

SAN Boot Configuration in StorTrends iTX

Overview

This document offers a brief overview of the steps involved in configuring a server to boot from directly from a StorTrends iSCSI Storage Area Network (SAN) device. The general outline of this paper will cover the hardware required to boot from SAN and step through the procedures behind attaching to the StorTrends appliance and carrying out the boot sequence.

Required Hardware for SAN BOOT

A base minimum hardware setup is required to properly execute a SAN boot. In this case the simple hardware setup consists of a single server with an iSCSI HBA installed, switch, and StorTrends SAN appliance with StorTrends iTX Data Storage Software.¹ Beyond these three hardware components, the only additional requirement is a direct connection crossover cable or two cables (with the switch in between) for network connectivity between the HBA in the server and one of the network ports on the StorTrends SAN appliance. The pictures below illustrate the minimum required setup for boot from SAN and a simple network connection layout.

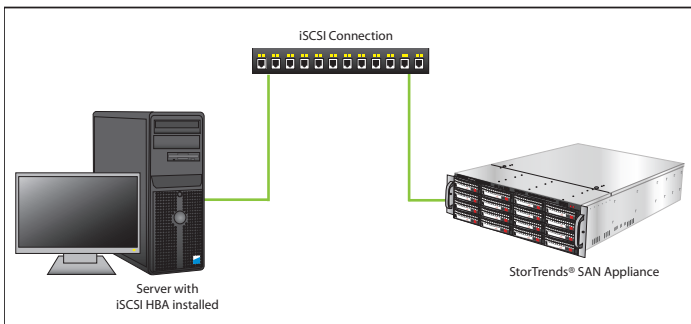


Figure 1: The physical hardware setup: a server w/HBA installed, switch and StorTrends SAN appliance

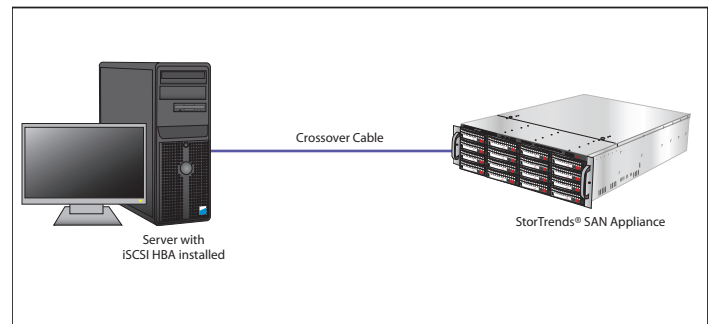


Figure 2: The physical hardware setup: a server w/HBA installed and StorTrends SAN appliance, directly connected via a crossover cable

Once the network and servers are setup, the connection to the StorTrends SAN appliance can be initiated. To begin, a volume and target must be created within the storage unit, which can be done using the Create Volume command included in the Setup Wizard in ManageTrends™, the web-based storage management GUI that is part of StorTrends iTX. Note that if the wizard is not used to manage the volume and target creation, then the user must manually confirm that the portals are enabled. This information can be found in the "Control Panel – iSCSI" section of the ManageTrends console.

Next, boot the server with the HBA installed and open the utility used to configure the HBA firmware. Configure the HBA to attach to the SAN volume created in the StorTrends SAN Appliance; note that this may require setting an IP address for the HBA and checking the connection using ping from either the SAN appliance or the HBA. After the HBA has connected to the SAN appliance, the server must be rebooted and have its BIOS boot sequence modified to allow the server to boot from the HBA

¹ AMI has tested and qualified a variety of iSCSI HBAs from QLogic. As of October 2008, qualified QLogic HBAs include the QLA4050C, QLA4052C, QLE4060C and QLE4062C models.

immediately after CD boot.

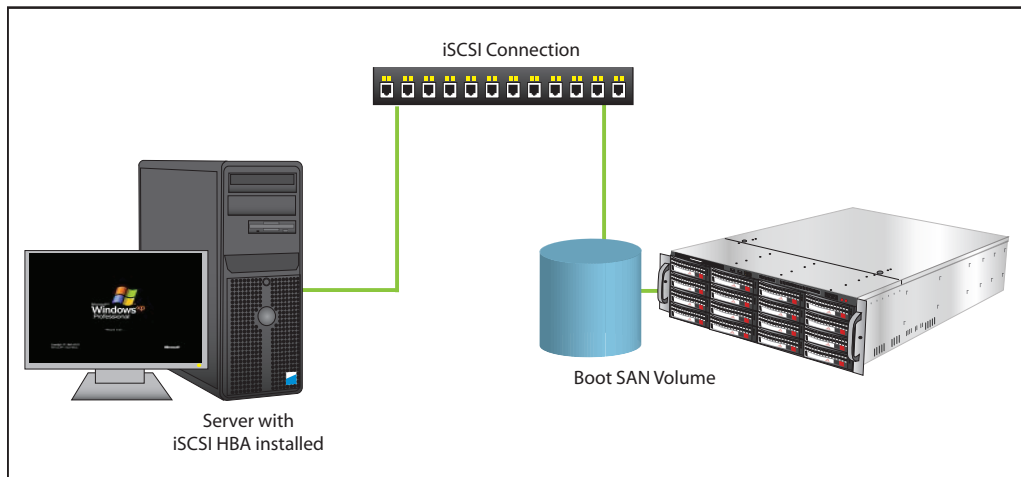


Figure 2: The server BIOS is reconfigured to boot its OS from the StorTrends SAN volume

Initiate the SAN Boot

From this point, the operating system can now be loaded from the SAN appliance. Insert the operating system CD into the CD-ROM drive of the SAN appliance and follow the prompted commands. When the prompt to select a hard disk target to install the OS, the SAN target that is connected to the HBA will now be displayed as a selection. Next, select this target for the installation and proceed to install the OS. After the OS is installed, remove the CD and reboot the server once again. The server will now boot the OS that has been installed on the StorTrends SAN volume.

Conclusion

For more details on configuring a server to SAN Boot from a StorTrends SAN appliance, or information of any of the products featured in the StorTrends product lineup, please contact the AMI's StorTrends Sales Department at 1-800-U-BUY-AMI, or sales@ami.com.