tftpd/nfsd/dhcp(bootp) is used by BootMania. Please do not execute BootMania in Mac that uses tftpd/nfsd/dhcp(bootp).

- About the file operation on the NetBoot clients.

When the NetBoot client shut down, all changes done to the startup disk are annulled. Please save it on the hard disk etc. of the local if you want to save the file that you changed.

- About the NetBoot user account

When the Netboot service starts, BootMani temporarily makes the user account as follows.

netboot100, netboot101, netboot102

Please do not make the above account name as an account usually used.

How to buy

Please buy it when it is used continuously.

However, when the function of Linux/BSD is used within the range of the trial version, it is not necessary to buy it.

The license is done to individual Mac. One license cannot be used with two or more Mac.

Purchase procedure

First of all, please confirm the trial on Mac that uses BootMania after it buys it. Mac that uses BootMania after it buys BootMania cannot be changed.

Please write down the purchase code displayed by pushing the following cart buttons of BootMania.



The purchase code is the following forms. (The content of parentheses is different in each Mac.)

Purchase Code=[003065E79AFE]

Next, please push the "BUY NOW" button in our webpage. Please input the purchase code when it pays.



You should receive the license key via e-mail 3-4 days after your purchase order. If you don't receive your key more than a week after your purchase, please contact us via e-mail.

Please give BootMania the license key pushing the following import buttons if you received the license key.



Acknowledgment

We wish to express our gratitude to the people who gave the use permission of the image for Linux, BSD and Darwin.

- Tux



Linux has an official mascot, Tux, the Linux penguin, which was selected by Linus Torvalds to represent the image he associates with the operating system. Tux was created by Larry Ewing and Larry has generously given it to the community to be freely used to promote Linux. More information on use of the image can be found on his webpage. More links to variations on the image and alternative logos can be found on our logo page.

<http://www.isc.tamu.edu/~lewing/linux/>

Larry Ewing lewing@isc.tamu.edu

- The BSD Daemon

[BSD Daemon used with permission.](#)
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Permission to use the daemon may be obtained from:
Marshall Kirk McKusick
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USA
or via email at mckusick@mckusick.com.

<http://www.mckusick.com/beastie/index.html>

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And, We wish to express our gratitude to the people of the open source community.

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