

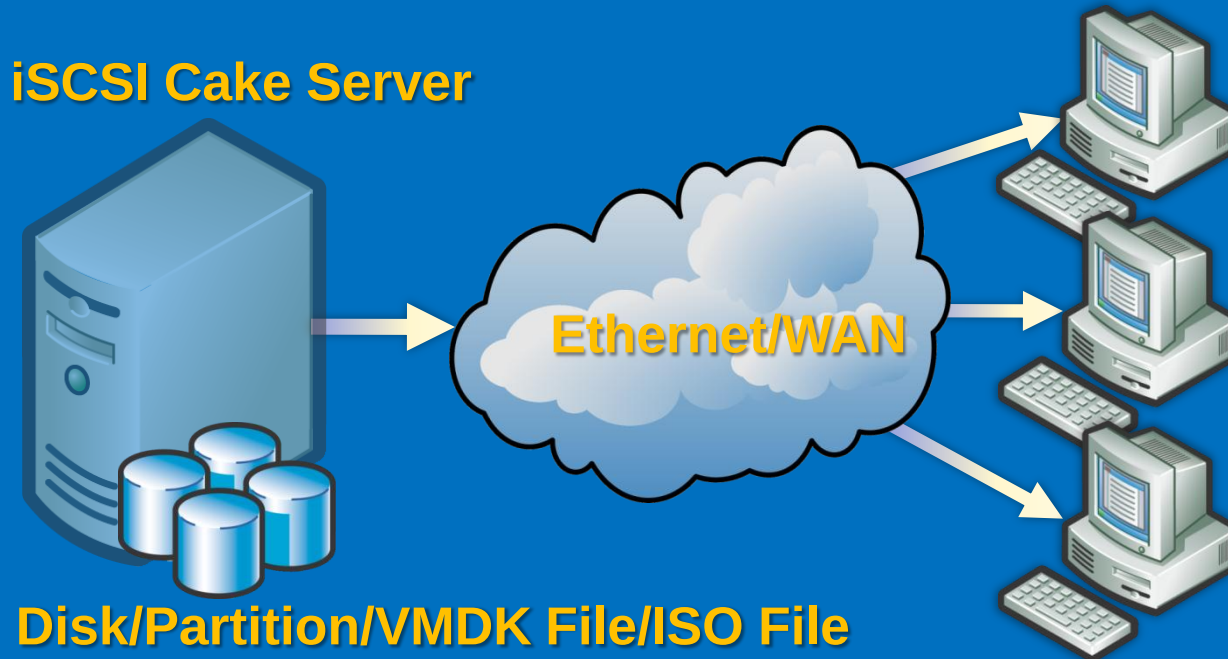
iSCSI Cake Target for Virtualization



YOUNGZSOFT 12/12/2008

What is iSCSI Cake

- iSCSI Cake is a Windows iSCSI target



Why iSCSI Cake

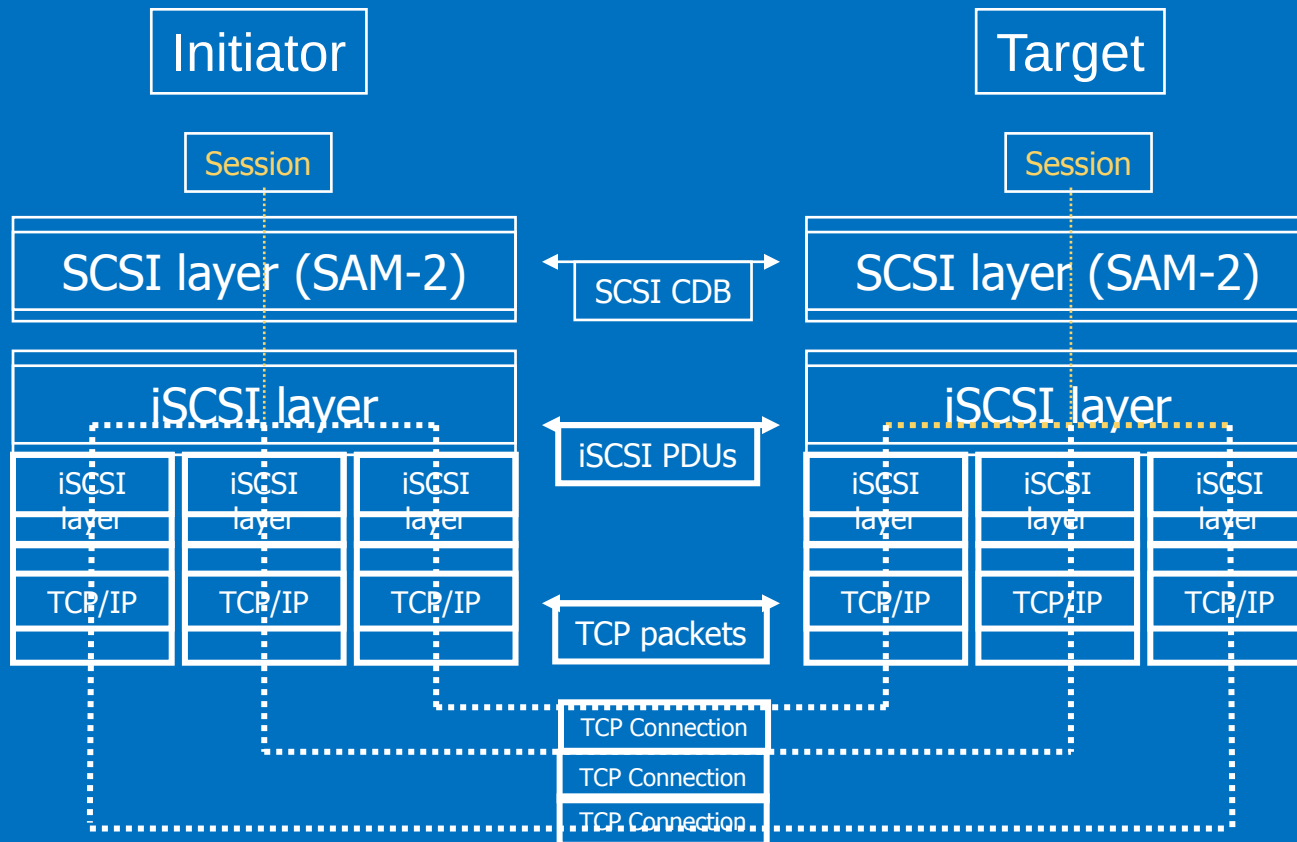
- Storage resource sharing.
 - Supports hundreds of clients simultaneously.
- Security.
 - Protects data by Copy-on-Write.
- Virtualization
 - Exports disk, partition, VMDK files, ISO files.

Key Features

- **Standard iSCSI Target**
- **OS Compatibility**
- **64bit Addressing**
- **VMWare Compatibility**
- **CDROM/DVD Simulator**
- **Port Mapping**
- **High IO performance**
- **Easy to Manage**
- **COW protection**

Standard iSCSI Target

- Compatible with standard iSCSI initiators on Windows, Linux, and Solaris.



OS Compatibility

- Supports all 32bit/64bit Windows 2000/XP/2003/VISTA/2008 and later Windows operating systems.



64bit Addressing

- Fully support for 64bit disk addressing.
 - SCSI READ6, READ10, READ16
 - SCSI WRITE6, WRITE10, WRITE16
- Supports up to 4PB storage device.

VMWare Compatibility

- Exports VMDK file directly to initiator.
- Boot virtual machine from iSCSI.



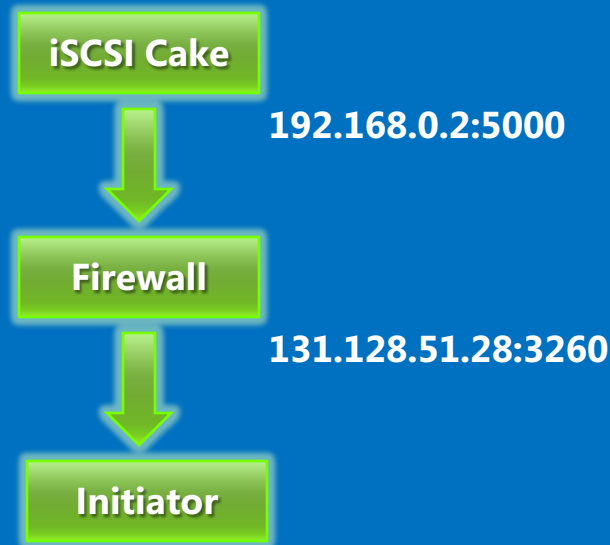
CDROM/DVD Simulator

- Exports ISO file to initiator as CDROM/DVD.



Port Mapping

- iSCSI Cake server can stay behind firewall.

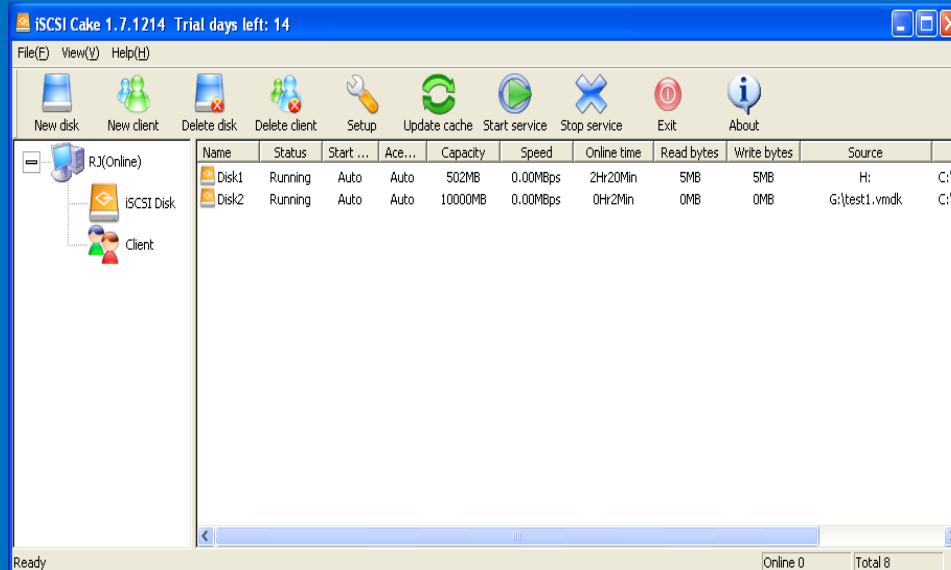


High IO performance

- Per-disk cache :
 - Improves read performance for all clients.
- Per-client cache :
 - Improves burst write performance for each client.

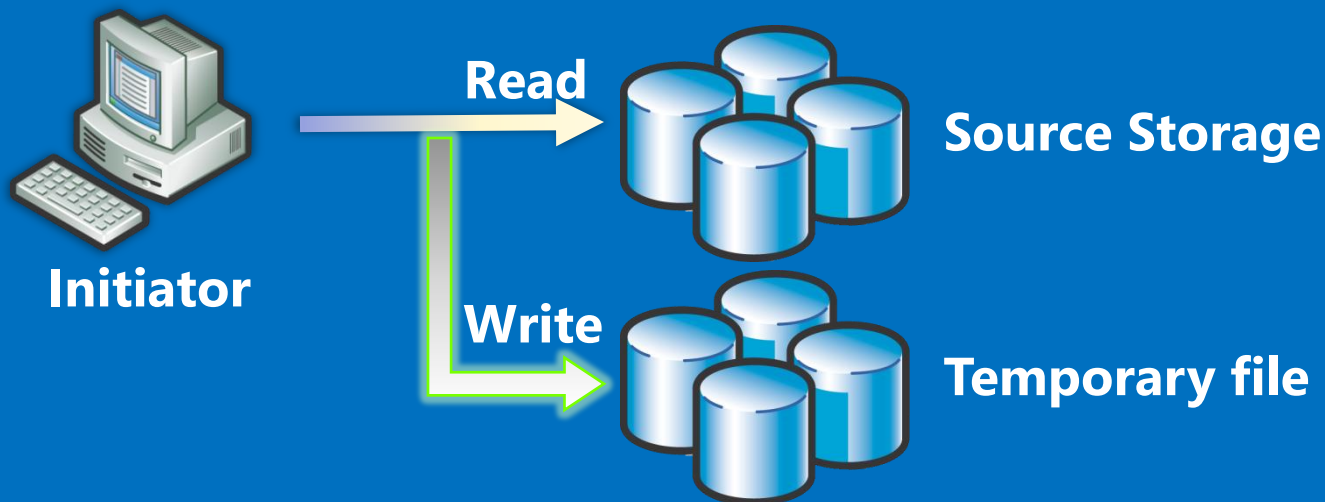
Easy to Manage

- Management tools can be installed on any computers to control remote iSCSI server.



COW protection

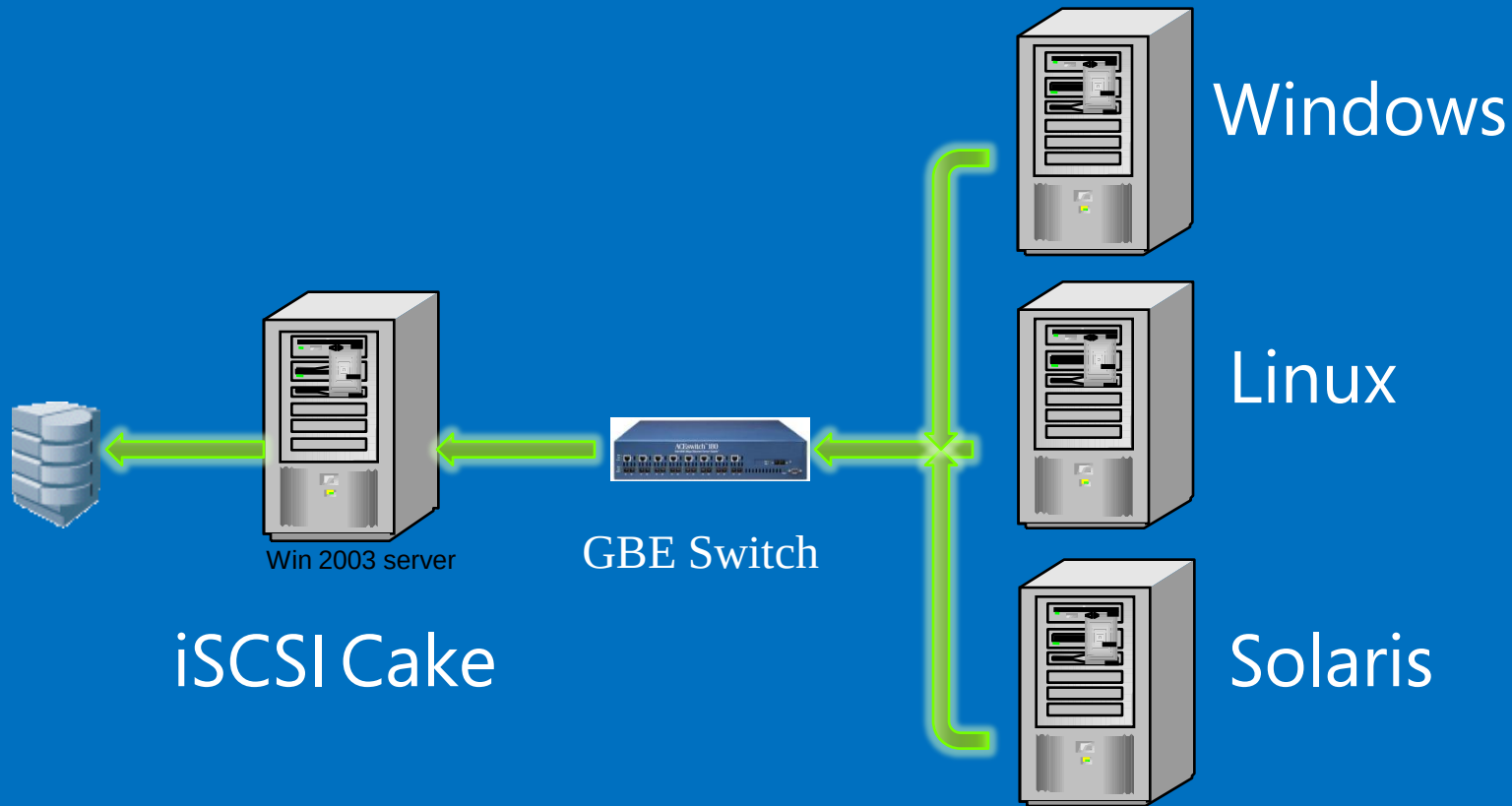
- Copy-on-Write is used to handle write requests from normal clients.
 - Normal clients' data are stored in working dir.
- Super clients write through to server disk.
 - CHAP is used to authenticate super clients.



iSCSI Cake Spec

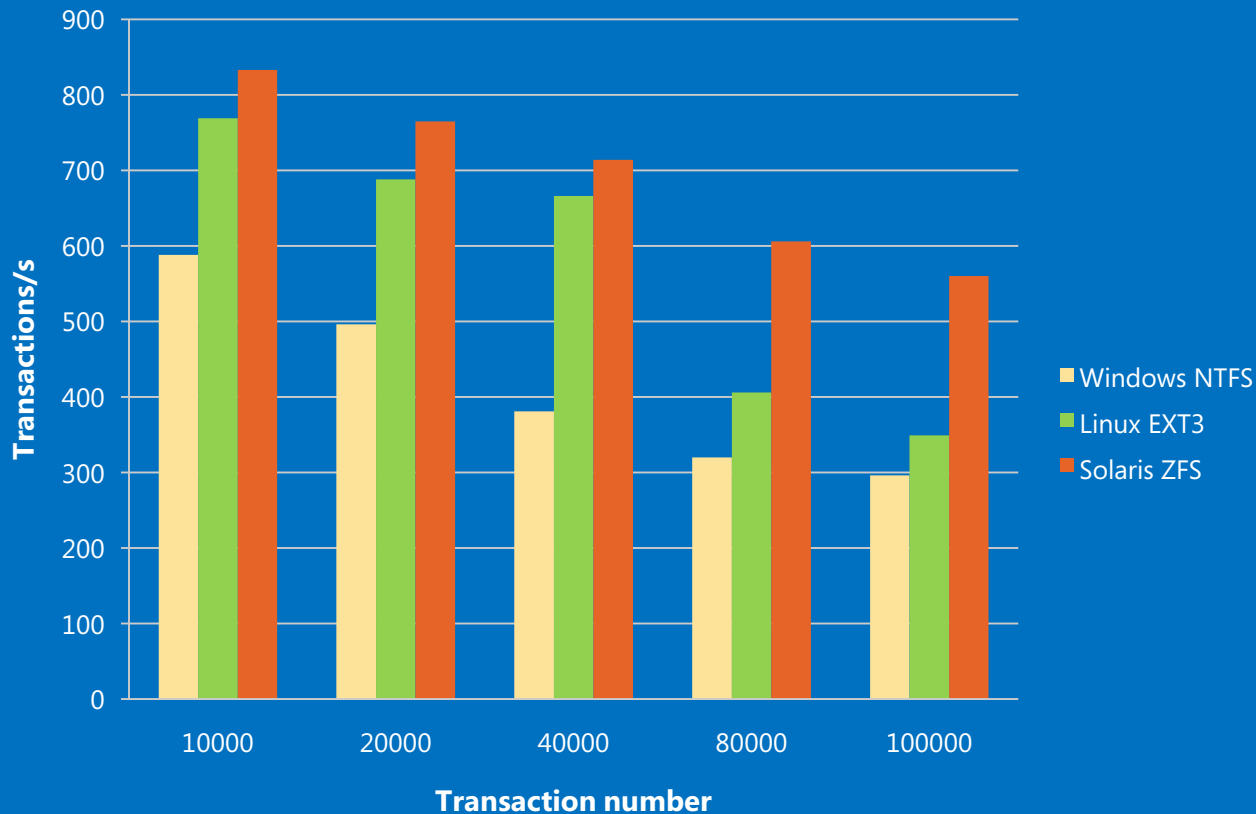
iSCSI Cake Specification	
Server OS	Windows 2000/XP/2003/VISTA/2008 (x86/x64)
Client OS	Windows/Linux/Solaris
Max capacity	4 PB
Source storage	Disk/Partition/VMDK/ISO
Boot from iSCSI	Windows/Linux
Network	Ethernet/Wan (Support port mapping)
Cache	Server cache and per-client cache
Security	CHAP
Management	Local/Remote
iSCSI protocol	iSCSI standard 1.0

Test Configuration



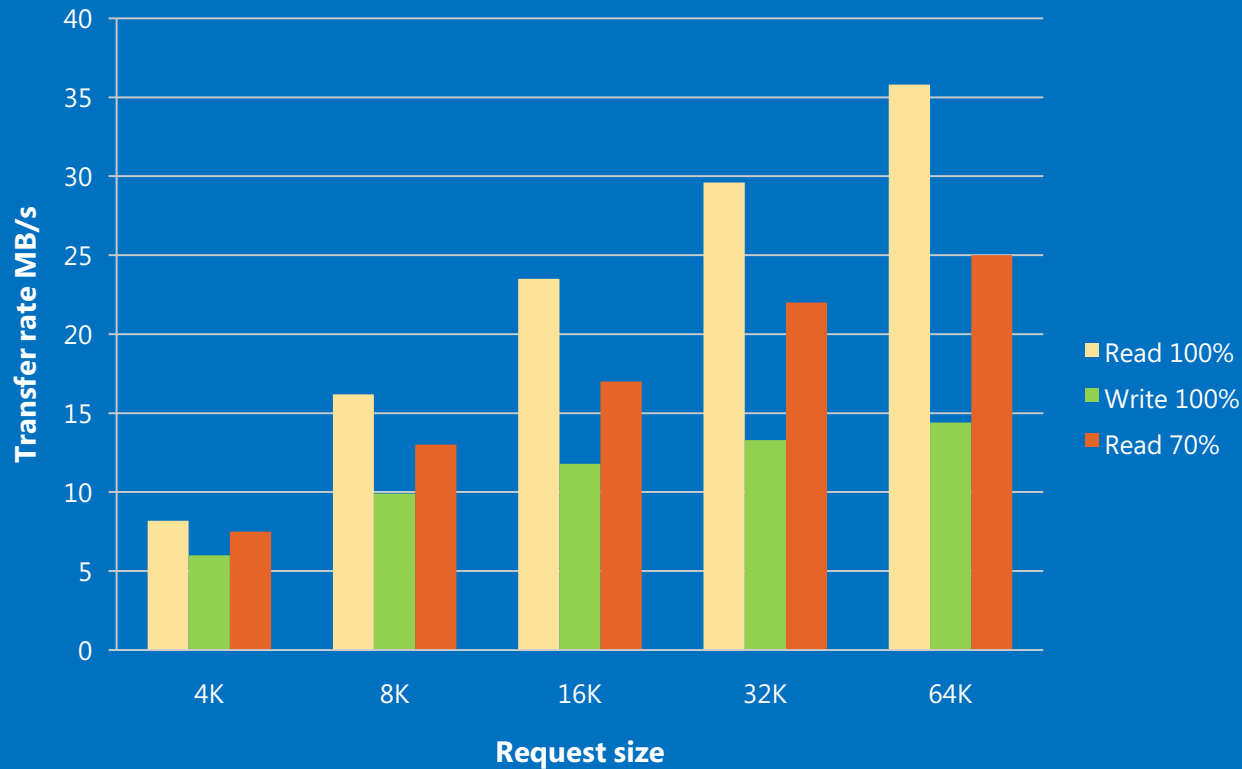
Postmark

- Postmark with Read 8K, Write 8K, file number 10,000.



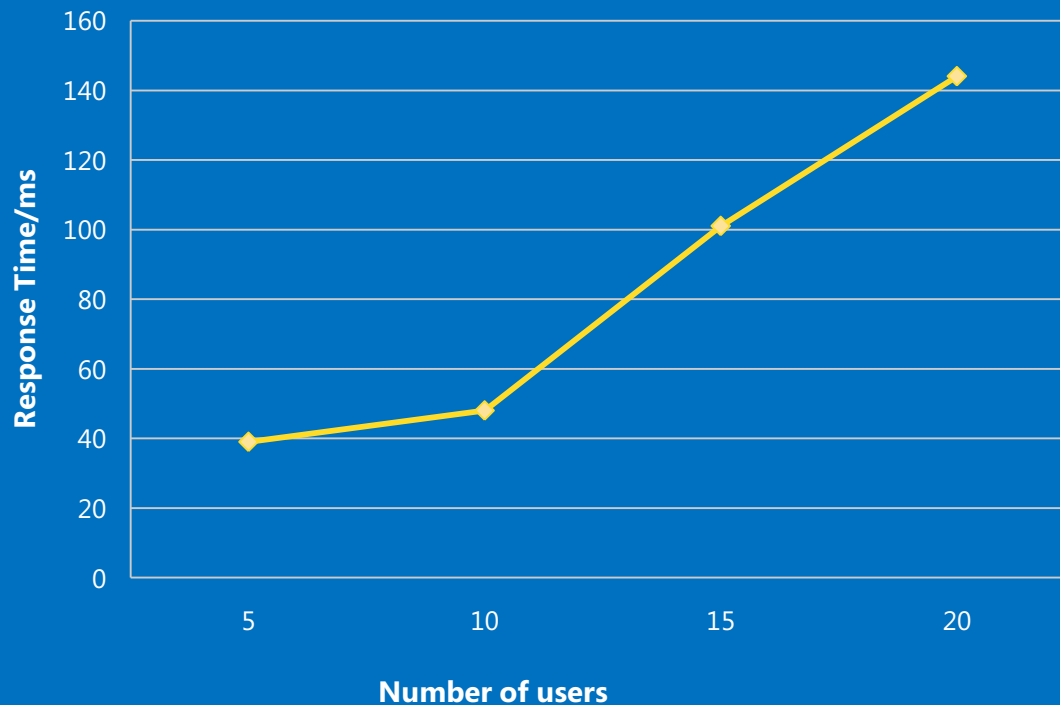
lometer

- lometer with sequential requests.



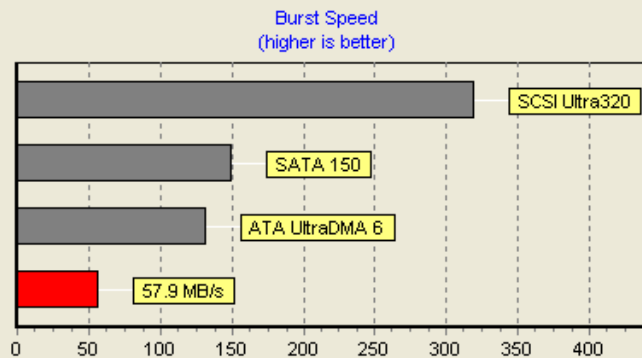
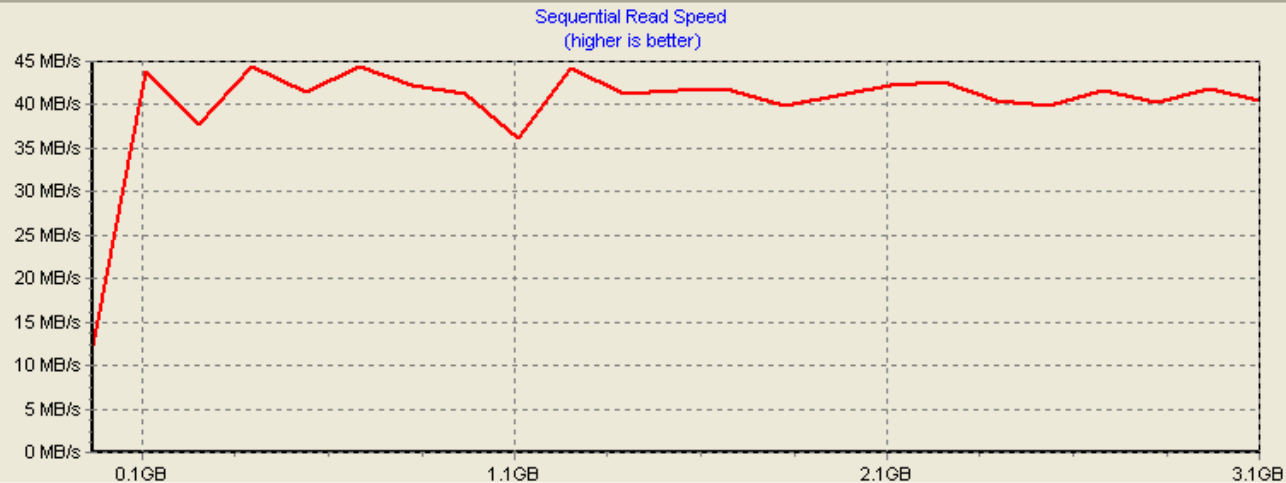
Loadsim

- Loadsim on Exchange Server 2003



HD Tach

HD Tach version 3.0.4.0 - For non-commercial or evaluation use only, see license agreement.



CCDISK iSCSI Cake

Tested on 2008-12-16 at 12:24

Random access: 0.3ms

CPU utilization: 32% (+/- 2%)

Average read: 40.1 MB/s

Lower is better for CPU and random access.

Higher is better for average read.

MB/s = 1,000,000 bytes per second.

GB = 1,000,000,000 bytes.

Save Results

Upload Results

Compare Another Drive

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Done

Reference

- Questions: support@iscsicake.com
- iSCSI Cake FAQ: <http://www.iscsicake.com/faq.htm>
- IETF RFC 3720 (iSCSI spec): <http://www.ietf.org/rfc/rfc3720.txt>
- Microsoft iSCSI Portal:
<http://www.microsoft.com/WindowsServer2003/technologies/storage/iscsi/default.mspx>
- Boot Windows 2003 from iSCSI Cake:
<http://www.iscsicake.com/download/win2003boot.pdf>
- Configuring iSCSI in a VMware ESX Server 3 Environment:
http://www.vmware.com/pdf/vi3_iscsi_cfg.pdf