



## **Sun StorageTek 6540 20,000 Mailbox Exchange 2007 Storage Solution**



**Tested with: ESRP – Storage Version 2.0**  
**Tested Date: February 5<sup>th</sup>, 2008**

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## Overview

This document provides information on Sun Microsystems' storage solution for Microsoft Exchange Server, based the *Microsoft Exchange Solution Reviewed Program (ESRP) – Storage* program\*. For any questions or comments regarding the contents of this document, see Contact for Additional Information.

\*The *ESRP – Storage* program was developed by Microsoft Corporation to provide a common storage testing framework for vendors to provide information on its storage solutions for Microsoft Exchange Server software. For more details on the *Microsoft ESRP – Storage* program, please click <http://www.microsoft.com/technet/prodtechnol/exchange/2007/esrp.msp>

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The information contained in this document represents the current view of s'on the issues discussed as of the date of publication. Due to changing market conditions, it should not be interpreted to be a commitment on the part of Sun Microsystems, and Sun Microsystems cannot guarantee the accuracy of any information presented after the date of publication.

## Features

This document describes a Microsoft Exchange 2007 primary storage solution on the Sun Microsystems StorageTek 6540 array. The targeted number of users in this environment is 20,000 with 4 servers. The tested user profile was 0.5 IOPS (0.42 + 20%) per mailbox with a limit of 300MB. This solution can be scaled by adding additional arrays. The ST6540 is an excellent chose for medium to large sized businesses.

## Solution Description

The tested solution consists of a Sun StorageTek 6540 Dual Fibre Channel RAID Controller cabinet with (10) CSM200 modules. There are (160) 146GB 15,000 rpm FC 4Gb/s for 23.36TB (raw) / 11.68TB (usable, RAID10). This solution can expand to (14) CSM200 modules for a total of 168TB (raw) / 84TB (usable, RAID10) with 750GB SATA-II drives.

## Key Specifications

- Dual Fibre Channel RAID controller
- End-to-end 4Gb/sec
- Scales up to 168TB and 224 drives
- Blazing 575,000 IOPS out of cache
- Supports high-performance FC and high-capacity SATA drives

### Sun StorageTek 6540 Array

<b>Controller card</b>	Dual Fibre Channel RAID controller
<b>Cache size (with ECC protection)</b>	4 GB, 8 GB, or 16 GB dedicated data cache
<b>Host interfaces/link speeds</b>	Eight 4 Gb/sec direct, arbitrated loop or switched attach ports
<b>Other interfaces</b>	Eight 4 Gb/sec FC expansion ports  Four 10/100 Base-T Ethernet ports  Two 9-pin RS-232 serial ports
<b>RAID Level</b>	0, 1, 3, 5, and 1+0
<b>Cache Battery Backup</b>	Up to seven days (depending on cache size)
<b>Integrated data services/ premium features (optional)</b>	<a href="#">Sun StorageTek Data Snapshot</a> (optional) (support four snaps per volume, 1,024 per array)  Sun StorageTek Data Volume Copy (optional) (support eight active copies per volume, 1,024 per array)  <a href="#">Sun StorageTek Data Replicator</a> (optional) (support 64 replicated

	volumes)
	Sun StorageTek Storage Domain (4, 8, 16, or 64)
<b>Dynamic capacity expansion</b>	Five to 224 drives 365 GB to 168 TB
<b>Expansion tray</b>	Up to 14 CSM200 expansion modules
<b>Dynamic reconfiguration</b>	Volume expansion, RAID migration, capacity expansion, segment size migration, volume and virtual disk reconfiguration, controller firmware upgrades
<b>Drive depopulation</b>	Scales from five to 16 hard disk drives per expansion module
<b>Volume</b>	Up to 2,048
<b>Global hot spares</b>	Up to 15
<b>Maximum array capacity</b>	168 TB

### Disk drives

<b>Form factor</b>	3.5 in., low-profile
<b>Interface</b>	Dual-ported Fibre Channel
<b>Supported drives/system per tray capacity (raw, unformatted)</b>	<p>Fibre Channel drives</p> <p>73 GB 15,000-rpm 4 Gb/sec -- 1,168 GB per tray (3 RU)</p> <p>146 GB 15,000-rpm 4 Gb/sec -- 2,336 GB per tray (3 RU)</p> <p>146 GB 10,000-rpm 2 Gb/sec -- 2,336 GB per tray (3 RU)</p> <p>300 GB 15,000-rpm 4 Gb/sec -- 4,800 GB per tray (3 RU)</p> <p>300 GB 10,000-rpm 2 Gb/sec --</p>

4,800 GB per tray (3 RU)

SATA-II drives

500 GB 7,200-rpm 3 Gb/sec --  
8,000 GB per tray (3 RU)

750 GB 7,200-rpm 3 Gb/sec --  
12,000 GB per tray (3 RU)

## Software

### Supported software

[Sun StorageTek QFS Software](#)

[Sun StorageTek Storage  
Archive Manager Software](#)

[Sun Cluster Software](#)

[Sun StorageTek Enterprise  
Backup Software \(EBS\)](#)

[Solstice DiskSuite 4.2.1](#) (in  
conjunction with [Solaris 8  
Operating System](#))

Solaris Volume Manager  
(embedded in Solaris 9  
Operating System)

[Symantec NetBackup \(NBU\)](#)

Symantec Volume Manager  
with DMP (VxVM)

Symantec File System (VxFS)

[Symantec Storage Foundation](#)

### Management software support

Sun StorageTek Common  
Array Manager (included)

SANtricity Storage Manager  
v9.16 (optional)

## Support

**Operating system support**

[Solaris Operating System 8, 9, 10, and x64](#)

Microsoft Windows 2000 Server and Advanced Server (SP4)

Microsoft Windows 2003 Server Standard, Enterprise, and Web editions

HP-UX 11.11 and 11.23

IBM AIX 5.2, 5.3

Red Hat Linux AS/ES/WS Enterprise Edition 3.0/4.0

SUSE LINUX LES 8 and 9

Netware 6 SP5, Netware 6.5 SP3

SGI IRIX 6.5.28

VMWare ESX 3.0

The Sun StorageTek 6540 array is fully supported with major host operating systems and multipath drivers.

**Warranty**

<b>Duration</b>	Three (3) years
<b>Phone support</b>	8 a.m.-8 p.m., Mon-Fri
<b>On-site service</b>	Next business day, 8 a.m.-5 p.m., Mon-Fri
<b>On-site response time</b>	Next business day, local business hours
<b>Service upgrade</b>	SunSpectrum service upgrades are available

**Dimensions**

<b>Height x width x depth</b>	<p>Controller module: 17.5cm (6.9 in.) x 48.3cm (19.0 in.) x 65.1cm (25.6 in.)</p> <p>Expansion module: 12.95cm (5.1 in.) x 44.70cm (17.6 in.) x 57.15cm (22.5 in.)</p> <p>Cabinet: 188cm (74 in.) x 59.7cm (23.5 in.) x 100cm (39.4 in.) x 100cm (39.4 in.)</p>
<b>Weight (maximum)</b>	<p>Controller module: 36.5 kg (80.5 lbs.)</p> <p>Expansion module: 40 kg (88 lbs.)</p> <p>Cabinet: 364.5 kg (810 lbs.) cabinet only</p>
<b>Power requirements</b>	
<b>AC power</b>	<p>Controller module: 2.65 A max. operating at 240 V AC (180-264 V AC range), 50/60 Hz 5.53 A max. operating at 115 V AC (90-136 V AC range), 50/60 Hz</p> <p>Expansion module: 1.97 A max. operating at 240 V AC (180-264 V AC range), 50/60 Hz 4.11 A max. operating at 115 V AC (90-136 V AC range), 50/60 Hz</p> <p>Cabinet: 32 A (2 x 16 A) maximum, N+1/dual grid redundant systems, single-phase 180-240 V AC, 47-63 Hz</p>
<b>Environment</b>	
<b>Operating temperature</b>	10° C to 40° C (50° to 104° F)
<b>Relative humidity</b>	20-80 percent noncondensing
<b>Altitude</b>	100 ft. (30.5m) below sea level to 9,840 ft. (3,000m)
<b>Shock</b>	25 G, 3.75 ms triangular
<b>Vibration</b>	Random vibration to specified power spectral density
<b>Heat output</b>	Controller module: 235 watts

(804 BTU/hr.)  
Expansion module: 444 watts  
(1,517 BTU/hr.)

## Regulations

### Safety and emissions

IEC 60950, EN 60950, UL/CSA 60950, FCC Part 15 (47CFR15B), CISPR 22 (EN55022—RF Radiated and Conducted Emissions), IEC 61000-3-2, IEC 61000-3-3

### Immunity

CISPR 24 (EN55024), IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000 4-6, IEC 61000-4-11



<http://www.windowservercatalog.com/item.aspx?idItem=b51c1c3f-e72b-e910-f98a-fdfc7ed25497>

**RAID Module LUNs**

Sun StorageTek 6540 RAID Module LUNs can be managed through Sun StorageTek Common Array Manager (CAM). RAID levels 0, 1, (1+0), 3 and 5 are supported.

### **Tested Configuration**

The LUN layout of this solution is as follows. For the database LUNS, 30 disks from two trays were mirrored with RAID10 with a single disk on each as a hot spare. For the log LUNS, 3 disks from two trays were mirrored with RAID10.

The I/O activity to the log is 100% small sequential writes. The I/O activity to the database is mostly random. By separating the two distinct I/O characteristics to different LUNs, performance will increase.

The ESRP-Storage program focuses on storage solution testing to address performance and reliability issues with storage design. However, storage is not the only factor to take into consideration when designing a scale up Exchange solution. Other factors which affect the server scalability are: server processor utilization, server physical and virtual memory limitations, resource requirements for other applications, directory and network service latencies, network infrastructure limitations, replication and recovery requirements, and client usage profiles. All these factors are beyond the scope for ESRP-Storage. Therefore, the number of mailboxes hosted per server as part of the tested configuration may not necessarily be viable for some customer deployment.

For more information on identifying and addressing performance bottlenecks in an Exchange system, please refer to Microsoft's Troubleshooting Microsoft Exchange Server Performance, available at <http://go.microsoft.com/fwlink/?LinkId=23454>.

### **Targeted Customer Profile**

This solution is targeted towards a 20,000 user Exchange 2007 deployment.

- Large organization
- Four Exchange 2007 Servers
- .42 IOPS + 20% headroom User I/O profile (0.5 tested)
- 300MB mailbox quota

### **Tested Deployment**

The following tables summarize the testing environment:

### Simulated Exchange Configuration:

Number of Exchange mailboxes simulated	20,000
Number of hosts	4
Number of mailboxes/host	5,000
Number of storage groups/host	7
Number of mailbox stores/storage group	1
Number of mailboxes/mailbox store	714
Number of mailbox store LUNs/storage group	1
Simulated profile: I/O's per second per mailbox (IOPS, include 20% headroom)	.5 (very heavy workload)
Database LUN size	2,048GB
Log LUN size	408GB
Total database size for performance testing	6,291GB
% storage capacity used by Exchange database**	72%

\*\*Storage performance characteristics change based on the percentage utilization of the individual disks. Tests that use a small percentage of the storage (~25%) may exhibit reduced throughput if the storage capacity utilization is significantly increased beyond what is tested in this paper.

### Primary Storage Hardware

Storage Connectivity (Fiber Channel, SAS, SATA, iSCSI)	Fiber Channel
Storage model and OS/firmware revision	ST6540 06.19.25.16 <a href="http://www.windowsservercatalog.com/item.aspx?idItem=b51c1c3f-e72b-e910-f98a-fdfc7ed25497">http://www.windowsservercatalog.com/item.aspx?idItem=b51c1c3f-e72b-e910-f98a-fdfc7ed25497</a>
Storage cache	4GB
Number of storage controllers	2
Number of storage ports	8
Maximum bandwidth of storage connectivity to host	32Gbit
Switch type/model/firmware revision	Qlogic 5600 FC V5.0.0.31.0

HBA model and firmware	SG-XPCI1FC-EM4-Z
Number of HBA's/host	2
Host server type	Sun Fire X4200M2 2xDual Core AMD 2220 CPU, 32,768MB RAM
Total number of disks tested in solution	184
Maximum number of spindles can be hosted in the storage	224

### Primary Storage Software

HBA driver	Storport 7-1.30A9
HBA QueueTarget Setting	0
HBA QueueDepth Setting	128
Multi-Pathing	SMIA-WSX64-01.01.32.04 MPIO DSM
Host OS	Microsoft Windows Server 2003, Enterprise Edition x64 SP2
ESE.dll file version	08.00.0685.024
Replication solution name/version	N/A

### Primary Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	Fibre Channel, 15k, 0409
Raw capacity per disk (GB)	146GB
Number of physical disks in test	120
total raw storage capacity (GB)	17,520
Disk slice size (GB)	N/A
Number of disks per LUN	30
Raid level	RAID10
Total formatted capacity	8,192GB
<a href="#">Storage capacity utilization</a>	47%
<a href="#">Database capacity utilization</a>	36%

### Primary Storage Disk Configuration (Transactional Log Disks)

Disk type, speed and firmware revision	Fibre Channel, 15k, 0409
Raw capacity per disk (GB)	146GB
Number of Spindles in test	24
total raw storage capacity (GB)	3,504

Disk slice size (GB)	N/A
Number of disks per LUN	6
Raid level	RAID10
Total formatted capacity	1,752GB

## Best Practices

Exchange 2007 server is a disk-intensive application. Based on the testing run using the ESRP framework, we would recommend the following to improve the storage performance.

For Exchange 2007 best practices on storage design, please visit <http://technet.microsoft.com/en-us/library/bb124518.aspx>

## Core Storage

1. Use the Microsoft Diskpart utility to align the sectors of all Exchange 2007 storage volumes before formatting. The Diskpart value should be set to 64.
2. Do not share Exchange 2007 disks with any other applications that are I/O intensive. This will have a negative effect on your disk subsystem performance.
3. When possible, separate the sequential writes of logs from the random access of database volumes.
4. Primary focus should be on the speed of the disks and not size.

## Contact for Additional Information

<http://www.sun.com/exchange>

## Test Result Summary

This section provides a high level summary of the test data from ESRP and the link to the detailed html reports which are generated by ESRP testing framework. Please click on the underlined headings below to view the html report for each test.

### ***Reliability***

A number of tests in the framework are to check Reliability tests runs for 24 hours. The goal is to verify the storage can handle high IO load for a long period of time. Both log and database files will be analyzed for integrity after the stress test to ensure no database/log corruption.

The following list provides an overview:

- No errors reported in the saved eventlog file.
- No errors reported in during the database and log checksum process.

### **Primary Storage Performance Results**

The Primary Storage performance testing is designed to exercise the storage with maximum sustainable Exchange type of IO for 2 hours. The test is to show how long it takes for the storage to respond to an IO under load. The data below is the sum of all of the logical disk I/O's and average of all the logical disks I/O latency in the 2 hours test duration. Each server is listed separately and the aggregate numbers across all servers is listed as well.

#### **Individual Server Metrics:**

The sum of I/O's across Storage Groups and the average latency across all Storage Groups on a per server basis.

<b>Database I/O</b>	
Average Database Disk Transfers/sec	3202.92
Average Database Disk Reads/sec	1773.321
Average Database Disk Writes/sec	1429.599
Average Database Disk Read Latency (ms)	12
Average Database Disk Write Latency (ms)	7
<b>Transaction Log I/O</b>	
Average Log Disk Writes/sec	830.962
Average Log Disk Write Latency (ms)	1

<b>Database I/O</b>	
Average Database Disk Transfers/sec	3429.772
Average Database Disk Reads/sec	1892.125
Average Database Disk Writes/sec	1537.647
Average Database Disk Read Latency (ms)	11
Average Database Disk Write Latency (ms)	8
<b>Transaction Log I/O</b>	
Average Log Disk Writes/sec	882.556
Average Log Disk Write Latency (ms)	1

<b>Database I/O</b>	
Average Database Disk Transfers/sec	2961.134
Average Database Disk Reads/sec	1633.004
Average Database Disk Writes/sec	1328.130
Average Database Disk Read Latency (ms)	11

Average Database Disk Write Latency (ms)	8
<b>Transaction Log I/O</b>	
Average Log Disk Writes/sec	768.327
Average Log Disk Write Latency (ms)	1

<b>Database I/O</b>	
Average Database Disk Transfers/sec	3228.218
Average Database Disk Reads/sec	1779.871
Average Database Disk Writes/sec	1448.346
Average Database Disk Read Latency (ms)	12
Average Database Disk Write Latency (ms)	6
<b>Transaction Log I/O</b>	
Average Log Disk Writes/sec	839.876
Average Log Disk Write Latency (ms)	1

**Aggregate Performance across all servers Metrics:**

The sum of I/O's across servers in solution and the average latency across all all servers in solution.

<b>Database I/O</b>	
Average Database Disk Transfers/sec	12822.044
Average Database Disk Reads/sec	7078.321
Average Database Disk Writes/sec	5743.722
Average Database Disk Read Latency (ms)	11.5
Average Database Disk Write Latency (ms)	7.25
<b>Transaction Log I/O</b>	
Average Log Disk Writes/sec	3321.721
Average Log Disk Write Latency (ms)	1

***Streaming Backup/Recovery Performance***

For the Version 1.0 release, only streaming backup type is supported for testing in the framework. There are two tests in this section. First one is to measure the read IO performance metrics by running checksum on all the databases and log files. The second test is to measure the end to end performance when the databases are backed up to disks.

## Database Read-only Performance

The test is to measure the maximum rate at which databases could be streaming backed up. The following table shows the average rate for a single database file.

MB read/sec per storage group_	46.36
MB read/sec per system	324.538
MB read/sec total	1298.15

## Log Read-only Performance

The test is to measure the maximum rate at which the log files can be played against the databases. The following table shows the average rate for 500 log files played in a single storage group. Each log file is 1 MB in size.

Average time to play one Log file (sec)	.362
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## Conclusion

This document is developed by storage solution providers, and reviewed by Microsoft Exchange Product team. The test results/data presented in this document is based on the tests introduced in the ESRP test framework. Customer should not quote the data directly for his/her pre-deployment verification. It is still necessary to go through the exercises to validate the storage design for a specific customer environment.

ESRP program is not designed to be a benchmarking program; tests are not designed to getting the maximum throughput for a giving solution. Rather, it is focused on producing recommendations from vendors for Exchange application. So the data presented in this document should not be used for direct comparisons among the solutions.

## Appendix

### Microsoft Exchange Server **Jetstress**

#### *Performance Test Result Report*

Test Summary

**Overall Test Result**    **Pass**

**Machine Name**    ISV-ESRP1

**Test****Description****Test Start Time** 1/30/2008 7:19:24 PM**Test End Time** 1/30/2008 9:22:29 PM**Jetstress** 08.01.0112.000**Version****Ese Version** 08.00.0685.024**Operating System** Microsoft Windows Server 2003 Service Pack 2 (5.2.3790.131072)**Performance****Log** [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.blg](C:\Program Files\Exchange2007\Performance_2008_1_30_19_19_26.blg)[C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.blg](C:\Program Files\Exchange2007\Performance_2008_1_30_19_19_26.blg)[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.blg](Files\Exchange2007\DBChecksum_2008_1_30_21_22_29.blg)

## Database Sizing and Throughput

**Achieved I/O per Second** 3202.92**Planned I/O per Second** 2500**Initial database size** 1736435023872**Final database size** 1762312699904**Database files (count)** 7

## Jetstress System Parameters

**Thread count** 12 (per-storage group)**Log buffers** 9000**Minimum database cache** 224.0 MB**Maximum database cache** 1792.0 MB**Insert operations** 25%**Delete operations** 10%**Replace operations** 50%**Read operations** 15%**Lazy commits** 80%

## Disk Subsystem Performance

<b>LogicalDisk</b>	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.012	0.007	1773.321	1429.599	(n/a)
<b>Log (G:)</b>	0.000	0.001	0.000	830.962	11665.350

## Host System Performance

<b>Counter</b>	Average	Minimum	Maximum
<b>% Processor Time</b>	5.766	3.271	8.168
<b>Available MBytes</b>	25579.852	25577.000	25680.000
<b>Free System Page Table Entries</b>	16755696.500	16755693.000	16755833.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000

<b>Pool Nonpaged Bytes</b>	76333798.400	76320768.000	76472320.000
<b>Pool Paged Bytes</b>	34107042.133	34021376.000	34566144.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:24 PM -- Jetstress testing begins ...  
1/30/2008 7:19:24 PM -- Prepare testing begins ...  
1/30/2008 7:19:25 PM -- Attaching databases ...  
1/30/2008 7:19:25 PM -- Prepare testing ends.  
1/30/2008 7:19:25 PM -- Dispatching transactions begins ...  
1/30/2008 7:19:25 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
1/30/2008 7:19:25 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 7:19:26 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 7:19:26 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 7:19:27 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 7:19:27 PM -- Performance logging begins (interval: 15000 ms).  
1/30/2008 7:19:27 PM -- Attaining prerequisites:  
1/30/2008 7:22:18 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1693663000.0 (lower bound: 1691143000.0, upper bound: none)  
1/30/2008 9:22:19 PM -- Performance logging ends.  
1/30/2008 9:22:19 PM -- JetInterop batch transaction stats: 90046, 89962, 89952, 90078, 90334, 89865, and 89559.  
1/30/2008 9:22:20 PM -- Dispatching transactions ends.  
1/30/2008 9:22:20 PM -- Shutting down databases ...  
1/30/2008 9:22:29 PM -- Instance744.1 (complete), Instance744.2 (complete), Instance744.3 (complete), Instance744.4 (complete), Instance744.5 (complete), Instance744.6 (complete), and Instance744.7 (complete)  
1/30/2008 9:22:30 PM -- Performance logging begins (interval: 30000 ms).  
1/30/2008 9:22:30 PM -- Verifying database checksums ...  
1/30/2008 10:46:12 PM -- F: (100% processed)  
1/30/2008 10:46:14 PM -- Performance logging ends.  
1/30/2008 10:46:14 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.blg](#) has 167 samples.  
1/30/2008 10:46:15 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.html](#) is saved.  
1/30/2008 10:46:15 PM -- Verifying log checksums ...  
1/30/2008 10:46:37 PM -- G:\sg1 (22 logs passed), G:\sg2 (23 logs passed), G:\sg3 (22 logs passed), G:\sg4 (21 logs passed), G:\sg5 (22 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
1/30/2008 10:46:37 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.blg](#) has 491 samples.  
1/30/2008 10:46:37 PM -- Creating test report ...  
1/30/2008 10:46:40 PM -- Volume F: has 0.0119 for Avg. Disk sec/Read.  
1/30/2008 10:46:40 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
1/30/2008 10:46:40 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
1/30/2008 10:46:40 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
1/30/2008 10:46:40 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
1/30/2008 10:46:40 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.xml](#) has 479 samples queried.

# Microsoft Exchange Server Jetstress

## Performance Test Result Report

Test Summary

**Overall Test Result** Pass

**Machine Name** ISV-ESRP2

### Test Description

**Test Start Time** 1/30/2008 7:19:17 PM

**Test End Time** 1/30/2008 9:22:10 PM

**Jetstress Version** 08.01.0112.000

**Ese Version** 08.00.0685.024

**Operating System** Microsoft Windows Server 2003 Service Pack 2 (5.2.3790.131072)

**Performance Log** [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.blg](C:\Program Files\Exchange2007\Performance_2008_1_30_19_19_18.blg)  
[C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_10.blg](C:\Program Files\Exchange2007\DBChecksum_2008_1_30_21_22_10.blg)

### Database Sizing and Throughput

**Achieved I/O per Second** 3429.772

**Planned I/O per Second** 2500

**Initial database size** 1728115621888

**Final database size** 1756100935680

**Database files (count)** 7

### Jetstress System Parameters

**Thread count** 12 (per-storage group)

**Log buffers** 9000

**Minimum database cache** 224.0 MB

**Maximum database cache** 1792.0 MB

**Insert operations** 25%

**Delete operations** 10%

**Replace operations** 50%

**Read operations** 15%

**Lazy commits** 80%

### Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (F:)	0.011	0.008	1892.125	1537.647	(n/a)

<b>Log (G:)</b>	0.000	0.001	0.000	882.556	11815.677
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### Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	6.255	4.628	7.962
<b>Available MBytes</b>	25574.433	25571.000	25669.000
<b>Free System Page Table Entries</b>	16755705.542	16755693.000	16755763.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	76209766.400	76144640.000	76492800.000
<b>Pool Paged Bytes</b>	35055086.933	34979840.000	35557376.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:17 PM -- Jetstress testing begins ...

1/30/2008 7:19:17 PM -- Prepare testing begins ...

1/30/2008 7:19:18 PM -- Attaching databases ...

1/30/2008 7:19:18 PM -- Prepare testing ends.

1/30/2008 7:19:18 PM -- Dispatching transactions begins ...

1/30/2008 7:19:18 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:18 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:18 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:18 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:19 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:19 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:19 PM -- Attaining prerequisites:

1/30/2008 7:21:57 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1696317000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:21:59 PM -- Performance logging ends.

1/30/2008 9:21:59 PM -- JetInterop batch transaction stats: 96141, 96351, 96431, 96518, 96331, 96218, and 96103.

1/30/2008 9:21:59 PM -- Dispatching transactions ends.

1/30/2008 9:21:59 PM -- Shutting down databases ...

1/30/2008 9:22:10 PM -- Instance1548.1 (complete), Instance1548.2 (complete), Instance1548.3 (complete), Instance1548.4 (complete), Instance1548.5 (complete), Instance1548.6 (complete), and Instance1548.7 (complete)

1/30/2008 9:22:10 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:10 PM -- Verifying database checksums ...

1/30/2008 10:49:43 PM -- F: (100% processed)

1/30/2008 10:49:44 PM -- Performance logging ends.

1/30/2008 10:49:44 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_10.blg](#) has 175 samples.

1/30/2008 10:49:45 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_10.html](#) is saved.

1/30/2008 10:49:46 PM -- Verifying log checksums ...

1/30/2008 10:50:07 PM -- G:\sg1 (22 logs passed), G:\sg2 (21 logs passed), G:\sg3 (23 logs passed), G:\sg4 (23 logs passed), G:\sg5 (22 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)

1/30/2008 10:50:07 PM -- [C:\Program](#)

[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.blg](#) has 490 samples.

1/30/2008 10:50:07 PM -- Creating test report ...

1/30/2008 10:50:10 PM -- Volume F: has 0.0111 for Avg. Disk sec/Read.

1/30/2008 10:50:10 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.

1/30/2008 10:50:10 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
1/30/2008 10:50:10 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
1/30/2008 10:50:10 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
1/30/2008 10:50:10 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.xml](#) has 479 samples queried.

## Microsoft Exchange Server **Jetstress**

### **Performance Test Result Report**

Test Summary

**Overall Test Result** **Pass**

**Machine Name** ISV-ESRP4

**Test**

**Description**

**Test Start Time** 1/30/2008 7:19:15 PM

**Test End Time** 1/30/2008 9:22:08 PM

**Jetstress Version** 08.01.0112.000

**Ese Version**

08.00.0685.024

**Operating System**

Microsoft Windows Server 2003 Service Pack 2 (5.2.3790.131072)

**Performance Log**

[C:\Program](#)

[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.blg](#)

[C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.blg](#)

Database Sizing and Throughput

**Achieved I/O per Second** 2961.134

**Planned I/O per Second** 2500

**Initial database size** 1728254033920

**Final database size** 1752332353536

**Database files (count)** 7

Jetstress System Parameters

**Thread count** 12 (per-storage group)

**Log buffers** 9000

**Minimum database cache** 224.0 MB

**Maximum database cache** 1792.0 MB

**Insert operations** 25%

**Delete operations** 10%

**Replace operations** 50%

**Read operations** 15%

**Lazy commits** 80%

## Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.011	0.008	1633.004	1328.130	(n/a)
<b>Log (G:)</b>	4.09185803757829E-06	0.001	0.001	768.327	11300.503

## Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	5.547	0.000	9.579
<b>Available MBytes</b>	25578.898	25553.000	25711.000
<b>Free System Page Table Entries</b>	16755835.042	16755833.000	16755903.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	75819630.933	75427840.000	76304384.000
<b>Pool Paged Bytes</b>	33536853.333	33443840.000	34054144.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:15 PM -- Jetstress testing begins ...

1/30/2008 7:19:15 PM -- Prepare testing begins ...

1/30/2008 7:19:16 PM -- Attaching databases ...

1/30/2008 7:19:16 PM -- Prepare testing ends.

1/30/2008 7:19:16 PM -- Dispatching transactions begins ...

1/30/2008 7:19:16 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:16 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:16 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:16 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:18 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:18 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:18 PM -- Attaining prerequisites:

1/30/2008 7:21:58 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1697513000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:21:59 PM -- Performance logging ends.

1/30/2008 9:21:59 PM -- JetInterop batch transaction stats: 83361, 83224, 83034, 82537, 82823, 83600, and 83655.

1/30/2008 9:22:00 PM -- Dispatching transactions ends.

1/30/2008 9:22:00 PM -- Shutting down databases ...

1/30/2008 9:22:08 PM -- Instance2052.1 (complete), Instance2052.2 (complete), Instance2052.3 (complete), Instance2052.4 (complete), Instance2052.5 (complete), Instance2052.6 (complete), and Instance2052.7 (complete)

1/30/2008 9:22:09 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:09 PM -- Verifying database checksums ...

1/30/2008 10:49:30 PM -- F: (100% processed)

1/30/2008 10:49:31 PM -- Performance logging ends.

1/30/2008 10:49:31 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.blg](#) has 174 samples.

1/30/2008 10:49:32 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.html](#) is saved.

1/30/2008 10:49:32 PM -- Verifying log checksums ...

1/30/2008 10:49:50 PM -- G:\sg1 (22 logs passed), G:\sg2 (22 logs passed), G:\sg3 (22 logs passed), G:\sg4 (23 logs passed), G:\sg5 (21 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
 1/30/2008 10:49:50 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.blg](#) has 490 samples.  
 1/30/2008 10:49:50 PM -- Creating test report ...  
 1/30/2008 10:49:53 PM -- Volume F: has 0.0113 for Avg. Disk sec/Read.  
 1/30/2008 10:49:53 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
 1/30/2008 10:49:53 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
 1/30/2008 10:49:53 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
 1/30/2008 10:49:53 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:49:53 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.xml](#) has 479 samples queried.

## Microsoft Exchange Server **Jetstress**

### *Performance Test Result Report*

Test Summary

**Overall Test Result** **Pass**

**Machine Name** ISV-ESRP5

**Test Description**

**Test Start Time** 1/30/2008 7:19:13 PM

**Test End Time** 1/30/2008 9:22:26 PM

**Jetstress Version** 08.01.0112.000

**Ese Version** 08.00.0685.024

**Operating System** Microsoft Windows Server 2003 Service Pack 2 (5.2.3790.131072)

**Performance Log** [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.blg](#)  
[C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.blg](#)

Database Sizing and Throughput

**Achieved I/O per Second** 3228.218

**Planned I/O per Second** 2500

**Initial database size** 1706191994880

**Final database size** 1732674830336

**Database files (count)** 7

Jetstress System Parameters

**Thread count** 12 (per-storage group)

**Log buffers** 9000

**Minimum database cache** 224.0 MB

**Maximum database cache** 1792.0 MB  
**Insert operations** 25%  
**Delete operations** 10%  
**Replace operations** 50%  
**Read operations** 15%  
**Lazy commits** 80%

#### Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.012	0.006	1779.871	1448.346	(n/a)
<b>Log (G:)</b>	0.000	0.001	0.000	839.876	11750.661

#### Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	7.017	5.126	8.773
<b>Available MBytes</b>	25566.081	25563.000	25666.000
<b>Free System Page Table Entries</b>	16755803.000	16755803.000	16755803.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	75174579.200	75157504.000	75390976.000
<b>Pool Paged Bytes</b>	35443131.733	35352576.000	35909632.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:13 PM -- Jetstress testing begins ...  
 1/30/2008 7:19:13 PM -- Prepare testing begins ...  
 1/30/2008 7:19:14 PM -- Attaching databases ...  
 1/30/2008 7:19:14 PM -- Prepare testing ends.  
 1/30/2008 7:19:14 PM -- Dispatching transactions begins ...  
 1/30/2008 7:19:14 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
 1/30/2008 7:19:14 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 7:19:15 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 7:19:15 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 7:19:16 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 7:19:16 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 7:19:16 PM -- Attaining prerequisites:  
 1/30/2008 7:22:08 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1694990000.0 (lower bound: 1691143000.0, upper bound: none)  
 1/30/2008 9:22:09 PM -- Performance logging ends.  
 1/30/2008 9:22:09 PM -- JetInterop batch transaction stats: 91169, 90356, 90277, 90634, 90597, 90853, and 91203.  
 1/30/2008 9:22:18 PM -- Dispatching transactions ends.  
 1/30/2008 9:22:18 PM -- Shutting down databases ...  
 1/30/2008 9:22:26 PM -- Instance996.1 (complete), Instance996.2 (complete), Instance996.3 (complete), Instance996.4 (complete), Instance996.5 (complete), Instance996.6 (complete), and Instance996.7 (complete)  
 1/30/2008 9:22:27 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 9:22:27 PM -- Verifying database checksums ...

1/30/2008 10:58:16 PM -- F: (100% processed)  
 1/30/2008 10:58:17 PM -- Performance logging ends.  
 1/30/2008 10:58:17 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.blg](#) has 191 samples.  
 1/30/2008 10:58:20 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.html](#) is saved.  
 1/30/2008 10:58:20 PM -- Verifying log checksums ...  
 1/30/2008 10:58:31 PM -- G:\sg1 (21 logs passed), G:\sg2 (21 logs passed), G:\sg3 (23 logs passed), G:\sg4 (22 logs passed), G:\sg5 (21 logs passed), G:\sg6 (21 logs passed), and G:\sg7 (21 logs passed)  
 1/30/2008 10:58:31 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.blg](#) has 491 samples.  
 1/30/2008 10:58:31 PM -- Creating test report ...  
 1/30/2008 10:58:35 PM -- Volume F: has 0.0118 for Avg. Disk sec/Read.  
 1/30/2008 10:58:35 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
 1/30/2008 10:58:35 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
 1/30/2008 10:58:35 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
 1/30/2008 10:58:35 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:58:35 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.xml](#) has 479 samples queried.

## Microsoft Exchange Server **Jetstress**

### *Streaming backup Test Result Report*

#### Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
<b>Instance744.1</b>	240649.77	01:30:46	44.19
<b>Instance744.2</b>	240301.77	01:28:51	45.07
<b>Instance744.3</b>	240277.77	01:28:52	45.06
<b>Instance744.4</b>	240421.77	01:28:51	45.09
<b>Instance744.5</b>	240653.77	01:29:36	44.76
<b>Instance744.6</b>	240661.77	01:29:36	44.76
<b>Instance744.7</b>	240423.77	01:21:10	49.36

#### Jetstress System Parameters

**Thread count** 12 (per-storage group)  
**Log buffers** 9000  
**Minimum database cache** 224.0 MB  
**Maximum database cache** 1792.0 MB  
**Insert operations** 25%  
**Delete operations** 10%  
**Replace operations** 50%  
**Read operations** 15%  
**Lazy commits** 80%

### Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.003	6.50912510900256E-05	2492.524	0.039	(n/a)
<b>Log (G:)</b>	0.000	9.16351076060992E-05	0.000	0.047	751.856

### Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	7.335	0.877	8.403
<b>Available MBytes</b>	27433.608	27426.000	27435.000
<b>Free System Page Table Entries</b>	16755273.000	16755273.000	16755273.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	76734237.702	76722176.000	76767232.000
<b>Pool Paged Bytes</b>	34668747.669	34553856.000	35643392.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:24 PM -- Jetstress testing begins ...

1/30/2008 7:19:24 PM -- Prepare testing begins ...

1/30/2008 7:19:25 PM -- Attaching databases ...

1/30/2008 7:19:25 PM -- Prepare testing ends.

1/30/2008 7:19:25 PM -- Dispatching transactions begins ...

1/30/2008 7:19:25 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:25 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:26 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:26 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:27 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:27 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:27 PM -- Attaining prerequisites:

1/30/2008 7:22:18 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1693663000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:22:19 PM -- Performance logging ends.

1/30/2008 9:22:19 PM -- JetInterop batch transaction stats: 90046, 89962, 89952, 90078, 90334, 89865, and 89559.

1/30/2008 9:22:20 PM -- Dispatching transactions ends.

1/30/2008 9:22:20 PM -- Shutting down databases ...

1/30/2008 9:22:29 PM -- Instance744.1 (complete), Instance744.2 (complete), Instance744.3 (complete), Instance744.4 (complete), Instance744.5 (complete), Instance744.6 (complete), and Instance744.7 (complete)

1/30/2008 9:22:30 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:30 PM -- Verifying database checksums ...

1/30/2008 10:46:12 PM -- F: (100% processed)

1/30/2008 10:46:14 PM -- Performance logging ends.

1/30/2008 10:46:14 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.blg](#) has 167 samples.

1/30/2008 10:46:15 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.html](#) is saved.

1/30/2008 10:46:15 PM -- Verifying log checksums ...

1/30/2008 10:46:37 PM -- G:\sg1 (22 logs passed), G:\sg2 (23 logs passed), G:\sg3 (22 logs passed), G:\sg4 (21 logs passed), G:\sg5 (22 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
1/30/2008 10:46:37 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.blg](#) has 491 samples.  
1/30/2008 10:46:37 PM -- Creating test report ...  
1/30/2008 10:46:40 PM -- Volume F: has 0.0119 for Avg. Disk sec/Read.  
1/30/2008 10:46:40 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
1/30/2008 10:46:40 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
1/30/2008 10:46:40 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
1/30/2008 10:46:40 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
1/30/2008 10:46:40 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.xml](#) has 479 samples queried.  
1/30/2008 10:46:40 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.html](#) is saved.  
1/30/2008 10:46:40 PM -- Jetstress testing ends.  
1/30/2008 11:08:17 PM -- Jetstress testing begins ...  
1/30/2008 11:08:17 PM -- Prepare testing begins ...  
1/30/2008 11:08:17 PM -- Attaching databases ...  
1/30/2008 11:08:17 PM -- Prepare testing ends.  
1/30/2008 11:08:17 PM -- Dispatching transactions begins ...  
1/30/2008 11:08:17 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
1/30/2008 11:08:17 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 11:08:17 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 11:08:18 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 11:08:18 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 11:08:18 PM -- Performance logging begins (interval: 15000 ms).  
1/30/2008 11:08:18 PM -- Generating log files ...  
1/30/2008 11:22:26 PM -- G:\sg1 (102.4% generated), G:\sg2 (101.0% generated), G:\sg3 (102.8% generated), G:\sg4 (103.2% generated), G:\sg5 (100.2% generated), G:\sg6 (102.0% generated), and G:\sg7 (104.0% generated)  
1/30/2008 11:22:27 PM -- Performance logging ends.  
1/30/2008 11:22:27 PM -- JetInterop batch transaction stats: 10000, 9980, 9939, 9921, 9781, 9876, and 10221.  
1/30/2008 11:22:27 PM -- Dispatching transactions ends.  
1/30/2008 11:22:27 PM -- Shutting down databases ...  
1/30/2008 11:22:37 PM -- Instance744.1 (complete), Instance744.2 (complete), Instance744.3 (complete), Instance744.4 (complete), Instance744.5 (complete), Instance744.6 (complete), and Instance744.7 (complete)  
1/30/2008 11:22:37 PM -- Performance logging begins (interval: 30000 ms).  
1/30/2008 11:22:37 PM -- Verifying database checksums ...  
1/31/2008 12:46:30 AM -- F: (100% processed)  
1/31/2008 12:46:31 AM -- Performance logging ends.  
1/31/2008 12:46:31 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_37.blg](#) has 167 samples.  
1/31/2008 12:46:31 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_37.html](#) is saved.  
1/31/2008 12:46:31 AM -- Verifying log checksums ...  
1/31/2008 12:47:55 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.blg](#) has 56 samples.  
1/31/2008 12:47:55 AM -- Creating test report ...  
1/31/2008 12:47:55 AM -- Volume F: has 0.0125 for Avg. Disk sec/Read.

1/31/2008 12:47:55 AM -- Volume G: has 0.0008 for Avg. Disk sec/Write.  
 1/31/2008 12:47:55 AM -- Volume G: has 0.0002 for Avg. Disk sec/Read.  
 1/31/2008 12:47:55 AM -- Test has 2.19621539241372 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:47:55 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.xml](#) has 55 samples queried.  
 1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.html](#) is saved.  
 1/31/2008 12:47:57 AM -- Performance logging begins (interval: 4000 ms).  
 1/31/2008 12:47:57 AM -- Recovering databases ...  
 1/31/2008 12:52:36 AM -- Performance logging ends.  
 1/31/2008 12:52:36 AM -- Instance744.1 (265.2418572), Instance744.2 (241.2440076), Instance744.3 (262.9920588), Instance744.4 (277.4907596), Instance744.5 (246.2435596), Instance744.6 (271.4912972), and Instance744.7 (256.4926412)  
 1/31/2008 12:52:36 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_47\\_55.blg](#) has 69 samples.  
 1/31/2008 12:52:36 AM -- Creating test report ...  
 1/31/2008 12:52:37 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_47\\_55.html](#) is saved.  
 1/31/2008 12:52:37 AM -- Jetstress testing ends.  
 1/31/2008 6:24:20 AM -- Jetstress testing begins ...  
 1/31/2008 6:24:20 AM -- Prepare testing begins ...  
 1/31/2008 6:24:21 AM -- Attaching databases ...  
 1/31/2008 6:24:21 AM -- Prepare testing ends.  
 1/31/2008 6:24:23 AM -- Performance logging begins (interval: 30000 ms).  
 1/31/2008 6:24:23 AM -- Streaming backup databases ...  
 1/31/2008 7:55:10 AM -- Performance logging ends.  
 1/31/2008 7:55:10 AM -- Instance744.1 (100% processed), Instance744.2 (100% processed), Instance744.3 (100% processed), Instance744.4 (100% processed), Instance744.5 (100% processed), Instance744.6 (100% processed), and Instance744.7 (100% processed)  
 1/31/2008 7:55:10 AM -- [C:\Program Files\Exchange2007\StreamingBackup\\_2008\\_1\\_31\\_6\\_24\\_21.blg](#) has 181 samples.  
 1/31/2008 7:55:10 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### **Streaming backup Test Result Report**

Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
<b>Instance2672.1</b>	239461.77	01:27:07	45.81
<b>Instance2672.2</b>	239565.77	01:29:13	44.75
<b>Instance2672.3</b>	239691.77	01:27:23	45.71
<b>Instance2672.4</b>	239551.77	01:27:59	45.37
<b>Instance2672.5</b>	239727.77	01:27:12	45.82
<b>Instance2672.6</b>	239745.77	01:27:46	45.53
<b>Instance2672.7</b>	239753.77	01:19:01	50.57

Jetstress System Parameters

**Thread count** 12 (per-storage group)  
**Log buffers** 9000  
**Minimum database cache** 224.0 MB  
**Maximum database cache** 1792.0 MB  
**Insert operations** 25%  
**Delete operations** 10%  
**Replace operations** 50%  
**Read operations** 15%  
**Lazy commits** 80%

#### Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.003	6.4740577359466E-05	2524.538	0.038	(n/a)
<b>Log (G:)</b>	0.000	2.22484530535378E-05	0.000	0.048	506.816

#### Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	9.098	1.072	10.709
<b>Available MBytes</b>	27441.567	27435.000	27443.000
<b>Free System Page Table Entries</b>	16755203.000	16755203.000	16755203.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	76487507.416	76480512.000	76521472.000
<b>Pool Paged Bytes</b>	36250704.539	36143104.000	37224448.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/31/2008 6:24:16 AM -- Jetstress testing begins ...

1/31/2008 6:24:16 AM -- Prepare testing begins ...

1/31/2008 6:24:16 AM -- Attaching databases ...

1/31/2008 6:24:16 AM -- Prepare testing ends.

1/31/2008 6:24:19 AM -- Performance logging begins (interval: 30000 ms).

1/31/2008 6:24:19 AM -- Streaming backup databases ...

1/31/2008 7:53:34 AM -- Performance logging ends.

1/31/2008 7:53:34 AM -- Instance2672.1 (100% processed), Instance2672.2 (100% processed), Instance2672.3 (100% processed), Instance2672.4 (100% processed), Instance2672.5 (100% processed), Instance2672.6 (100% processed), and Instance2672.7 (100% processed)

1/31/2008 7:53:34 AM -- [C:\Program](#)

[Files\Exchange2007\StreamingBackup\\_2008\\_1\\_31\\_6\\_24\\_16.blg](#) has 178 samples.

1/31/2008 7:53:34 AM -- Creating test report ...

# Microsoft Exchange Server Jetstress

## Streaming backup Test Result Report

Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
<b>Instance2052.1</b>	239089.77	01:24:26	47.19
<b>Instance2052.2</b>	239201.77	01:24:25	47.22
<b>Instance2052.3</b>	239069.77	01:24:26	47.19
<b>Instance2052.4</b>	239059.77	01:25:26	46.64
<b>Instance2052.5</b>	239165.77	01:25:26	46.65
<b>Instance2052.6</b>	239251.77	01:24:26	47.23
<b>Instance2052.7</b>	239055.77	01:18:54	50.49

Jetstress System Parameters

<b>Thread count</b>	12 (per-storage group)
<b>Log buffers</b>	9000
<b>Minimum database cache</b>	224.0 MB
<b>Maximum database cache</b>	1792.0 MB
<b>Insert operations</b>	25%
<b>Delete operations</b>	10%
<b>Replace operations</b>	50%
<b>Read operations</b>	15%
<b>Lazy commits</b>	80%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.002	5.97236306151313E-05	2635.811	0.033	(n/a)
<b>Log (G:)</b>	0.000	7.75883091267707E-05	0.000	0.042	602.768

Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	8.493	3.027	10.137
<b>Available MBytes</b>	27437.665	27429.000	27439.000
<b>Free System Page Table Entries</b>	16755413.000	16755413.000	16755413.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	75955549.365	75931648.000	76001280.000
<b>Pool Paged Bytes</b>	33922903.341	33828864.000	34877440.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:15 PM -- Jetstress testing begins ...  
 1/30/2008 7:19:15 PM -- Prepare testing begins ...  
 1/30/2008 7:19:16 PM -- Attaching databases ...  
 1/30/2008 7:19:16 PM -- Prepare testing ends.  
 1/30/2008 7:19:16 PM -- Dispatching transactions begins ...  
 1/30/2008 7:19:16 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
 1/30/2008 7:19:16 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 7:19:16 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 7:19:16 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 7:19:18 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 7:19:18 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 7:19:18 PM -- Attaining prerequisites:  
 1/30/2008 7:21:58 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1697513000.0 (lower bound: 1691143000.0, upper bound: none)  
 1/30/2008 9:21:59 PM -- Performance logging ends.  
 1/30/2008 9:21:59 PM -- JetInterop batch transaction stats: 83361, 83224, 83034, 82537, 82823, 83600, and 83655.  
 1/30/2008 9:22:00 PM -- Dispatching transactions ends.  
 1/30/2008 9:22:00 PM -- Shutting down databases ...  
 1/30/2008 9:22:08 PM -- Instance2052.1 (complete), Instance2052.2 (complete), Instance2052.3 (complete), Instance2052.4 (complete), Instance2052.5 (complete), Instance2052.6 (complete), and Instance2052.7 (complete)  
 1/30/2008 9:22:09 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 9:22:09 PM -- Verifying database checksums ...  
 1/30/2008 10:49:30 PM -- F: (100% processed)  
 1/30/2008 10:49:31 PM -- Performance logging ends.  
 1/30/2008 10:49:31 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.blg](#) has 174 samples.  
 1/30/2008 10:49:32 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.html](#) is saved.  
 1/30/2008 10:49:32 PM -- Verifying log checksums ...  
 1/30/2008 10:49:50 PM -- G:\sg1 (22 logs passed), G:\sg2 (22 logs passed), G:\sg3 (22 logs passed), G:\sg4 (23 logs passed), G:\sg5 (21 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
 1/30/2008 10:49:50 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.blg](#) has 490 samples.  
 1/30/2008 10:49:50 PM -- Creating test report ...  
 1/30/2008 10:49:53 PM -- Volume F: has 0.0113 for Avg. Disk sec/Read.  
 1/30/2008 10:49:53 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
 1/30/2008 10:49:53 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
 1/30/2008 10:49:53 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
 1/30/2008 10:49:53 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:49:53 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.xml](#) has 479 samples queried.  
 1/30/2008 10:49:53 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.html](#) is saved.  
 1/30/2008 10:49:53 PM -- Jetstress testing ends.  
 1/30/2008 11:09:40 PM -- Jetstress testing begins ...  
 1/30/2008 11:09:40 PM -- Prepare testing begins ...  
 1/30/2008 11:09:40 PM -- Attaching databases ...  
 1/30/2008 11:09:40 PM -- Prepare testing ends.  
 1/30/2008 11:09:40 PM -- Dispatching transactions begins ...  
 1/30/2008 11:09:40 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 11:09:40 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 11:09:41 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 11:09:41 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 11:09:41 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 11:09:41 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 11:09:41 PM -- Generating log files ...  
 1/30/2008 11:23:35 PM -- G:\sg1 (103.4% generated), G:\sg2 (104.2% generated), G:\sg3 (100.2% generated), G:\sg4 (103.6% generated), G:\sg5 (104.6% generated), G:\sg6 (100.6% generated), and G:\sg7 (102.6% generated)  
 1/30/2008 11:23:36 PM -- Performance logging ends.  
 1/30/2008 11:23:36 PM -- JetInterop batch transaction stats: 10074, 10092, 9892, 10104, 10222, 9876, and 9900.  
 1/30/2008 11:23:36 PM -- Dispatching transactions ends.  
 1/30/2008 11:23:36 PM -- Shutting down databases ...  
 1/30/2008 11:23:47 PM -- Instance2052.1 (complete), Instance2052.2 (complete), Instance2052.3 (complete), Instance2052.4 (complete), Instance2052.5 (complete), Instance2052.6 (complete), and Instance2052.7 (complete)  
 1/30/2008 11:23:48 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 11:23:48 PM -- Verifying database checksums ...  
 1/31/2008 12:51:14 AM -- F: (100% processed)  
 1/31/2008 12:51:15 AM -- Performance logging ends.  
 1/31/2008 12:51:15 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_23\\_47.blg](#) has 174 samples.  
 1/31/2008 12:51:16 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_23\\_47.html](#) is saved.  
 1/31/2008 12:51:16 AM -- Verifying log checksums ...  
 1/31/2008 12:52:07 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:52:07 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.blg](#) has 55 samples.  
 1/31/2008 12:52:07 AM -- Creating test report ...  
 1/31/2008 12:52:08 AM -- Volume F: has 0.0117 for Avg. Disk sec/Read.  
 1/31/2008 12:52:08 AM -- Volume G: has 0.0014 for Avg. Disk sec/Write.  
 1/31/2008 12:52:08 AM -- Volume G: has 0.0005 for Avg. Disk sec/Read.  
 1/31/2008 12:52:08 AM -- Test has 2.19612190912938 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:52:08 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:52:08 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.xml](#) has 54 samples queried.  
 1/31/2008 12:52:08 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.html](#) is saved.  
 1/31/2008 12:52:10 AM -- Performance logging begins (interval: 4000 ms).  
 1/31/2008 12:52:10 AM -- Recovering databases ...  
 1/31/2008 12:54:26 AM -- Performance logging ends.  
 1/31/2008 12:54:26 AM -- Instance2052.1 (135.0061199), Instance2052.2 (129.0065423), Instance2052.3 (126.7567007), Instance2052.4 (127.7566303), Instance2052.5 (128.0066127), Instance2052.6 (127.5066479), and Instance2052.7 (135.0061199)  
 1/31/2008 12:54:26 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_52\\_8.blg](#) has 33 samples.  
 1/31/2008 12:54:26 AM -- Creating test report ...  
 1/31/2008 12:54:27 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_52\\_8.html](#) is saved.  
 1/31/2008 12:54:27 AM -- Jetstress testing ends.  
 1/31/2008 6:24:31 AM -- Jetstress testing begins ...  
 1/31/2008 6:24:31 AM -- Prepare testing begins ...

1/31/2008 6:24:33 AM -- Attaching databases ...  
 1/31/2008 6:24:33 AM -- Prepare testing ends.  
 1/31/2008 6:24:35 AM -- Performance logging begins (interval: 30000 ms).  
 1/31/2008 6:24:35 AM -- Streaming backup databases ...  
 1/31/2008 7:50:03 AM -- Performance logging ends.  
 1/31/2008 7:50:03 AM -- Instance2052.1 (100% processed), Instance2052.2 (100% processed), Instance2052.3 (100% processed), Instance2052.4 (100% processed), Instance2052.5 (100% processed), Instance2052.6 (100% processed), and Instance2052.7 (100% processed)  
 1/31/2008 7:50:03 AM -- [C:\Program Files\Exchange2007\StreamingBackup\\_2008\\_1\\_31\\_6\\_24\\_33.blg](#) has 170 samples.  
 1/31/2008 7:50:03 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### **Streaming backup Test Result Report**

Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
<b>Instance996.1</b>	236687.65	01:26:22	45.67
<b>Instance996.2</b>	236359.65	01:26:22	45.61
<b>Instance996.3</b>	236247.65	01:26:22	45.59
<b>Instance996.4</b>	236455.65	01:26:22	45.63
<b>Instance996.5</b>	236333.65	01:26:22	45.61
<b>Instance996.6</b>	236611.65	01:26:22	45.66
<b>Instance996.7</b>	236421.65	01:18:55	49.92

Jetstress System Parameters

**Thread count** 12 (per-storage group)  
**Log buffers** 9000  
**Minimum database cache** 224.0 MB  
**Maximum database cache** 1792.0 MB  
**Insert operations** 25%  
**Delete operations** 10%  
**Replace operations** 50%  
**Read operations** 15%  
**Lazy commits** 80%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.003	5.13690208427051E-05	2569.740	0.011	(n/a)
<b>Log (G:)</b>	0.000	4.85948667966212E-05	0.000	0.011	357.302

## Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	10.192	6.572	12.327
<b>Available MBytes</b>	27420.058	27412.000	27422.000
<b>Free System Page Table Entries</b>	16755243.000	16755243.000	16755243.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	77533612.651	77467648.000	77606912.000
<b>Pool Paged Bytes</b>	35807351.070	35713024.000	36802560.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log 1/30/2008 7:19:13 PM -- Jetstress testing begins ...

1/30/2008 7:19:13 PM -- Prepare testing begins ...

1/30/2008 7:19:14 PM -- Attaching databases ...

1/30/2008 7:19:14 PM -- Prepare testing ends.

1/30/2008 7:19:14 PM -- Dispatching transactions begins ...

1/30/2008 7:19:14 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:14 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:15 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:15 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:16 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:16 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:16 PM -- Attaining prerequisites:

1/30/2008 7:22:08 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1694990000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:22:09 PM -- Performance logging ends.

1/30/2008 9:22:09 PM -- JetInterop batch transaction stats: 91169, 90356, 90277, 90634, 90597, 90853, and 91203.

1/30/2008 9:22:18 PM -- Dispatching transactions ends.

1/30/2008 9:22:18 PM -- Shutting down databases ...

1/30/2008 9:22:26 PM -- Instance996.1 (complete), Instance996.2 (complete), Instance996.3 (complete), Instance996.4 (complete), Instance996.5 (complete), Instance996.6 (complete), and Instance996.7 (complete)

1/30/2008 9:22:27 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:27 PM -- Verifying database checksums ...

1/30/2008 10:58:16 PM -- F: (100% processed)

1/30/2008 10:58:17 PM -- Performance logging ends.

1/30/2008 10:58:17 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.blg](#) has 191 samples.

1/30/2008 10:58:20 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.html](#) is saved.

1/30/2008 10:58:20 PM -- Verifying log checksums ...

1/30/2008 10:58:31 PM -- G:\sg1 (21 logs passed), G:\sg2 (21 logs passed), G:\sg3 (23 logs passed), G:\sg4 (22 logs passed), G:\sg5 (21 logs passed), G:\sg6 (21 logs passed), and G:\sg7 (21 logs passed)

1/30/2008 10:58:31 PM -- [C:\Program](#)

[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.blg](#) has 491 samples.

1/30/2008 10:58:31 PM -- Creating test report ...

1/30/2008 10:58:35 PM -- Volume F: has 0.0118 for Avg. Disk sec/Read.

1/30/2008 10:58:35 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.

1/30/2008 10:58:35 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
 1/30/2008 10:58:35 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
 1/30/2008 10:58:35 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:58:35 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.xml](#) has 479 samples queried.  
 1/30/2008 10:58:35 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.html](#) is saved.  
 1/30/2008 10:58:35 PM -- Jetstress testing ends.  
 1/30/2008 11:08:43 PM -- Jetstress testing begins ...  
 1/30/2008 11:08:43 PM -- Prepare testing begins ...  
 1/30/2008 11:08:44 PM -- Attaching databases ...  
 1/30/2008 11:08:44 PM -- Prepare testing ends.  
 1/30/2008 11:08:44 PM -- Dispatching transactions begins ...  
 1/30/2008 11:08:44 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
 1/30/2008 11:08:44 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 11:08:44 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 11:08:44 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 11:08:45 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 11:08:45 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 11:08:45 PM -- Generating log files ...  
 1/30/2008 11:22:26 PM -- G:\sg1 (101.0% generated), G:\sg2 (100.2% generated), G:\sg3 (101.0% generated), G:\sg4 (102.0% generated), G:\sg5 (101.0% generated), G:\sg6 (104.6% generated), and G:\sg7 (100.8% generated)  
 1/30/2008 11:22:27 PM -- Performance logging ends.  
 1/30/2008 11:22:27 PM -- JetInterop batch transaction stats: 9814, 9679, 9928, 9840, 9656, 9855, and 9722.  
 1/30/2008 11:22:27 PM -- Dispatching transactions ends.  
 1/30/2008 11:22:27 PM -- Shutting down databases ...  
 1/30/2008 11:22:35 PM -- Instance996.1 (complete), Instance996.2 (complete), Instance996.3 (complete), Instance996.4 (complete), Instance996.5 (complete), Instance996.6 (complete), and Instance996.7 (complete)  
 1/30/2008 11:22:36 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 11:22:36 PM -- Verifying database checksums ...  
 1/31/2008 12:58:41 AM -- F: (100% processed)  
 1/31/2008 12:58:42 AM -- Performance logging ends.  
 1/31/2008 12:58:42 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.blg](#) has 192 samples.  
 1/31/2008 12:58:43 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.html](#) is saved.  
 1/31/2008 12:58:43 AM -- Verifying log checksums ...  
 1/31/2008 12:59:36 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:59:36 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.blg](#) has 54 samples.  
 1/31/2008 12:59:36 AM -- Creating test report ...  
 1/31/2008 12:59:37 AM -- Volume F: has 0.0123 for Avg. Disk sec/Read.  
 1/31/2008 12:59:37 AM -- Volume G: has 0.0008 for Avg. Disk sec/Write.  
 1/31/2008 12:59:37 AM -- Volume G: has 0.0002 for Avg. Disk sec/Read.  
 1/31/2008 12:59:37 AM -- Test has 1.26317308266576 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:59:37 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:59:37 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.xml](#) has 53 samples queried.  
 1/31/2008 12:59:37 AM -- [C:\Program](#)

[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.html](#) is saved.  
 1/31/2008 12:59:39 AM -- Performance logging begins (interval: 4000 ms).  
 1/31/2008 12:59:39 AM -- Recovering databases ...  
 1/31/2008 1:02:57 AM -- Performance logging ends.  
 1/31/2008 1:02:57 AM -- Instance996.1 (188.9927424), Instance996.2 (180.7430592),  
 Instance996.3 (174.99328), Instance996.4 (176.9932032), Instance996.5 (182.9929728),  
 Instance996.6 (192.7425984), and Instance996.7 (196.7424448)  
 1/31/2008 1:02:57 AM -- [C:\Program](#)  
[Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_59\\_37.blg](#) has 49 samples.  
 1/31/2008 1:02:57 AM -- Creating test report ...  
 1/31/2008 1:02:58 AM -- [C:\Program](#)  
[Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_59\\_37.html](#) is saved.  
 1/31/2008 1:02:58 AM -- Jetstress testing ends.  
 1/31/2008 6:24:27 AM -- Jetstress testing begins ...  
 1/31/2008 6:24:27 AM -- Prepare testing begins ...  
 1/31/2008 6:24:28 AM -- Attaching databases ...  
 1/31/2008 6:24:28 AM -- Prepare testing ends.  
 1/31/2008 6:24:31 AM -- Performance logging begins (interval: 30000 ms).  
 1/31/2008 6:24:31 AM -- Streaming backup databases ...  
 1/31/2008 7:50:54 AM -- Performance logging ends.  
 1/31/2008 7:50:54 AM -- Instance996.1 (100% processed), Instance996.2 (100%  
 processed), Instance996.3 (100% processed), Instance996.4 (100% processed),  
 Instance996.5 (100% processed), Instance996.6 (100% processed), and Instance996.7  
 (100% processed)  
 1/31/2008 7:50:54 AM -- [C:\Program](#)  
[Files\Exchange2007\StreamingBackup\\_2008\\_1\\_31\\_6\\_24\\_28.blg](#) has 172 samples.  
 1/31/2008 7:50:54 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### *SoftRecovery Test Result Report*

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
<b>Instance744.1</b>	512	265.2418572
<b>Instance744.2</b>	505	241.2440076
<b>Instance744.3</b>	515	262.9920588
<b>Instance744.4</b>	516	277.4907596
<b>Instance744.5</b>	500	246.2435596
<b>Instance744.6</b>	510	271.4912972
<b>Instance744.7</b>	519	256.4926412

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.033	0.015	3812.908	52.861	(n/a)
<b>Log (G:)</b>	0.003	0.006	429.209	21.243	5149.421

## Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	7.153	1.847	9.269
<b>Available MBytes</b>	25806.855	25557.000	27290.000
<b>Free System Page Table Entries</b>	16755273.000	16755273.000	16755273.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	77213933.449	77094912.000	77377536.000
<b>Pool Paged Bytes</b>	35580883.478	35016704.000	35921920.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:24 PM -- Jetstress testing begins ...

1/30/2008 7:19:24 PM -- Prepare testing begins ...

1/30/2008 7:19:25 PM -- Attaching databases ...

1/30/2008 7:19:25 PM -- Prepare testing ends.

1/30/2008 7:19:25 PM -- Dispatching transactions begins ...

1/30/2008 7:19:25 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:25 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:26 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:26 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:27 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:27 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:27 PM -- Attaining prerequisites:

1/30/2008 7:22:18 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1693663000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:22:19 PM -- Performance logging ends.

1/30/2008 9:22:19 PM -- JetInterop batch transaction stats: 90046, 89962, 89952, 90078, 90334, 89865, and 89559.

1/30/2008 9:22:20 PM -- Dispatching transactions ends.

1/30/2008 9:22:20 PM -- Shutting down databases ...

1/30/2008 9:22:29 PM -- Instance744.1 (complete), Instance744.2 (complete), Instance744.3 (complete), Instance744.4 (complete), Instance744.5 (complete), Instance744.6 (complete), and Instance744.7 (complete)

1/30/2008 9:22:30 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:30 PM -- Verifying database checksums ...

1/30/2008 10:46:12 PM -- F: (100% processed)

1/30/2008 10:46:14 PM -- Performance logging ends.

1/30/2008 10:46:14 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.blg](#) has 167 samples.

1/30/2008 10:46:15 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_29.html](#) is saved.

1/30/2008 10:46:15 PM -- Verifying log checksums ...

1/30/2008 10:46:37 PM -- G:\sg1 (22 logs passed), G:\sg2 (23 logs passed), G:\sg3 (22 logs passed), G:\sg4 (21 logs passed), G:\sg5 (22 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)

1/30/2008 10:46:37 PM -- [C:\Program](#)

[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.blg](#) has 491 samples.

1/30/2008 10:46:37 PM -- Creating test report ...

1/30/2008 10:46:40 PM -- Volume F: has 0.0119 for Avg. Disk sec/Read.

1/30/2008 10:46:40 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.

1/30/2008 10:46:40 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.

1/30/2008 10:46:40 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

1/30/2008 10:46:40 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:46:40 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.xml](#) has 479 samples queried.  
 1/30/2008 10:46:40 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_26.html](#) is saved.  
 1/30/2008 10:46:40 PM -- Jetstress testing ends.  
 1/30/2008 11:08:17 PM -- Jetstress testing begins ...  
 1/30/2008 11:08:17 PM -- Prepare testing begins ...  
 1/30/2008 11:08:17 PM -- Attaching databases ...  
 1/30/2008 11:08:17 PM -- Prepare testing ends.  
 1/30/2008 11:08:17 PM -- Dispatching transactions begins ...  
 1/30/2008 11:08:17 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
 1/30/2008 11:08:17 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 11:08:17 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 11:08:18 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 11:08:18 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 11:08:18 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 11:08:18 PM -- Generating log files ...  
 1/30/2008 11:22:26 PM -- G:\sg1 (102.4% generated), G:\sg2 (101.0% generated), G:\sg3 (102.8% generated), G:\sg4 (103.2% generated), G:\sg5 (100.2% generated), G:\sg6 (102.0% generated), and G:\sg7 (104.0% generated)  
 1/30/2008 11:22:27 PM -- Performance logging ends.  
 1/30/2008 11:22:27 PM -- JetInterop batch transaction stats: 10000, 9980, 9939, 9921, 9781, 9876, and 10221.  
 1/30/2008 11:22:27 PM -- Dispatching transactions ends.  
 1/30/2008 11:22:27 PM -- Shutting down databases ...  
 1/30/2008 11:22:37 PM -- Instance744.1 (complete), Instance744.2 (complete), Instance744.3 (complete), Instance744.4 (complete), Instance744.5 (complete), Instance744.6 (complete), and Instance744.7 (complete)  
 1/30/2008 11:22:37 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 11:22:37 PM -- Verifying database checksums ...  
 1/31/2008 12:46:30 AM -- F: (100% processed)  
 1/31/2008 12:46:31 AM -- Performance logging ends.  
 1/31/2008 12:46:31 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_37.blg](#) has 167 samples.  
 1/31/2008 12:46:31 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_37.html](#) is saved.  
 1/31/2008 12:46:31 AM -- Verifying log checksums ...  
 1/31/2008 12:47:55 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.blg](#) has 56 samples.  
 1/31/2008 12:47:55 AM -- Creating test report ...  
 1/31/2008 12:47:55 AM -- Volume F: has 0.0125 for Avg. Disk sec/Read.  
 1/31/2008 12:47:55 AM -- Volume G: has 0.0008 for Avg. Disk sec/Write.  
 1/31/2008 12:47:55 AM -- Volume G: has 0.0002 for Avg. Disk sec/Read.  
 1/31/2008 12:47:55 AM -- Test has 2.19621539241372 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:47:55 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.xml](#) has 55 samples queried.  
 1/31/2008 12:47:55 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_18.html](#) is saved.  
 1/31/2008 12:47:57 AM -- Performance logging begins (interval: 4000 ms).

1/31/2008 12:47:57 AM -- Recovering databases ...  
 1/31/2008 12:52:36 AM -- Performance logging ends.  
 1/31/2008 12:52:36 AM -- Instance744.1 (265.2418572), Instance744.2 (241.2440076),  
 Instance744.3 (262.9920588), Instance744.4 (277.4907596), Instance744.5 (246.2435596),  
 Instance744.6 (271.4912972), and Instance744.7 (256.4926412)  
 1/31/2008 12:52:36 AM -- [C:\Program](#)  
[Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_47\\_55.blg](#) has 69 samples.  
 1/31/2008 12:52:36 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### **SoftRecovery Test Result Report**

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
<b>Instance1548.1</b>	521	173.2523182
<b>Instance1548.2</b>	513	166.5028366
<b>Instance1548.3</b>	521	165.2529326
<b>Instance1548.4</b>	515	164.0030286
<b>Instance1548.5</b>	501	162.5031438
<b>Instance1548.6</b>	519	166.002875
<b>Instance1548.7</b>	517	167.0027982

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.025	0.004	7314.635	85.941	(n/a)
<b>Log (G:)</b>	0.003	0.005	699.133	29.285	5049.094

Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	12.882	2.629	16.595
<b>Available MBytes</b>	25843.558	25554.000	27267.000
<b>Free System Page Table Entries</b>	16755203.000	16755203.000	16755203.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	77130728.186	76750848.000	77426688.000
<b>Pool Paged Bytes</b>	36699778.977	36069376.000	36900864.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:17 PM -- Jetstress testing begins ...

1/30/2008 7:19:17 PM -- Prepare testing begins ...

1/30/2008 7:19:18 PM -- Attaching databases ...

1/30/2008 7:19:18 PM -- Prepare testing ends.

1/30/2008 7:19:18 PM -- Dispatching transactions begins ...

1/30/2008 7:19:18 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:18 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 7:19:18 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 7:19:18 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 7:19:19 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 7:19:19 PM -- Performance logging begins (interval: 15000 ms).  
1/30/2008 7:19:19 PM -- Attaining prerequisites:  
1/30/2008 7:21:57 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1696317000.0 (lower bound: 1691143000.0, upper bound: none)  
1/30/2008 9:21:59 PM -- Performance logging ends.  
1/30/2008 9:21:59 PM -- JetInterop batch transaction stats: 96141, 96351, 96431, 96518, 96331, 96218, and 96103.  
1/30/2008 9:21:59 PM -- Dispatching transactions ends.  
1/30/2008 9:21:59 PM -- Shutting down databases ...  
1/30/2008 9:22:10 PM -- Instance1548.1 (complete), Instance1548.2 (complete), Instance1548.3 (complete), Instance1548.4 (complete), Instance1548.5 (complete), Instance1548.6 (complete), and Instance1548.7 (complete)  
1/30/2008 9:22:10 PM -- Performance logging begins (interval: 30000 ms).  
1/30/2008 9:22:10 PM -- Verifying database checksums ...  
1/30/2008 10:49:43 PM -- F: (100% processed)  
1/30/2008 10:49:44 PM -- Performance logging ends.  
1/30/2008 10:49:44 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_10.blg](#) has 175 samples.  
1/30/2008 10:49:45 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_10.html](#) is saved.  
1/30/2008 10:49:46 PM -- Verifying log checksums ...  
1/30/2008 10:50:07 PM -- G:\sg1 (22 logs passed), G:\sg2 (21 logs passed), G:\sg3 (23 logs passed), G:\sg4 (23 logs passed), G:\sg5 (22 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
1/30/2008 10:50:07 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.blg](#) has 490 samples.  
1/30/2008 10:50:07 PM -- Creating test report ...  
1/30/2008 10:50:10 PM -- Volume F: has 0.0111 for Avg. Disk sec/Read.  
1/30/2008 10:50:10 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
1/30/2008 10:50:10 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
1/30/2008 10:50:10 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
1/30/2008 10:50:10 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
1/30/2008 10:50:10 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.xml](#) has 479 samples queried.  
1/30/2008 10:50:10 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_18.html](#) is saved.  
1/30/2008 10:50:10 PM -- Jetstress testing ends.  
1/30/2008 11:09:12 PM -- Jetstress testing begins ...  
1/30/2008 11:09:12 PM -- Prepare testing begins ...  
1/30/2008 11:09:12 PM -- Attaching databases ...  
1/30/2008 11:09:12 PM -- Prepare testing ends.  
1/30/2008 11:09:12 PM -- Dispatching transactions begins ...  
1/30/2008 11:09:12 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
1/30/2008 11:09:12 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 11:09:13 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 11:09:13 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 11:09:13 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 11:09:13 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 11:09:13 PM -- Generating log files ...  
 1/30/2008 11:22:27 PM -- G:\sg1 (104.2% generated), G:\sg2 (102.6% generated), G:\sg3 (104.2% generated), G:\sg4 (103.0% generated), G:\sg5 (100.2% generated), G:\sg6 (103.8% generated), and G:\sg7 (103.4% generated)  
 1/30/2008 11:22:29 PM -- Performance logging ends.  
 1/30/2008 11:22:29 PM -- JetInterop batch transaction stats: 9964, 10083, 10075, 9988, 9896, 10012, and 10014.  
 1/30/2008 11:22:29 PM -- Dispatching transactions ends.  
 1/30/2008 11:22:29 PM -- Shutting down databases ...  
 1/30/2008 11:22:35 PM -- Instance1548.1 (complete), Instance1548.2 (complete), Instance1548.3 (complete), Instance1548.4 (complete), Instance1548.5 (complete), Instance1548.6 (complete), and Instance1548.7 (complete)  
 1/30/2008 11:22:36 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 11:22:36 PM -- Verifying database checksums ...  
 1/31/2008 12:50:13 AM -- F: (100% processed)  
 1/31/2008 12:50:14 AM -- Performance logging ends.  
 1/31/2008 12:50:14 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.blg](#) has 175 samples.  
 1/31/2008 12:50:15 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.html](#) is saved.  
 1/31/2008 12:50:15 AM -- Verifying log checksums ...  
 1/31/2008 12:51:38 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:51:38 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_13.blg](#) has 52 samples.  
 1/31/2008 12:51:38 AM -- Creating test report ...  
 1/31/2008 12:51:39 AM -- Volume F: has 0.0116 for Avg. Disk sec/Read.  
 1/31/2008 12:51:39 AM -- Volume G: has 0.0008 for Avg. Disk sec/Write.  
 1/31/2008 12:51:39 AM -- Volume G: has 0.0003 for Avg. Disk sec/Read.  
 1/31/2008 12:51:39 AM -- Test has 1.59720834077965 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:51:39 AM -- Test has 4 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:51:39 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_13.xml](#) has 51 samples queried.  
 1/31/2008 12:51:39 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_13.html](#) is saved.  
 1/31/2008 12:51:41 AM -- Performance logging begins (interval: 4000 ms).  
 1/31/2008 12:51:41 AM -- Recovering databases ...  
 1/31/2008 12:54:35 AM -- Performance logging ends.  
 1/31/2008 12:54:35 AM -- Instance1548.1 (173.2523182), Instance1548.2 (166.5028366), Instance1548.3 (165.2529326), Instance1548.4 (164.0030286), Instance1548.5 (162.5031438), Instance1548.6 (166.002875), and Instance1548.7 (167.0027982)  
 1/31/2008 12:54:35 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_51\\_39.blg](#) has 43 samples.  
 1/31/2008 12:54:35 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### **SoftRecovery Test Result Report**

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
<b>Instance2052.1</b>	516	135.0061199
<b>Instance2052.2</b>	521	129.0065423

<b>Instance2052.3</b>	500	126.7567007
<b>Instance2052.4</b>	517	127.7566303
<b>Instance2052.5</b>	523	128.0066127
<b>Instance2052.6</b>	503	127.5066479
<b>Instance2052.7</b>	513	135.0061199

#### Disk Subsystem Performance

<b>LogicalDisk</b>	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.020	0.003	9707.069	110.519	(n/a)
<b>Log (G:)</b>	0.002	0.001	901.650	38.826	5112.652

#### Host System Performance

<b>Counter</b>	Average	Minimum	Maximum
<b>% Processor Time</b>	17.422	9.173	23.041
<b>Available MBytes</b>	25903.273	25565.000	27230.000
<b>Free System Page Table Entries</b>	16755413.000	16755413.000	16755413.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	76749110.303	76505088.000	76902400.000
<b>Pool Paged Bytes</b>	35140701.091	34496512.000	35229696.000
<b>Database Page Fault Stalls/sec</b>	0.063	0.000	2.000

Test Log1/30/2008 7:19:15 PM -- Jetstress testing begins ...

1/30/2008 7:19:15 PM -- Prepare testing begins ...

1/30/2008 7:19:16 PM -- Attaching databases ...

1/30/2008 7:19:16 PM -- Prepare testing ends.

1/30/2008 7:19:16 PM -- Dispatching transactions begins ...

1/30/2008 7:19:16 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)

1/30/2008 7:19:16 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)

1/30/2008 7:19:16 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

1/30/2008 7:19:16 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

1/30/2008 7:19:18 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.

1/30/2008 7:19:18 PM -- Performance logging begins (interval: 15000 ms).

1/30/2008 7:19:18 PM -- Attaining prerequisites:

1/30/2008 7:21:58 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1697513000.0 (lower bound: 1691143000.0, upper bound: none)

1/30/2008 9:21:59 PM -- Performance logging ends.

1/30/2008 9:21:59 PM -- JetInterop batch transaction stats: 83361, 83224, 83034, 82537, 82823, 83600, and 83655.

1/30/2008 9:22:00 PM -- Dispatching transactions ends.

1/30/2008 9:22:00 PM -- Shutting down databases ...

1/30/2008 9:22:08 PM -- Instance2052.1 (complete), Instance2052.2 (complete), Instance2052.3 (complete), Instance2052.4 (complete), Instance2052.5 (complete), Instance2052.6 (complete), and Instance2052.7 (complete)

1/30/2008 9:22:09 PM -- Performance logging begins (interval: 30000 ms).

1/30/2008 9:22:09 PM -- Verifying database checksums ...

1/30/2008 10:49:30 PM -- F: (100% processed)

1/30/2008 10:49:31 PM -- Performance logging ends.  
1/30/2008 10:49:31 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.blg](#) has 174 samples.  
1/30/2008 10:49:32 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_8.html](#) is saved.  
1/30/2008 10:49:32 PM -- Verifying log checksums ...  
1/30/2008 10:49:50 PM -- G:\sg1 (22 logs passed), G:\sg2 (22 logs passed), G:\sg3 (22 logs passed), G:\sg4 (23 logs passed), G:\sg5 (21 logs passed), G:\sg6 (22 logs passed), and G:\sg7 (22 logs passed)  
1/30/2008 10:49:50 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.blg](#) has 490 samples.  
1/30/2008 10:49:50 PM -- Creating test report ...  
1/30/2008 10:49:53 PM -- Volume F: has 0.0113 for Avg. Disk sec/Read.  
1/30/2008 10:49:53 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
1/30/2008 10:49:53 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
1/30/2008 10:49:53 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
1/30/2008 10:49:53 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
1/30/2008 10:49:53 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.xml](#) has 479 samples queried.  
1/30/2008 10:49:53 PM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_16.html](#) is saved.  
1/30/2008 10:49:53 PM -- Jetstress testing ends.  
1/30/2008 11:09:40 PM -- Jetstress testing begins ...  
1/30/2008 11:09:40 PM -- Prepare testing begins ...  
1/30/2008 11:09:40 PM -- Attaching databases ...  
1/30/2008 11:09:40 PM -- Prepare testing ends.  
1/30/2008 11:09:40 PM -- Dispatching transactions begins ...  
1/30/2008 11:09:40 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
1/30/2008 11:09:40 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 11:09:41 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 11:09:41 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 11:09:41 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 11:09:41 PM -- Performance logging begins (interval: 15000 ms).  
1/30/2008 11:09:41 PM -- Generating log files ...  
1/30/2008 11:23:35 PM -- G:\sg1 (103.4% generated), G:\sg2 (104.2% generated), G:\sg3 (100.2% generated), G:\sg4 (103.6% generated), G:\sg5 (104.6% generated), G:\sg6 (100.6% generated), and G:\sg7 (102.6% generated)  
1/30/2008 11:23:36 PM -- Performance logging ends.  
1/30/2008 11:23:36 PM -- JetInterop batch transaction stats: 10074, 10092, 9892, 10104, 10222, 9876, and 9900.  
1/30/2008 11:23:36 PM -- Dispatching transactions ends.  
1/30/2008 11:23:36 PM -- Shutting down databases ...  
1/30/2008 11:23:47 PM -- Instance2052.1 (complete), Instance2052.2 (complete), Instance2052.3 (complete), Instance2052.4 (complete), Instance2052.5 (complete), Instance2052.6 (complete), and Instance2052.7 (complete)  
1/30/2008 11:23:48 PM -- Performance logging begins (interval: 30000 ms).  
1/30/2008 11:23:48 PM -- Verifying database checksums ...  
1/31/2008 12:51:14 AM -- F: (100% processed)  
1/31/2008 12:51:15 AM -- Performance logging ends.  
1/31/2008 12:51:15 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_23\\_47.blg](#) has 174 samples.  
1/31/2008 12:51:16 AM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_23\\_47.html](#) is saved.  
1/31/2008 12:51:16 AM -- Verifying log checksums ...  
1/31/2008 12:52:07 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100

logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:52:07 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.blg](#) has 55 samples.  
 1/31/2008 12:52:07 AM -- Creating test report ...  
 1/31/2008 12:52:08 AM -- Volume F: has 0.0117 for Avg. Disk sec/Read.  
 1/31/2008 12:52:08 AM -- Volume G: has 0.0014 for Avg. Disk sec/Write.  
 1/31/2008 12:52:08 AM -- Volume G: has 0.0005 for Avg. Disk sec/Read.  
 1/31/2008 12:52:08 AM -- Test has 2.19612190912938 Maximum Database Page Fault Stalls/sec.  
 1/31/2008 12:52:08 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
 1/31/2008 12:52:08 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.xml](#) has 54 samples queried.  
 1/31/2008 12:52:08 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_9\\_41.html](#) is saved.  
 1/31/2008 12:52:10 AM -- Performance logging begins (interval: 4000 ms).  
 1/31/2008 12:52:10 AM -- Recovering databases ...  
 1/31/2008 12:54:26 AM -- Performance logging ends.  
 1/31/2008 12:54:26 AM -- Instance2052.1 (135.0061199), Instance2052.2 (129.0065423), Instance2052.3 (126.7567007), Instance2052.4 (127.7566303), Instance2052.5 (128.0066127), Instance2052.6 (127.5066479), and Instance2052.7 (135.0061199)  
 1/31/2008 12:54:26 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_52\\_8.blg](#) has 33 samples.  
 1/31/2008 12:54:26 AM -- Creating test report ...

## Microsoft Exchange Server **Jetstress**

### *Streaming backup Test Result Report*

Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
<b>Instance996.1</b>	236687.65	01:26:22	45.67
<b>Instance996.2</b>	236359.65	01:26:22	45.61
<b>Instance996.3</b>	236247.65	01:26:22	45.59
<b>Instance996.4</b>	236455.65	01:26:22	45.63
<b>Instance996.5</b>	236333.65	01:26:22	45.61
<b>Instance996.6</b>	236611.65	01:26:22	45.66
<b>Instance996.7</b>	236421.65	01:18:55	49.92

Jetstress System Parameters

**Thread count** 12 (per-storage group)  
**Log buffers** 9000  
**Minimum database cache** 224.0 MB  
**Maximum database cache** 1792.0 MB  
**Insert operations** 25%  
**Delete operations** 10%  
**Replace operations** 50%  
**Read operations** 15%

**Lazy commits**

80%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
<b>Database (F:)</b>	0.003	5.13690208427051E-05	2569.740	0.011	(n/a)
<b>Log (G:)</b>	0.000	4.85948667966212E-05	0.000	0.011	357.302

Host System Performance

Counter	Average	Minimum	Maximum
<b>% Processor Time</b>	10.192	6.572	12.327
<b>Available MBytes</b>	27420.058	27412.000	27422.000
<b>Free System Page Table Entries</b>	16755243.000	16755243.000	16755243.000
<b>Transition Pages RePurposed/sec</b>	0.000	0.000	0.000
<b>Pool Nonpaged Bytes</b>	77533612.651	77467648.000	77606912.000
<b>Pool Paged Bytes</b>	35807351.070	35713024.000	36802560.000
<b>Database Page Fault Stalls/sec</b>	0.000	0.000	0.000

Test Log1/30/2008 7:19:13 PM -- Jetstress testing begins ...  
1/30/2008 7:19:13 PM -- Prepare testing begins ...  
1/30/2008 7:19:14 PM -- Attaching databases ...  
1/30/2008 7:19:14 PM -- Prepare testing ends.  
1/30/2008 7:19:14 PM -- Dispatching transactions begins ...  
1/30/2008 7:19:14 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
1/30/2008 7:19:14 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
1/30/2008 7:19:15 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
1/30/2008 7:19:15 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
1/30/2008 7:19:16 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
1/30/2008 7:19:16 PM -- Performance logging begins (interval: 15000 ms).  
1/30/2008 7:19:16 PM -- Attaining prerequisites:  
1/30/2008 7:22:08 PM -- \Database(JetstressWin)\Database Cache Size, Last: 1694990000.0 (lower bound: 1691143000.0, upper bound: none)  
1/30/2008 9:22:09 PM -- Performance logging ends.  
1/30/2008 9:22:09 PM -- JetInterop batch transaction stats: 91169, 90356, 90277, 90634, 90597, 90853, and 91203.  
1/30/2008 9:22:18 PM -- Dispatching transactions ends.  
1/30/2008 9:22:18 PM -- Shutting down databases ...  
1/30/2008 9:22:26 PM -- Instance996.1 (complete), Instance996.2 (complete), Instance996.3 (complete), Instance996.4 (complete), Instance996.5 (complete), Instance996.6 (complete), and Instance996.7 (complete)  
1/30/2008 9:22:27 PM -- Performance logging begins (interval: 30000 ms).  
1/30/2008 9:22:27 PM -- Verifying database checksums ...  
1/30/2008 10:58:16 PM -- F: (100% processed)  
1/30/2008 10:58:17 PM -- Performance logging ends.  
1/30/2008 10:58:17 PM -- [C:\Program Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.blg](#) has 191 samples.  
1/30/2008 10:58:20 PM -- [C:\Program](#)

[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_21\\_22\\_26.html](#) is saved.  
 1/30/2008 10:58:20 PM -- Verifying log checksums ...  
 1/30/2008 10:58:31 PM -- G:\sg1 (21 logs passed), G:\sg2 (21 logs passed), G:\sg3 (23 logs passed), G:\sg4 (22 logs passed), G:\sg5 (21 logs passed), G:\sg6 (21 logs passed), and G:\sg7 (21 logs passed)  
 1/30/2008 10:58:31 PM -- [C:\Program](#)  
[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.blg](#) has 491 samples.  
 1/30/2008 10:58:31 PM -- Creating test report ...  
 1/30/2008 10:58:35 PM -- Volume F: has 0.0118 for Avg. Disk sec/Read.  
 1/30/2008 10:58:35 PM -- Volume G: has 0.0007 for Avg. Disk sec/Write.  
 1/30/2008 10:58:35 PM -- Volume G: has 0.0000 for Avg. Disk sec/Read.  
 1/30/2008 10:58:35 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.  
 1/30/2008 10:58:35 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.  
 1/30/2008 10:58:35 PM -- [C:\Program](#)  
[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.xml](#) has 479 samples queried.  
 1/30/2008 10:58:35 PM -- [C:\Program](#)  
[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_19\\_19\\_15.html](#) is saved.  
 1/30/2008 10:58:35 PM -- Jetstress testing ends.  
 1/30/2008 11:08:43 PM -- Jetstress testing begins ...  
 1/30/2008 11:08:43 PM -- Prepare testing begins ...  
 1/30/2008 11:08:44 PM -- Attaching databases ...  
 1/30/2008 11:08:44 PM -- Prepare testing ends.  
 1/30/2008 11:08:44 PM -- Dispatching transactions begins ...  
 1/30/2008 11:08:44 PM -- Database cache settings: (minimum: 224.0 MB, maximum: 1.8 GB)  
 1/30/2008 11:08:44 PM -- Database flush thresholds: (start: 17.9 MB, stop: 35.8 MB)  
 1/30/2008 11:08:44 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).  
 1/30/2008 11:08:44 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).  
 1/30/2008 11:08:45 PM -- Operation mix: Sessions 12, Inserts 25%, Deletes 10%, Replaces 50%, Reads 15%, Lazy Commits 80%.  
 1/30/2008 11:08:45 PM -- Performance logging begins (interval: 15000 ms).  
 1/30/2008 11:08:45 PM -- Generating log files ...  
 1/30/2008 11:22:26 PM -- G:\sg1 (101.0% generated), G:\sg2 (100.2% generated), G:\sg3 (101.0% generated), G:\sg4 (102.0% generated), G:\sg5 (101.0% generated), G:\sg6 (104.6% generated), and G:\sg7 (100.8% generated)  
 1/30/2008 11:22:27 PM -- Performance logging ends.  
 1/30/2008 11:22:27 PM -- JetInterop batch transaction stats: 9814, 9679, 9928, 9840, 9656, 9855, and 9722.  
 1/30/2008 11:22:27 PM -- Dispatching transactions ends.  
 1/30/2008 11:22:27 PM -- Shutting down databases ...  
 1/30/2008 11:22:35 PM -- Instance996.1 (complete), Instance996.2 (complete), Instance996.3 (complete), Instance996.4 (complete), Instance996.5 (complete), Instance996.6 (complete), and Instance996.7 (complete)  
 1/30/2008 11:22:36 PM -- Performance logging begins (interval: 30000 ms).  
 1/30/2008 11:22:36 PM -- Verifying database checksums ...  
 1/31/2008 12:58:41 AM -- F: (100% processed)  
 1/31/2008 12:58:42 AM -- Performance logging ends.  
 1/31/2008 12:58:42 AM -- [C:\Program](#)  
[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.blg](#) has 192 samples.  
 1/31/2008 12:58:43 AM -- [C:\Program](#)  
[Files\Exchange2007\DBChecksum\\_2008\\_1\\_30\\_23\\_22\\_35.html](#) is saved.  
 1/31/2008 12:58:43 AM -- Verifying log checksums ...  
 1/31/2008 12:59:36 AM -- G:\sg1 (100 logs passed), G:\sg2 (100 logs passed), G:\sg3 (100 logs passed), G:\sg4 (100 logs passed), G:\sg5 (100 logs passed), G:\sg6 (100 logs passed), and G:\sg7 (100 logs passed)  
 1/31/2008 12:59:36 AM -- [C:\Program](#)  
[Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.blg](#) has 54 samples.

1/31/2008 12:59:36 AM -- Creating test report ...  
1/31/2008 12:59:37 AM -- Volume F: has 0.0123 for Avg. Disk sec/Read.  
1/31/2008 12:59:37 AM -- Volume G: has 0.0008 for Avg. Disk sec/Write.  
1/31/2008 12:59:37 AM -- Volume G: has 0.0002 for Avg. Disk sec/Read.  
1/31/2008 12:59:37 AM -- Test has 1.26317308266576 Maximum Database Page Fault Stalls/sec.  
1/31/2008 12:59:37 AM -- Test has 5 Database Page Fault Stalls/sec samples higher than 0.  
1/31/2008 12:59:37 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.xml](#) has 53 samples queried.  
1/31/2008 12:59:37 AM -- [C:\Program Files\Exchange2007\Performance\\_2008\\_1\\_30\\_23\\_8\\_44.html](#) is saved.  
1/31/2008 12:59:39 AM -- Performance logging begins (interval: 4000 ms).  
1/31/2008 12:59:39 AM -- Recovering databases ...  
1/31/2008 1:02:57 AM -- Performance logging ends.  
1/31/2008 1:02:57 AM -- Instance996.1 (188.9927424), Instance996.2 (180.7430592), Instance996.3 (174.99328), Instance996.4 (176.9932032), Instance996.5 (182.9929728), Instance996.6 (192.7425984), and Instance996.7 (196.7424448)  
1/31/2008 1:02:57 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_59\\_37.blg](#) has 49 samples.  
1/31/2008 1:02:57 AM -- Creating test report ...  
1/31/2008 1:02:58 AM -- [C:\Program Files\Exchange2007\SoftRecovery\\_2008\\_1\\_31\\_0\\_59\\_37.html](#) is saved.  
1/31/2008 1:02:58 AM -- Jetstress testing ends.  
1/31/2008 6:24:27 AM -- Jetstress testing begins ...  
1/31/2008 6:24:27 AM -- Prepare testing begins ...  
1/31/2008 6:24:28 AM -- Attaching databases ...  
1/31/2008 6:24:28 AM -- Prepare testing ends.  
1/31/2008 6:24:31 AM -- Performance logging begins (interval: 30000 ms).  
1/31/2008 6:24:31 AM -- Streaming backup databases ...  
1/31/2008 7:50:54 AM -- Performance logging ends.  
1/31/2008 7:50:54 AM -- Instance996.1 (100% processed), Instance996.2 (100% processed), Instance996.3 (100% processed), Instance996.4 (100% processed), Instance996.5 (100% processed), Instance996.6 (100% processed), and Instance996.7 (100% processed)  
1/31/2008 7:50:54 AM -- [C:\Program Files\Exchange2007\StreamingBackup\\_2008\\_1\\_31\\_6\\_24\\_28.blg](#) has 172 samples.  
1/31/2008 7:50:54 AM -- Creating test report ...