



CHAPTER 1

Boot over IB Overview

With your software and IB device, you can centrally locate host images and configure your hosts to boot these images over your IB fabric. This chapter explains the Boot over IB (BoIB) feature and discusses the value that this feature adds to your network.

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Note

For expansions of acronyms and abbreviations used in this publication, see [Appendix A, “Acronyms and Abbreviations.”](#)

How Boot over IB Works

When hosts boot over an IB fabric, they boot an image that resides on a remote storage device. Hosts with HCAs that use BoIB firmware can boot an image using one of the following methods:

- Using a Fibre Channel SAN through the Fibre Channel gateway
- Using PXE with Ethernet services or with an IB server

When the IB host boots, it initializes the HCA and executes the HCA BoIB firmware boot image. The HCA firmware communicates with the connected server switch to determine which boot LUN to request. Once this information is received, the HCA acts like a standard SCSI interface and reads the boot sector from the remote Fibre Channel storage. The rest of the OS loads as though the storage were locally attached storage.

Alternatively, you can boot with PXE over an IB fabric using Ethernet services or from an IB server. To boot over PXE, connect the boot server either to IB or to an Ethernet network, but use the same IP subnet as the boot host. If an Ethernet-based boot server is used, an Ethernet gateway is used to bridge the IP subnet.

Boot over IB Features

The BoIB feature serves as a manageability tool to help you more easily and centrally administer your network. With this feature, you can do the following tasks:

- Quickly and easily change the boot image that hosts run
- Centrally localize boot images
- Easily reallocate hosts based on your immediate needs
- Eliminate any need for local storage, eliminating a common source of failure
- Reduce the amount of power that your servers consume
- Increase the mean time between failure of your servers
- Replace old hardware with new hardware and boot the existing boot image and configuration

With the BoIB feature, you can change storage mappings during production, then reboot servers from a different storage to change the functions of the servers.

Supported Platforms and Prerequisites

For a list of supported platforms, consult *Release Notes for Windows Boot over InfiniBand*.