



The World's Choice for Network Booting Solutions

DATA SHEET

Argon Client Management Services™ (CMS)

**Lower Your Total Cost of Ownership with
Client Management Services
from Argon Technology Corporation**

Client Management Services from Argon Technology, a world leader in network booting solutions includes a host of features to help you manage client devices including PCs, laptops, network servers, and networked appliances. It provides comprehensive network booting and pre-booting solutions for client PCs. Among its many features, you'll find an easy-to-use, flexible, fully automated system for deploying Windows operating systems onto client PCs over a Local Area Network.

Highlights

- Simplifies Automated and unattended deployment of Windows .NET, XP, 2000, NT 4.0, 98, 95 & Me
- Creates pre-OS network boot images to perform maintenance tasks on client PCs
- Compatible with the Wired for Management (WfM), Preboot Execution Environment (PXE) 2.1 network booting specification
- Works with PXE-compliant boot ROMs on client PCs, for example Argon Managed PC Boot Agent (MBA)
- Ability to issue Remote Wake Up commands to client PCs
- PXE Server services can run as native Windows NT 4.0, 2000, and XP system services
- Server applications can run as executables on Windows 98, NT 4.0, 2000 and XP
- Allows creation of "menu boot files" that allow client PC users to select from a menu of boot options—different operating system deployments (including Linux) or client management tasks—at boot time
- Simple, user-friendly application interface includes wizards that guide you through creating boot image files for OS deployment, pre-OS, and remote booting
- Quick and easy verification of network boot functionality with default OS-absent boot image
- Contains a Client Boot Disk creator to support clients that do not contain PXE boot ROMS



Client Boot Disk Creator

CMS contains a Client Boot Disk creator to use with client PCs/laptops that are not PXE compliant. The Client Boot Disk executes the PXE startup process via a floppy diskette.

Currently, CMS client boot disks support various ISA, PCI, USB adapters, MiniPCI and PC cards. For a complete list of supported adapters, click the "View Adapter List" button within the application.

**Note: You cannot add additional network adapters to the CMS Client Boot Disk. Argon Technology may add additional network adapters and make the updates available through the Website and future service packs.*

Key Benefits

Automated Windows OS Deployment

- System administrators can deploy Windows operating systems without having to visit each client PC with installation CDs.
- Administrators don't have to be present at the client PC to log in, start, and/or configure the installation.
- No need to purchase and learn expensive and complex desktop management and deployment products.
- Valuable PC configuration, setup, and deployment tool for systems integrators and VARs.

Pre-OS network booting

- Ability to deploy and execute popular third party desktop management agents on client PCs before the local OS is seamlessly loaded from the hard drive.
- Lower total cost of ownership— central control and maintenance of client PCs cuts administrator "travel time" and increases system availability for end users.
Higher enterprise productivity— reduces client PC downtime and protects valuable data.

The Benefits of Pre-OS Booting and Automated OS Deployment

Client Management Services (CMS) includes all the server-based services and administration tools needed to setup an open network boot environment. You can deploy your favorite third party client management tools in a pre-OS booting phase. For example, you can check, backup, and restore critical files, perform virus scans, flash update a system BIOS, and more before the client PC boots from its local hard drive. CMS gives system administrators centralized control over whether client PCs devices receive any or all of their boot-up instructions from the network.

System administrators also gain significant advantage from the OS deployment capabilities of CMS. Now they can rollout an OS without having to visit client PCs with an installation CD or boot disk, and then wait for the new OS to install. Instead, they can deploy Microsoft operating systems like Windows XP, 2000, NT 4.0, 98, 95, and Me from a fully central location.

CMS also supports Remote Wake Up (RWU), so administrators can initiate client management tasks or OS deployments even when a client PC is powered off, as long as it is RWU capable. By sending a RWU command to one or many client PCs immediately or at a scheduled time, these tasks can be carried out during off-hours, avoiding user disruptions.

Components of Argon Client Management Services

Client Boot Manager

The Client Boot Manager maintains a client configuration database file that the Boot Server uses when a client PC is doing a network boot. This database file contains such information as the client PC's network adapter MAC address, static IP address (if the BOOTP boot protocol is being used), boot image file assignment, and other configuration information for each client PC.

Its significant functions provide the ability to:

- Maintain a client database with configuration information for all network booting clients.
- Use Wizards to automate the creation of boot image files for Windows OS deployment, network booting, and pre-OS management.
- Setup Windows OS deployment images to do automated, unattended installations of Windows over the network.
- Create, view and edit boot image files up to 16MB in size.
- Create, view and edit boot menu files with up to 12 menu entries.
- Easily assign image files to client PCs, permanently or temporarily, to perform a specific task.
- View the OS deployment progress of client PCs, using a Client Status window.
- Issue Remote Wake Up commands to client PCs – immediately or delayed until a later time for off-hours client management.

Client Boot Manager can also help locate and fix syntax errors of client PC entries in the database.

Boot Server

The Boot Server supports both PXE and BOOTP boot protocols, and provides service functionalities needed for network booting. Using PXE or BOOTP, the Boot Server provides the boot ROM on the client PC with boot information from the client configuration database for that particular client PC, such as the filename of the boot image file to be downloaded. In addition, if BOOTP is used it will also provide a static IP address for the client PC; whereas, if PXE is used, the network's DHCP server provides a dynamic IP address.

PXE Server

The PXE protocol is an extension of DHCP, designed, among other things, to standardize network booting operations. It is used primarily in WfM environments where client PCs have PXE-compatible boot ROMs.

BOOTP Server

You can use BOOTP in place of DHCP services to respond to IP address requests from client PCs that have BOOTP-compatible boot ROMs

TFTP Server

TFTP is used to transfer files between a client PC and server on a TCP/IP network. TFTP is used during network booting to transfer boot image files from the server to the client PC using the boot ROM. TFTP can also be used to provide updates to dedicated network devices, switches, routers, and print servers.

DOS-based Network Boot Utilities

Client Management Services includes many useful utilities you can use in the pre-OS phase.

- BPPATCH replaces parameters supplied by the Boot Server into text files within a boot image file, such as batch files, INI files, and system files. This gives multiple client PCs the ability to share one common boot image file that can include configurations specifically tailored to individual PCs.
- PBOOT can be used to terminate a pre-OS environment and continue booting the client PC using the operating system installed on the drive C: active partition. You can also use PBOOT to reboot the PC or, if the PC's BIOS supports Advanced Power Management (APM), shut down the PC, which is useful if the client PC was started using remote wake-up.
- A Universal NDIS 2-compliant driver, that uses the PXE-compliant boot ROM on the client PC. The upper side of the Universal NDIS driver interfaces with a protocol driver. The lower side interfaces with the boot ROM and calls functions in the boot ROM to perform the network operations defined in the NDIS 2 specification. Because the Universal NDIS Driver will work with any brand of NIC that includes a PXE-compliant boot ROM, you no longer need to create multiple image files to accommodate NIC specific NDIS 2 drivers.

The Windows OS deployment function of CMS uses the Universal NDIS driver during portions of the deployment process. You can also use the Universal NDIS driver with other third-party client management products that you may have. This is typically done during remote operating system installations, workstation deployments, and/or application deployments. As well, you can include the Universal NDIS driver in boot images you create to perform your own desired pre-OS tasks.

- SETTAG is a command-line utility executed on client PCs to send parameters to the Boot Server to change the configuration the next time the client PC boots. For example, a parameter can be sent to change the next boot image file, or to change the default item in a menu. This is useful for creating a special-task image that, when completed, allows the client PC to resume using its standard boot image file.

You can also use SETTAG to send information you want displayed in the status window in Boot Server and Client Boot Manager. CMS' Windows OS deployment capability uses the SETTAG utility to perform the deployment and to report deployment status to the administrator.

- SETTAG uses the PXE-compliant boot ROM on the client PC and Windows sockets to transmit and receive packets in 16-bit DOS and Windows DOS console platforms.

System Requirements

▪ Server

Client Management Services can be run on any Windows desktop system, either a network server, or directly from a desktop system, with the exception of Windows 95.

The administrator utilities can be installed on an administrator's PC instead of a server. In this case, the administrator PC must also be running one of the operating systems listed above.

▪ Client PCs

Client PCs must contain a PXE or BOOTP compliant boot ROM, such as the Argon Managed PC Boot Agent (MBA). The boot ROM firmware can be located on a NIC or embedded in the client PC BIOS. If the client PCs do not contain a PXE or BOOTP compliant Boot ROM, use the Client Boot Disk Generator in CMS to create PXE floppy disks.

Remote Wake Up instrumentation is necessary to utilize RWU functionality.

Specifications

▪ Client Boot Manager

- Manages the client configuration database
- Wizards to create boot image files for OS deployment and pre-OS booting
- Advanced client configuration database error checking
- Can issue Remote Wake Up command to client PCs
- Can assign boot image files to client PCs temporarily or permanently
- Ability to copy and resize existing boot image files
- Handles boot images of up to 16 MB in size
- Supports menu boot files with up to 12 entries per menu (nested submenus are allowed)

▪ Boot Server (PXE Server, BOOTP Server)

- Supports PXE protocol, which complies with Wired for Management 2.0, Preboot Execution Environment 2.1 specification
- Supports BOOTP protocol, which complies with RFC 951 and 1084
- Reads client Configuration database file (created by Client Boot Manager)
- DHCP proxy feature
- Configurable event logging
- Real time client status viewer of OS deployment progress
- Unicast/broadcast BOOTP replies (not available when running on Windows 98)

▪ TFTP Server

- Supports RFCs 1350, 1783, and 2348
- Supports transfer size, timeout interval, and blocksize option extensions
- Supports file transfer in secure mode
- Configurable event logging
- Programmable retries (3-10) and timeouts (1-255s)
- Selectable port number (1-5000)

What is “Network Booting”?

Network booting can be another tool in the IT manager's toolbox to help reduce the Total Cost of Ownership (TCO) associated with managing today's client PCs. Basic network booting procedures are accomplished as follows:

- The client PC is powered on, either locally by an end user or through the network using a remote wake up (RWU) command.
- The boot ROM in a client PC connects to the network server and discovers its IP address. Both DHCP, and BOOTP are supported.
- The boot ROM also obtains the filename of the boot image file to be downloaded. It obtains the filename from a service such as DHCP, BOOTP, or PXE. The boot ROM then requests the boot image file from a TFTP service.
- Using TFTP, the network server transfers the appropriate boot image file to the client PC. No intervention is required, but a menu can be displayed that allows end users to choose booting options and server downloads.
- When the entire boot image file is loaded into the client PC's memory, the boot ROM transfers control to the boot image file, which then executes.
- Client maintenance applications specified in the boot image file are executed in the client PC prior to loading its local OS. The applications can include OS Deployment, virus scanners, BIOS updates, and others. When the client management tasks have completed the boot image operation automatically terminates.
- At this point, the client PC either shuts down, reboots, or proceeds to load the OS from its hard drive and the end user logs into the network as usual.

15-Day Trial Download Available at: <http://www.ArgonTechnology.com/cms/>

The 15-day trial version can be converted into a fully functional version by purchasing a Activation License from the Argon website or Argon directly. Activation License Serial Number will be emailed to you once receipt of payment has been confirmed.

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