

**Topic:** OS Installation Methods for ClearCube Blade PCs  
**Component(s) Affected:** Operating Systems  
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## OVERVIEW / ENVIRONMENT

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This document outlines various methods for installing operating systems on ClearCube Blades. Because the Blades do not depend on IDE devices, the methods are somewhat different than the approach used with standard white box PCs.

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## DESCRIPTION

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Typical OS installations on white box PCs are performed using a locally attached IDE CD-ROM drive. Because ClearCube Blades use a different technology, the preferred methods for installing new operating systems are as follows:

### Method 1: USB CD-ROM

Installing an operating system from a USB CD-ROM requires a USB CD-ROM drive and an available USB port. This method of installation requires the least amount of hardware and software configuration. It is the preferred method for local OS installs. To install an operating system from a USB CD-ROM, do the following:

1. Plug the CD-ROM into a USB port.
2. Place the installation CD in to the CD-ROM.
3. Power up the Blade.
4. Escape out of the boot sequence to choose boot options from a default menu.
5. Choose **Boot From CD-ROM**.
6. Install the OS normally.

### Method 2: PXE (Pre-eXecution Environment)

To install an operating system using PXE, you need a DHCP server and PXE server. These services can be running on one computer or two different computers (not the target Blade). To install using PXE, do the following:

1. Power up the Blade.
2. Escape out of the boot sequence and enter the BIOS configuration.
3. In the BIOS, set the first boot device to **Boot From LAN**.
4. Save settings and exit the BIOS.
5. After broadcasting for a DHCP address, the Blade receives DHCP and PXE information.
6. If the PXE server is available and configured correctly, a list of boot options appear on a Boot Menu. Choose the appropriate boot option.

PXE boot options can include:

- Booting to DOS with access to a network share
- Booting into imaging applications, such as Ghost or Image Center
- Directly initiating a network install of OS images
- Upgrading BIOS firmware.

### Method 3: Physical Floppy Disk

Installing an OS using a physical boot floppy requires a USB floppy drive and a floppy disk. To install using a boot floppy, do the following:

1. Plug the USB floppy drive into the USB port on the front of the Blade or the back of the C/Port.
2. Insert the appropriate boot disk into the floppy drive.
3. Power up the Blade.
4. Escape out of the boot sequence and enter the BIOS configuration.
5. In the BIOS, set the first boot device to **Boot From Floppy**.
6. Save settings and exit the BIOS.
7. When the Blade boots, it responds to the bootable floppy as any standard PC would.
8. The floppy disk can be configured to boot the Blade and load the network drivers necessary to transfer a disk image across the network or initiate a network install of an OS.

### Method 4: Virtual Floppy Disk

Installing an OS using a virtual floppy disk requires imaging software that provides the ability to build and execute virtual floppy disks, such as PowerQuest Deploy Center. A virtual floppy disk provides the same functionality as a physical floppy disk, but does not require any physical media, nor does it require physical access to the Blade or its USB ports. To install using a virtual floppy disk, do the following:

1. Create the virtual floppy disk (refer to the manual of your particular software).
2. Build an executable based on that virtual floppy disk.
3. Using a network connection or some removable media, place the executable on the Blade.
4. Run the executable.
5. The Blade should reboot and boot into the mode chosen when the virtual floppy was built.

### Method 5: Zip Drive

Installing an OS using a Zip Drive requires a USB Zip drive and a Zip disk. To install using a USB Zip drive, do the following:

1. Plug the USB Zip drive into the USB port on the front of the Blade or the back of the C/Port.
2. Insert the appropriate boot disk into the floppy drive.
3. Power up the Blade.
4. Escape out of the boot sequence and enter the BIOS configuration.
5. In the BIOS, set the first boot device to 'Boot From Zip Drive'.
6. Save settings and exit the BIOS.
7. When the Blade boots, it responds to the bootable disk as any standard PC would.
8. The Zip disk can be configured to boot the Blade and load the network drivers necessary to transfer a disk image across the network or initiate a network install of an OS.

If the setup files fit on the Zip disk, an install can also be performed directly from the Zip drive.

### Method 6: CD-ROM

Installing an OS from a CD-ROM requires an IDE CD-ROM drive, a “Y” power adapter, and a master/slave IDE cable. This method of installation requires the removal and reconfiguration of hardware. It is not the recommended method for OS installation because of its complexity. If you are unfamiliar with PC hardware, do not attempt this method.

1. Remove Blades 5, 6, 7, and 8 from the Cage.
2. Remove the target Blade from the Cage.
3. Unplug the hard drive power cables.
4. Remove the IDE cable and hard drive from the Blade.
5. Plug the master/slave IDE cable into the motherboard, with Pin 1 matching on cable and board.
6. Attach the “Y” power adapter to the power plug from the motherboard.
7. Attach one power lead to the hard drive and one to the CD-ROM drive.
8. Connect the IDE cable to both the hard drive and the IDE cable, ensuring the CD-ROM is the slave.
9. Insert the Blade into slot 8 of the Cage.
10. Power up the Blade.
11. Escape out of the boot sequence and enter the BIOS configuration.
12. In the BIOS, set the first boot device to **Boot From CD-ROM**.
13. Save settings and exit the BIOS.
14. Boot from the CD and install OS normally.
15. After the install is complete, reassemble the Blade.

For more information, please contact ClearCube technical support.

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