



# Sun Storage 7000: Infiniband Connected Storage

**Cynthia McGuire**

Fishworks

<http://blogs.sun.com/cindi>

cindi@sun.com

# Sun ZFS Storage 7000 Series

**7110**  
**ENTRY STANDALONE**

**7210**  
**HIGH DENSITY SCALABLE**

**7310**  
**ENTRY SCALABLE CLUSTER-CAPABLE**

**7410**  
**SCALABLE CLUSTER-CAPABLE**

## STANDARD FEATURES

All Data Protocols and Data Services Included

(Analytics, Snapshots, Replication, Compression, Deduplication;  
NFS, SMB, iSCSI, FC, **iSER**, **SRP**, **IPoIB**, **NFS/RDMA**, HTTP, WebDAV, FTP...)

Built-in 4×1 Gb Ethernet ports

Remote Console (Serial or Ethernet)

Lights-out Management

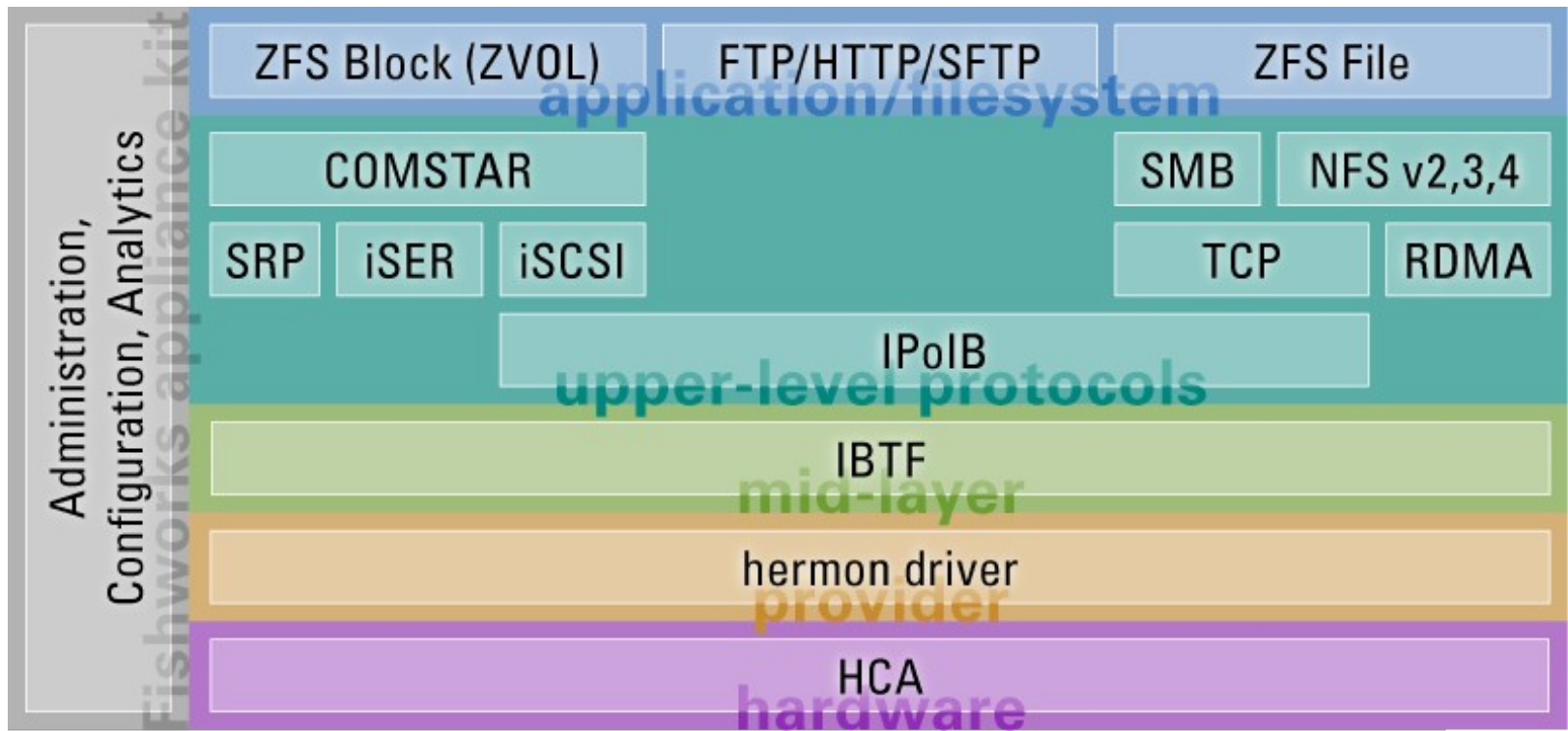
2×10 Gb Ethernet (optical)

4×1 Gb Ethernet (copper) • 2×1Gb Ethernet (optical)

**2×DDR or QDR Infiniband** • 2×4Gb or 8Gb Fibre Channel

FC or SCSI HBA for tape backup

# Integrated Software Stack



# Infiniband Qualification: IBolP

	FTP(S) SFTP	SMB	NFS v2	NFS v3, v4	iSCSI	HTTP WebDAV	Browser UI
Win2008 WinOF 2.1	●	●	○	○	Microsoft Initiator 2.7	Webfolders Webdrive Netdrive Browser	IE7, FF2.x, FF3.x
OFED 1.4.2 Red Hat 5.2, SLES 11	●	●	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x
OFED 1.5 Red Hat 5.4, SLES11	●	○	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x
Solaris 10U7	●	○	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x
Solaris 10U8	●	○	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x
OpenSolaris 2009.06	●	○	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x
OpenSolaris 2010.03	●	●	●	●	●	Browser Cadaver 0.23.2	FF2.x, FF3.x

# Infiniband Qualification: RDMA

	SRP	iSER	NFS v2, v3, v4
OFED 1.4.2 Red Hat 5.2, SLES 11	●	●	2.6.30 kernel
OFED 1.5 Red Hat 5.4, SLES 11	2.6.31 kernel	●	2.6.30 kernel
OpenSolaris 2010.03	○	●	●
VMWare ESX 4.0 Mellanox Drivers	●	○	○

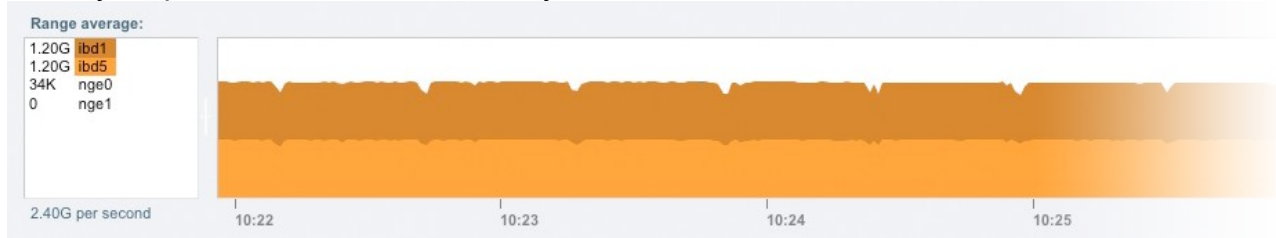
# Analytics

## IPoIB: NFSv3 streaming DRAM reads 2.40Gb/sec network

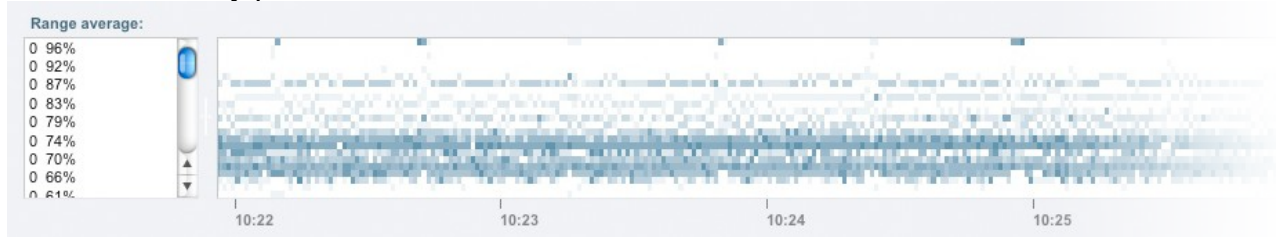
Protocol: NFSv3 operations per second broken down by type of operation



Network: device bytes per second broken down by device



CPU: CPUs broken down by percent utilization



# Analytics

## RDMA: NFSv3 streaming DRAM reads 2.93Gb/sec network

Protocol: NFSv3 operations per second broken down by type of operation



CPU: CPUs broken down by percent utilization

