



Dell PowerVault MD1120
5000 Large Mailbox Clustered Continuous
Replication Microsoft Exchange 2007
Storage Solution



Tested with: ESRP – Storage Version 2.2
Tested Date: March 20, 2009

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Overview

This document provides information on Dell's PowerVault MD1120 storage solution for Microsoft Exchange Server 2007, based on *Microsoft Exchange Solution Reviewed Program (ESRP) – Storage program**. 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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Features

This white paper describes a tested and validated storage solution for a 5000 mailbox Exchange 2007 environment with Cluster Continuous Replication (CCR). CCR is a high availability clustering mechanism based on the MSCS majority node set (MNS) model. It requires an active and a passive set of Exchange Mailbox server nodes each of which maintain their own copy of the mailbox databases. Mail clients access the primary (active) server, and database changes to it are shipped to the secondary (passive) server in the form of log records. The shipped log records are played on the secondary server to keep the secondary database copies consistent with the primary.

Dell PowerVault MD1120 is a SAS based storage enclosure. The major features of the storage system include:

- Capacity for 24 2.5-inch, hot-plug, 3.0-Gbps, serial-attached SCSI (SAS) hard drives, either 10K RPM or 15K RPM
- Support for up to three daisy-chained storage enclosures per channel in unified mode for a total of 144 hard drives
- Host-based RAID support via a PERC 6/E adapter
- In-band enclosure management provided through SCSI enclosure services (SES)
- RAID and system management using Dell OpenManage™ Server Administrator Storage Management Service

Each PowerVault MD1120 enclosure supports up to 24 drives, the solution presented in this paper utilizes a total of 7 volumes of disks, 6 for Exchange information stores and 1 for transaction logs. There was a total of 150 drives in the configuration.

Solution Description

The Dell™ PowerVault™ MD1120 is a modular disk storage expansion enclosure for PowerEdge™ servers capable of housing up to 24 2.5-inch disk drives in a single 2U rackable chassis. The expansion enclosures support both 10K RPM and 15K RPM drives up to capacities of 300GB.

[Dell PowerVault MD1120 Product Page](#)

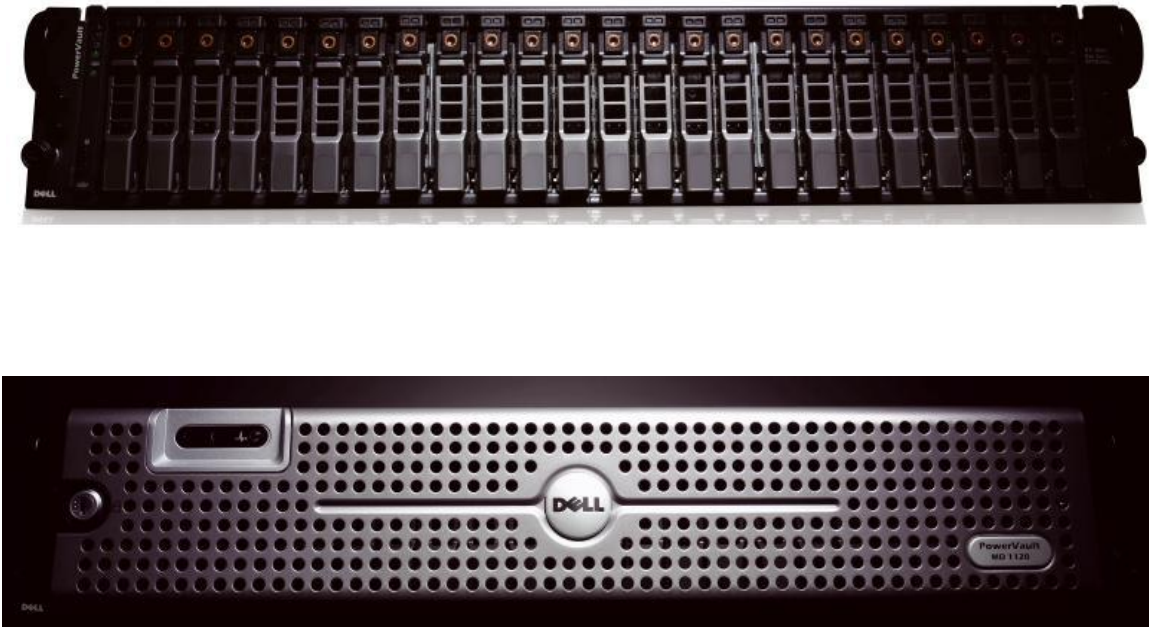


Figure 1: Dell PowerVault MD1120 enclosure with 24 drives

PERC 6/E is the RAID controller used to connect the PowerVault MD1120 storage enclosure to the Exchange server. It supports 3 Gbps Serial Attached SCSI (SAS) as the storage interconnect technology and PCI Express (PCI-E) as the host-based interconnect technology.

The PERC 6/E controller offers:

- Intel IOP333 I/O processor based on Intel XScale Microarchitecture
- 512MB of customized DDR2 400MHz, Error-Correcting Code (ECC) cache memory with optional upgrade to 512MB
- 3 Gbps maximum speed for each SAS lane
- Two external x4 ("by four") SAS ports, each aggregating 4 SAS lanes for a total bandwidth per port of 12.0 Gbps
- x8 PCI E host interface for a total bandwidth of 32.0 Gbps
- Up to 72 hours of intelligent, transportable, battery-backed, cache memory

The presented solution is a CCR solution for up to 5000 mailboxes. It includes a single PowerEdge 2950 server directly attached to Dell PowerVault MD1120 storage enclosure on the primary server. The secondary server is configured to be identical to the primary. The primary and secondary storage do not share storage array controllers or disks.

The tested user profile was 1 IOPS per user with a 1024 MB mailbox size. This IO profile is high for Exchange 2007, but not unrealistic for certain "super" Exchange users. Sometimes additional applications, such as certain mobile messaging applications, can raise the IOPS profile of a user as high as three or four times that of normal. Using 15K RPM drives gives more than enough performance for this profile in addition to headroom in case of a disk failure and rebuild. RAID5 was chosen to maximize the use of available space on the drives (73GB each). However, in the event of a disk failure within a RAID 5 set, read penalties for that RAID set reach 80%. In this configuration there is plenty of performance headroom from the 15K RPM drives so the impact of a disk failure and rebuild will not affect performance.

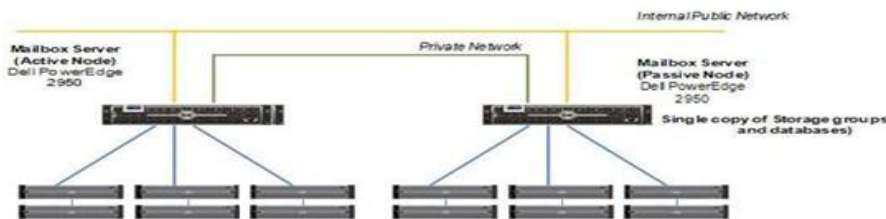


Figure 2: Test Set up Diagram

Microsoft Exchange Server System:

Server	Dell PowerEdge 2950
CPU	2 Intel®Xeon®CPU;5460@3.16GHz
Memory	32 GB DDR2 ECC
NIC	Broadcom NeXtreme II
RAID Controller	PERC 6i (FW Version 6.0.3-0002)
Internal Disks	6 Seagate 73 GB 15K RPM SAS (ST973451SS)

Storage System:

Storage System	Dell PowerVault MD1120
Disks	144 Seagate 73GB 15K RPM SAS (ST973451SS/Rev SM04) Drives
RAID Controller	PERC 6/E 6.1.1-0047

Storage Configuration:

The storage configuration per enclosure was as follows:

- A RAID 5 volume was created from physical disks 0 through 23 of each PowerVault MD 1120. This was used for Exchange Information stores.
- A RAID 10 volume was created from physical disks 4,5,6 and 7 on the internal controller of the Poweredge 2950. This was used for the transaction logs.

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
- 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 intended for small to mid size organizations hosting up to 5000 Exchange 2007 mailboxes. The configuration used for testing was as follows:

- Number of mailboxes : 5000

- Number of hosts attached to the storage system: 1
- User IO profile: 1 I/O Operation per second
- 1024 MB Mailbox quota per mailbox
- Backup strategy: Streaming backup to disk
- Cluster Continuous Replication for High Availability

Tested Deployment

The following tables summarize the testing environment:

Simulated Exchange Configuration:

Number of Exchange mailboxes simulated	5000
Number of hosts	1
Number of mailboxes/host	5000
Number of storage groups/host	27
Number of mailbox stores/storage group	1
Number of mailboxes/mailbox store	185
Number of mailbox store LUNs/storage group	1
Simulated profile: I/O's per second per mailbox (IOPS, include 20% headroom)	1
Database LUN size	1558.25 GB * 6 = 9349.5
Log LUN size	203.25 GB
Backup LUN size/storage group	N/A
Total database size for performance testing	5198.5 GB
% storage capacity used by Exchange database	56%

Primary Storage Hardware

Storage Connectivity (Fiber Channel, SAS, SATA, iSCSI)	SAS
Storage model and OS/firmware revision	PowerVault MD1120+PERC 6/E Firmware 6.1.1-0047
Storage cache	512 MB – PERC 6/E RAID controller cache
Number of storage controllers	2
Number of storage ports	2
Maximum bandwidth of storage connectivity to host	3 GBit
Switch type/model/firmware revision	N/A
HBA model and firmware	PERC 6/E (RAID controller) Firmware 6.1.1-0047
Number of HBA's/host	1
Host server type	Dell PowerEdge 2950

	2 Intel®Xeon®CPU; 5460@3.16GHz
Total number of disks tested in solution	144
Maximum number of spindles can be hosted in the storage	24 per cabinet –up to 96 in daisy chain configuration

Primary Storage Software

HBA driver (RAID Controller)	DELL PERC 6/E
HBA QueueDepth Setting	N/A
Multi-Pathing	N/A
Host OS	Windows Server 2008 Enterprise X64 Edition
ESE.dll file version	8.1.240.5
Replication solution name/version	N/A

Primary Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	Seagate 73GB 15K RPM SAS (ST973451SS/Rev SM04) Drives
Raw capacity per disk (GB)	73 GB
Number of physical disks in test	144
Total raw storage capacity (GB)	10512 GB
Number of disks per LUN	24
Raid level	RAID 5
Total formatted capacity	6504 GB
Storage capacity utilization	6504 GB/ 10512 = 61%
Database capacity utilization	5198.5 GB / 6504 GB= 80%

Primary Storage Disk Configuration (Transactional Log Disks)

Disk type, speed and firmware revision	Seagate 73GB 15K RPM SAS (ST973451SS/Rev SM04) Drives
Raw capacity per disk (GB)	73 GB
Number of Spindles in test	4
total raw storage capacity (GB)	292 GB
Number of disks per LUN	1
Raid level	RAID 10
Total formatted capacity	135.5 GB

Replication Configuration

Replication mechanism	Cluster Continuous Replication
Number of links	2
Simulated link distance	LAN
Link type	IP
Link bandwidth	Gigabit Ethernet (1 Gbps)

Replicated Storage Hardware

Storage Connectivity (Fiber Channel, SAS, SATA, iSCSI)	SAS
Storage model and OS/firmware revision	PowerVault MD1120+PERC 6/E (Identical to the Primary Storage) Firmware 6.1.1-0047 Dell PowerVault MD1120 Product Page
Storage cache	512 MB - PERC 6E RAID controller cache
Number of storage controllers	2
Number of storage ports	2
Maximum bandwidth of storage connectivity to host	3 GBit
Switch type/model/firmware revision	N/A
HBA model and firmware	PERC 6/E (RAID controller) Firmware 6.1.1-0047
Number of HBA's/host	1
Host server type	Dell PowerEdge 2950 2 Intel®Xeon®CPU; 5460@3.16GHz
Total number of disks tested in solution	144

Maximum number of spindles can be hosted in the storage	24 per cabinet –up to 98 in daisy chain configuration
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Replicated Storage Software

Host OS	Windows Server 2008 Enterprise X64 Edition
ESE.dll file version	8.1.240.5

Replicated Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	Seagate 73GB 15K RPM SAS (ST973451SS/Rev SM04) Drives
Raw capacity per disk (GB)	73 GB
Number of physical disks in test	144
Total raw storage capacity (GB)	10512 GB
Number of disks per LUN	24
Raid level	RAID 5
Total formatted capacity	6504 GB
Storage capacity utilization	6504 GB/ 10512 = 61%
Database capacity utilization	5198.5 GB / 6504 GB= 80%

Replicated Storage Disk Configuration (Transactional Log Disks)

Disk type, speed and firmware revision	Seagate 73GB 15K RPM SAS (ST973451SS/Rev SM04) Drives
Raw capacity per disk (GB)	73 GB
Number of Spindles in test	4
Total raw storage capacity (GB)	292 GB
Disk slice size (GB)	N/A
Number of slices per LUN or number of disks per LUN	1
Raid level	RAID 10
Total formatted capacity	135.5 GB

Best Practices

The older versions of Exchange including Exchange Server 2003 are 32-bit applications and are limited by the amount of addressable memory. Roughly 3GB of user mode virtual memory can be utilized for Exchange Server 2003 and the remaining 1GB is required for the kernel.

Exchange Server 2007 overcomes the memory limitations by providing support as a 64-bit application capable of running on supported x64 platforms. On Windows Server 2008 x64 Edition about 2TB of addressable memory is available for the kernel mode and the user mode applications. Both the application and kernel can have sufficient memory for operations, allowing the Extensible Storage Engine (ESE) in Exchange Server 2007 to utilize more memory to buffer data pages. The result is a reduction in the number of I/Os, specifically the read operations, required to the disk subsystem. The total number of database disk I/O operations for a given user load is dependent on the available system memory. For a given load, the total database disk I/O operations required per second (IOPS) decreases over a period with increase in system memory. This decrease in database IOPS is primarily caused by a decrease in database reads.

Even with the decrease in database IOPS using larger server memory, Exchange server remains a disk I/O intensive application. The disk subsystem should be capable to support both the capacity and I/O throughput demands of the application. Here are some best practices to help improve the I/O subsystem performance:

- Exchange Server can benefit from having the disk partitions track-aligned. For Windows 2003 Server SP1 or above use DiskPart to verify that your disk tracks are sector-aligned. Use a value of 64 to align the Exchange disks to a 64 KB boundary. In Exchange Server 2007, the data page size is increased from 4KB to 8KB and can provide I/O optimization in certain scenarios by containing larger messages within a page and holding internal data structures within one page due to the larger page size.
- Exchange Server 2007 also provides support for more storage groups to host mailbox database stores or databases – up to 50 storage groups per server, compared to 4 in Exchange 2003. This enables splitting user mailboxes across multiple available storage groups, providing ease of management for administrative operations such as backup/restore. Besides management ease, splitting mailboxes across multiple storage groups provides increased log checkpoint depth available for user data operations. In certain scenarios dirty data pages can be optimized to reside in memory for a longer period of time and reduce the number of write I/O operations required to the disk

sub-system. The solution described in this paper contains 27 storage groups with 185 users per storage group.

- Due to the high I/O demand, it is best to have dedicated disks for Exchange 2007. This will isolate the Exchange I/O's to dedicated set of disks and prevent other applications from competing for I/O throughput with Exchange disks. This will also help troubleshoot any disk latency issues as Exchange will have its own set of dedicated spindles.
- It is also recommended to place the database and transaction logs onto separate set of disks. The transaction logs generate 100% serial write I/O's to disk while the database generates 100% random read/writes. Isolating the transaction log and database I/O's onto separate disks will prevent mixing of serial and random I/O's and help improve performance.

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

For other detailed PowerVault MD1120 best practices on storage optimization, please refer to [PowerVault MD1120 Reference Guide](#)

With Cluster Continuous Replication, Exchange maintains the passive database copy by creating asynchronous transaction log copies of the active database and replaying them on the passive database. Administrators can use the passive database to increase system resiliency by deploying the active and passive nodes in physically separate locations. They can also offload the backup operation to the passive node thereby eliminating the impact of backup operation on the active node.

Administrators can typically allocate resources to CCR nodes the same way they would to a stand-alone Mailbox server. Although the passive node underutilizes these resources, administrators should still configure it with the same processors and memory as the active node to allow it to easily take over should the active node fail. In addition, although the passive node incurs more database I/Os than the active node, administrators can configure it with the same amount of disk resources as the active node because of its non-production use.

Backup strategy

To protect e-mail data from potential disasters having a well designed and implemented backup solution is critical. Depending on the requirements of an environment different backup strategies may be implemented such as:

- Backup to disk
- Backup to tape
- LAN/SAN based backup etc.

In this solution, CCR is used to maintain a passive database copy on a separate storage system. This passive copy of the database may be used to perform to tape or disk.

The tests performed for backup include: backup-to-disk (read only) and log replay. The backup-to-disk test measures the read I/O performance by running a checksum on all the databases and log files. This test can help determine what kind of database read throughput can be achieved during backups. The backup speed and throughput achieved will depend upon the backup device used. The log replay test was used to measure the maximum rate at which the log files can be played against the databases. This is used to determine the restore times and also database write throughput can be achieved during a log recovery.

Contact for Additional Information

For additional information please visit <http://www.dell.com/exchange2007>

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: (click on the underlined word will show the html report after the reliability tests run)

- Any errors reported in the saved eventlog file?
No errors were reported in the eventlog file.
- Any errors reported in during the database and log checksum process?
 - No errors were reported in the database and log checksum process.
- If backup to disk test is done, any errors reported during the process?
 - Backup to disk was not tested

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.

Database I/O	
Average Database Disk Transfers/sec	5923
Average Database Disk Reads/sec	3802
Average Database Disk Writes/sec	3668
Average Database Disk Read Latency (ms)	10
Average Database Disk Write Latency (ms)	6.5
Transaction Log I/O	
Average Log Disk Writes/sec	2353
Average Log Disk Write Latency (ms)	1

Streaming Backup/Recovery Performance

ESRP Version 2.0 release supports only streaming backup type for testing. There are three tests in this section. The first two tests measure the database and log read I/O performance metrics by running a checksum on all the databases and log files. A third test to measure the end-to-end performance when the databases are backed up to disks was not performed.

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 (Average)
MB read/sec total	1242

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)	.54 Seconds
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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 A: Performance Testing

Performance Test Result Report

Overall Test Result **Pass**

Machine Name PE2950

Test Description

Test Start Time 3/18/2009 4:11:48 PM

Test End Time 3/18/2009 10:07:57 PM

Jetstress Version 08.02.0060.000

Ese Version

08.01.0240.005

Operating System Windows Server (R) 2008 Enterprise Service Pack 1 (6.0.6001.65536)

Performance Log C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Tuning_2009_3_18_20_2_41.blg

C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.blg

C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\DBChecksum_2009_3_18_22_7_57.blg

Database Sizing and Throughput

Achieved I/O per Second 7476.042

Target I/O per Second 5000

Initial database size 5368716394496

Final database size 5392175136768

Database files (count) 28

Jetstress System Parameters

Thread count 8 (per-storage group)

Log buffers 9000

Minimum database cache 896.0 MB

Maximum database cache 7168.0 MB

Insert operations 40%

Delete operations 30%

Replace operations 5%

Read operations 25%

Lazy commits 55%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
-------------	--------------------	---------------------	----------------	-----------------	-----------------------

Database (E:)	0.010	0.010	681.869	664.482	(n/a)
Database (G:)	0.008	0.012	541.788	516.532	(n/a)
Database (N:)	0.008	0.012	542.237	492.159	(n/a)
Database (X:)	0.010	0.007	680.465	671.562	(n/a)
Database (Y:)	0.010	0.008	678.823	666.605	(n/a)
Database (Z:)	0.011	0.011	680.127	659.392	(n/a)
Log (D:)	0.000	0.000	0.000	2353.629	4072.922

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	7.635	6.061	9.163
Available MBytes	23209.643	23201.000	23214.000
Free System Page Table Entries	33567799.793	33567257.000	33568176.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	60718411.357	60702720.000	60743680.000
Pool Paged Bytes	97871252.042	96468992.000	97910784.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log3/18/2009 11:29:03 AM -- Jetstress testing begins ...

3/18/2009 11:29:09 AM -- Prepare testing begins ...

3/18/2009 11:29:37 AM -- Attaching databases ...

3/18/2009 11:29:37 AM -- Prepare testing ends.

3/18/2009 11:29:37 AM -- Dispatching transactions begins ...

3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 11:30:07 AM -- Attaining prerequisites:

3/18/2009 11:38:33 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).

3/18/2009 11:38:35 AM -- Automatic tuning begins ...

3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.

3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.

3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.

3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.

3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.

3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)

3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.
3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.
3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)
3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 11:48:45 AM -- Performance logging ends.
 3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
 3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
 3/18/2009 11:48:47 AM -- Attaining prerequisites:
 3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 1:48:48 PM -- Performance logging ends.
 3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
 3/18/2009 1:48:48 PM -- Dispatching transactions ends.
 3/18/2009 1:48:48 PM -- Shutting down databases ...
 3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 1:48:53 PM -- Verifying database checksums ...
 3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 2:54:42 PM -- Performance logging ends.
 3/18/2009 2:54:42 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.blg](#) has 131 samples.
 3/18/2009 2:54:45 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.html](#) is saved.
 3/18/2009 2:54:45 PM -- Verifying log checksums ...
 3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)
 3/18/2009 2:54:54 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.blg](#) has 479 samples.
 3/18/2009 2:54:54 PM -- Creating test report ...
 3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/18/2009 2:55:01 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.xml](#) has 478 samples queried.

3/18/2009 2:55:02 PM -- <C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.html> is saved.

3/18/2009 2:55:02 PM -- Jetstress testing ends.

3/18/2009 4:11:48 PM -- Jetstress testing begins ...

3/18/2009 4:11:48 PM -- Prepare testing begins ...

3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.

3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)

3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)

3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).

3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).

3/18/2009 4:44:38 PM -- Duplicating 27 databases:

3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).

3/18/2009 7:53:54 PM -- Attaching databases ...

3/18/2009 7:53:54 PM -- Prepare testing ends.

3/18/2009 7:53:54 PM -- Dispatching transactions begins ...

3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 7:54:23 PM -- Attaining prerequisites:

3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).

3/18/2009 8:02:43 PM -- Automatic tuning begins ...

3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.

3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.

3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.

3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.

3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)

3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.

3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.

3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.

3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.

3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.

3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.

3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)

3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Performance logging ends.
3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).
3/18/2009 8:07:52 PM -- Attaining prerequisites:
3/18/2009 8:07:52 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 10:07:52 PM -- Performance logging ends.
3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507, 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524, 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and 32856.
3/18/2009 10:07:52 PM -- Dispatching transactions ends.
3/18/2009 10:07:52 PM -- Shutting down databases ...
3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
3/18/2009 10:07:57 PM -- Verifying database checksums ...
3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
3/18/2009 11:13:08 PM -- Performance logging ends.
3/18/2009 11:13:08 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.blg has 130 samples.
3/18/2009 11:13:11 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.html is saved.
3/18/2009 11:13:11 PM -- Verifying log checksums ...
3/18/2009 11:13:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (3 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed), and D:\L28 (2 logs passed)
3/18/2009 11:13:19 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.blg has 479 samples.
3/18/2009 11:13:19 PM -- Creating test report ...
3/18/2009 11:13:26 PM -- Volume E: has 0.0102 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume G: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume N: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume X: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Y: has 0.0101 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Z: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:13:26 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/18/2009 11:13:26 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/18/2009 11:13:26 PM -- [23](C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-</p></div><div data-bbox=)

[build\Performance_2009_3_18_20_7_49.xml](#) has 478 samples queried.

Database Checksum Test Result Report

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
E:\SG1\Jetstress1.edb	23507122	0	0	0	183649 MBytes / 1010 seconds
E:\SG2\Jetstress1.edb	23507122	0	0	0	183649 MBytes / 1039 seconds
E:\SG3\Jetstress1.edb	23507634	0	0	0	183653 MBytes / 776 seconds
E:\SG4\Jetstress1.edb	23508402	0	0	0	183659 MBytes / 499 seconds
E:\SG5\Jetstress1.edb	23507634	0	0	0	183653 MBytes / 497 seconds
G:\SG1\Jetstress1.edb	23507634	0	0	0	183653 MBytes / 316 seconds
G:\SG2\Jetstress1.edb	23508658	0	0	0	183661 MBytes / 319 seconds
G:\SG3\Jetstress1.edb	23507634	0	0	0	183653 MBytes / 327 seconds
G:\SG4\Jetstress1.edb	23506354	0	0	0	183643 MBytes / 337 seconds
N:\SG1\Jetstress1.edb	23507378	0	0	0	183651 MBytes / 447 seconds
N:\SG2\Jetstress1.edb	23508914	0	0	0	183663 MBytes / 440 seconds
N:\SG3\Jetstress1.edb	23506866	0	0	0	183647 MBytes / 430 seconds
N:\SG4\Jetstress1.edb	23509426	0	0	0	183667 MBytes / 367 seconds

X:\SG1\Jetstress1.edb 23507634	0	0	0	183653 MBytes / 515 seconds
X:\SG2\Jetstress1.edb 23509426	0	0	0	183667 MBytes / 512 seconds
X:\SG3\Jetstress1.edb 23508402	0	0	0	183659 MBytes / 519 seconds
X:\SG4\Jetstress1.edb 23508402	0	0	0	183659 MBytes / 525 seconds
X:\SG5\Jetstress1.edb 23508914	0	0	0	183663 MBytes / 516 seconds
Y:\SG1\Jetstress1.edb 23508402	0	0	0	183659 MBytes / 458 seconds
Y:\SG2\Jetstress1.edb 23505842	0	0	0	183639 MBytes / 451 seconds
Y:\SG3\Jetstress1.edb 23508402	0	0	0	183659 MBytes / 437 seconds
Y:\SG4\Jetstress1.edb 23508146	0	0	0	183657 MBytes / 364 seconds
Y:\SG5\Jetstress1.edb 23508146	0	0	0	183657 MBytes / 246 seconds
Z:\SG1\Jetstress1.edb 23507122	0	0	0	183649 MBytes / 1068 seconds
Z:\SG2\Jetstress1.edb 23507634	0	0	0	183653 MBytes / 1081 seconds
Z:\SG3\Jetstress1.edb 23509170	0	0	0	183665 MBytes / 760 seconds
Z:\SG4\Jetstress1.edb 23509938	0	0	0	183671 MBytes / 542 seconds
Z:\SG5\Jetstress1.edb 23508146	0	0	0	183657 MBytes / 456 seconds
(Sum) 658224504	0	0	0	5142378 MBytes / 3910 seconds

Disk Subsystem Performance (of checksum)

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec
E:	0.015	0.000	3843.053	0.000
G:	0.006	0.000	9026.423	0.000
N:	0.007	0.000	6973.748	0.000
X:	0.009	0.000	5670.666	0.000
Y:	0.007	0.000	7489.175	0.000
Z:	0.016	0.000	3748.912	0.000

Memory System Performance (of checksum)

Counter	Average	Minimum	Maximum
% Processor Time	35.060	11.876	67.814
Available MBytes	30659.823	30636.000	30671.000
Free System Page Table Entries	33569348.400	33568361.000	33569611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	60743490.954	60715008.000	60907520.000
Pool Paged Bytes	97075231.508	96436224.000	97099776.000

Test Log3/18/2009 11:29:03 AM -- Jetstress testing begins ...

3/18/2009 11:29:09 AM -- Prepare testing begins ...

3/18/2009 11:29:37 AM -- Attaching databases ...

3/18/2009 11:29:37 AM -- Prepare testing ends.

3/18/2009 11:29:37 AM -- Dispatching transactions begins ...

3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 11:30:07 AM -- Attaining prerequisites:

3/18/2009 11:38:33 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).

3/18/2009 11:38:35 AM -- Automatic tuning begins ...

3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.

3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.

3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.

3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.

3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.

3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)

3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces

5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.
3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.
3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)
3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces
5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces
5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Performance logging ends.
3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces
5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
3/18/2009 11:48:47 AM -- Attaining prerequisites:

3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 1:48:48 PM -- Performance logging ends.
3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
3/18/2009 1:48:48 PM -- Dispatching transactions ends.
3/18/2009 1:48:48 PM -- Shutting down databases ...
3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
3/18/2009 1:48:53 PM -- Verifying database checksums ...
3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
3/18/2009 2:54:42 PM -- Performance logging ends.
3/18/2009 2:54:42 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum_2009_3_18_13_48_52.blg has 131 samples.
3/18/2009 2:54:45 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum_2009_3_18_13_48_52.html is saved.
3/18/2009 2:54:45 PM -- Verifying log checksums ...
3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)
3/18/2009 2:54:54 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance_2009_3_18_11_48_45.blg has 479 samples.
3/18/2009 2:54:54 PM -- Creating test report ...
3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/18/2009 2:55:01 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance_2009_3_18_11_48_45.xml has 478 samples queried.
3/18/2009 2:55:02 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance_2009_3_18_11_48_45.html is saved.
3/18/2009 2:55:02 PM -- Jetstress testing ends.
3/18/2009 4:11:48 PM -- Jetstress testing begins ...
3/18/2009 4:11:48 PM -- Prepare testing begins ...
3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.

3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)
3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)
3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).
3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).
3/18/2009 4:44:38 PM -- Duplicating 27 databases:
3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).
3/18/2009 7:53:54 PM -- Attaching databases ...
3/18/2009 7:53:54 PM -- Prepare testing ends.
3/18/2009 7:53:54 PM -- Dispatching transactions begins ...
3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
3/18/2009 7:54:23 PM -- Attaining prerequisites:
3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).
3/18/2009 8:02:43 PM -- Automatic tuning begins ...
3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.
3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.
3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.
3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.
3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)
3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.
3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)
3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Performance logging ends.
3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).

3/18/2009 8:07:52 PM -- Attaining prerequisites:
 3/18/2009 8:07:52 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 10:07:52 PM -- Performance logging ends.
 3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507, 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524, 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and 32856.
 3/18/2009 10:07:52 PM -- Dispatching transactions ends.
 3/18/2009 10:07:52 PM -- Shutting down databases ...
 3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 10:07:57 PM -- Verifying database checksums ...
 3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 11:13:08 PM -- Performance logging ends.
 3/18/2009 11:13:08 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum 2009 3 18 22 7 57.blg](#) has 130 samples.

Appendix B: Stress Testing

Stress Test Result Report

Test Summary

Overall Test Result **Pass**

Machine Name PE2950

Test Description

Test Start Time 3/19/2009 1:09:01 PM

Test End Time 3/20/2009 1:21:10 PM

Jetstress Version 08.02.0060.000

Ese Version 08.01.0240.005

Operating System Windows Server (R) 2008 Enterprise Service Pack 1 (6.0.6001.65536)

Performance Log [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\Tuning 2009 3 19 13 15 53.blg](#)
[C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\Stress 2009 3 19 13 21 2.blg](#)
[C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\DBChecksum 2009 3 20 13 21 10.blg](#)

Database Sizing and Throughput

Achieved I/O per Second 7544.234
Target I/O per Second 5000
Initial database size 5402277117952
Final database size 5624556355584
Database files (count) 28

Jetstress System Parameters

Thread count 8 (per-storage group)
Log buffers 9000
Minimum database cache 896.0 MB
Maximum database cache 7168.0 MB
Insert operations 40%
Delete operations 30%
Replace operations 5%
Read operations 25%
Lazy commits 55%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (E:)	0.010	0.009	716.188	632.913	(n/a)
Database (G:)	0.008	0.009	573.896	498.609	(n/a)
Database (N:)	0.008	0.010	573.975	489.773	(n/a)
Database (X:)	0.010	0.007	716.225	636.590	(n/a)
Database (Y:)	0.010	0.009	717.266	638.731	(n/a)
Database (Z:)	0.010	0.008	716.839	633.227	(n/a)
Log (D:)	0.000	0.000	0.000	2296.385	4078.961

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	7.704	5.944	15.303
Available MBytes	23137.528	23103.000	23165.000
Free System Page Table Entries	33568674.822	33567941.000	33569067.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	64963965.218	64921600.000	65064960.000
Pool Paged Bytes	102419834.013	97460224.000	124252160.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log3/18/2009 11:29:03 AM -- Jetstress testing begins ...
 3/18/2009 11:29:09 AM -- Prepare testing begins ...
 3/18/2009 11:29:37 AM -- Attaching databases ...
 3/18/2009 11:29:37 AM -- Prepare testing ends.
 3/18/2009 11:29:37 AM -- Dispatching transactions begins ...
 3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
 3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
 3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
 3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
 3/18/2009 11:30:07 AM -- Attaining prerequisites:
 3/18/2009 11:38:33 AM -- \\MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).
 3/18/2009 11:38:35 AM -- Automatic tuning begins ...
 3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.
 3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.
 3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)
 3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.
 3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.
 3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)
 3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
 3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
 3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
 3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
 3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
 3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
 3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
 3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
 3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
 3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
 3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
 3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:48:45 AM -- Performance logging ends.
 3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
 3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
 3/18/2009 11:48:47 AM -- Attaining prerequisites:
 3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 1:48:48 PM -- Performance logging ends.
 3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
 3/18/2009 1:48:48 PM -- Dispatching transactions ends.
 3/18/2009 1:48:48 PM -- Shutting down databases ...
 3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 1:48:53 PM -- Verifying database checksums ...
 3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 2:54:42 PM -- Performance logging ends.

3/18/2009 2:54:42 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.blg](#) has 131 samples.

3/18/2009 2:54:45 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.html](#) is saved.

3/18/2009 2:54:45 PM -- Verifying log checksums ...

3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)

3/18/2009 2:54:54 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.blg](#) has 479 samples.

3/18/2009 2:54:54 PM -- Creating test report ...

3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

3/18/2009 2:55:01 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.xml](#) has 478 samples queried.

3/18/2009 2:55:02 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.html](#) is saved.

3/18/2009 2:55:02 PM -- Jetstress testing ends.

3/18/2009 4:11:48 PM -- Jetstress testing begins ...

3/18/2009 4:11:48 PM -- Prepare testing begins ...

3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.

3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)

3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)

3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).

3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).

3/18/2009 4:44:38 PM -- Duplicating 27 databases:

3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).

3/18/2009 7:53:54 PM -- Attaching databases ...

3/18/2009 7:53:54 PM -- Prepare testing ends.

3/18/2009 7:53:54 PM -- Dispatching transactions begins ...

3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 7:54:23 PM -- Attaining prerequisites:

3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).

3/18/2009 8:02:43 PM -- Automatic tuning begins ...

3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.

3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.

3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.
3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.
3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)
3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.
3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)
3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Performance logging ends.
3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).
3/18/2009 8:07:52 PM -- Attaining prerequisites:
3/18/2009 8:07:52 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 10:07:52 PM -- Performance logging ends.
3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507, 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524, 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and 32856.
3/18/2009 10:07:52 PM -- Dispatching transactions ends.
3/18/2009 10:07:52 PM -- Shutting down databases ...
3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
3/18/2009 10:07:57 PM -- Verifying database checksums ...
3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)

3/18/2009 11:13:08 PM -- Performance logging ends.
3/18/2009 11:13:08 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\DBChecksum_2009_3_18_22_7_57.blg has 130 samples.
3/18/2009 11:13:11 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\DBChecksum_2009_3_18_22_7_57.html is saved.
3/18/2009 11:13:11 PM -- Verifying log checksums ...
3/18/2009 11:13:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (3 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed), and D:\L28 (2 logs passed)
3/18/2009 11:13:19 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.blg has 479 samples.
3/18/2009 11:13:19 PM -- Creating test report ...
3/18/2009 11:13:26 PM -- Volume E: has 0.0102 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume G: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume N: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume X: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Y: has 0.0101 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Z: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:13:26 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/18/2009 11:13:26 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/18/2009 11:13:26 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.xml has 478 samples queried.
3/18/2009 11:13:26 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.html is saved.
3/18/2009 11:13:26 PM -- Jetstress testing ends.
3/19/2009 9:46:21 AM -- Jetstress testing begins ...
3/19/2009 9:46:21 AM -- Prepare testing begins ...
3/19/2009 9:46:50 AM -- Attaching databases ...
3/19/2009 9:46:50 AM -- Prepare testing ends.
3/19/2009 9:47:21 AM -- Performance logging begins (interval: 30000 ms).
3/19/2009 9:47:21 AM -- Streaming backup databases ...
3/19/2009 11:06:20 AM -- Performance logging ends.
3/19/2009 11:06:20 AM -- Instance2764.1 (100% processed), Instance2764.2 (100% processed), Instance2764.3 (100% processed), Instance2764.4 (100% processed), Instance2764.5 (100% processed), Instance2764.6 (100% processed), Instance2764.7 (100% processed), Instance2764.8 (100% processed), Instance2764.9 (100% processed), Instance2764.10 (100% processed), Instance2764.11 (100% processed), Instance2764.12 (100% processed), Instance2764.13 (100% processed), Instance2764.14 (100% processed), Instance2764.15 (100% processed), Instance2764.16 (100% processed), Instance2764.17 (100% processed), Instance2764.18 (100% processed), Instance2764.19 (100% processed), Instance2764.20 (100% processed), Instance2764.21 (100% processed), Instance2764.22 (100% processed), Instance2764.23 (100% processed), Instance2764.24 (100% processed), Instance2764.25 (100% processed), Instance2764.26 (100% processed), Instance2764.27 (100% processed), and Instance2764.28 (100% processed)
3/19/2009 11:06:20 AM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming_BU\StreamingBackup_2009_3_19_9_46_50.blg has 157 samples.
3/19/2009 11:06:20 AM -- Creating test report ...
3/19/2009 11:06:21 AM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming_BU\StreamingBackup_2009_3_19_9_46_50.html is saved.
3/19/2009 11:06:21 AM -- Jetstress testing ends.
3/19/2009 12:06:42 PM -- Jetstress testing begins ...
3/19/2009 12:06:42 PM -- Prepare testing begins ...

3/19/2009 12:07:10 PM -- Attaching databases ...
 3/19/2009 12:07:10 PM -- Prepare testing ends.
 3/19/2009 12:07:10 PM -- Dispatching transactions begins ...
 3/19/2009 12:07:10 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
 3/19/2009 12:07:10 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
 3/19/2009 12:07:39 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
 3/19/2009 12:07:39 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
 3/19/2009 12:07:39 PM -- Attaining prerequisites:
 3/19/2009 12:15:15 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6775407000.0 (lower bound: 6764573000.0, upper bound: none)
 3/19/2009 12:15:17 PM -- Performance logging begins (interval: 5000 ms).
 3/19/2009 12:15:17 PM -- Automatic tuning begins ...
 3/19/2009 12:15:48 PM -- Volume E: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume G: has 0.00005 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume N: has 0.00003 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume X: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume Y: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume Z: has 0.00007 for read latency slope.
 3/19/2009 12:17:50 PM -- 1548 batch transactions/sec and 16 sessions have 6264 IOPS.
 3/19/2009 12:17:50 PM -- 16 sessions have actual 6264 IOPS (target IOPS: 5000)
 3/19/2009 12:17:50 PM -- Volume E: has 0.0079 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume G: has 0.0067 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume N: has 0.0065 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume Y: has 0.0084 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 12:17:50 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Performance logging ends.
 3/19/2009 12:17:50 PM -- Automatic tuning succeeded.
 3/19/2009 12:17:52 PM -- Operation mix: Sessions 16, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/19/2009 12:17:52 PM -- Performance logging begins (interval: 15000 ms).
 3/19/2009 12:17:52 PM -- Generating log files ...
 3/19/2009 12:53:02 PM -- D:\L1 (101.4% generated), D:\L2 (102.4% generated), D:\L3 (100.2% generated), D:\L4 (103.4% generated), D:\L5 (102.4% generated), D:\L6 (104.0% generated), D:\L7 (102.8% generated), D:\L8 (102.0% generated), D:\L9 (102.8% generated), D:\L10 (102.8% generated), D:\L11 (102.4% generated), D:\L12 (100.6% generated), D:\L13 (103.4% generated), D:\L14 (101.6% generated), D:\L15 (101.6% generated), D:\L16 (103.4% generated), D:\L17 (101.6% generated), D:\L18 (100.4% generated), D:\L19 (102.0% generated), D:\L20 (101.0% generated), D:\L21 (102.8% generated), D:\L22 (101.8% generated), D:\L23 (100.8% generated), D:\L24 (102.8% generated), D:\L25 (103.4% generated), D:\L26 (102.2% generated), D:\L27 (102.8% generated), and D:\L28 (100.2% generated)
 3/19/2009 12:53:02 PM -- Performance logging ends.
 3/19/2009 12:53:02 PM -- JetInterop batch transaction stats: 33774, 33707, 33516, 34288, 33971, 34313, 33950, 33970, 33765, 33893, 33954, 33701, 34238, 33919, 33752, 33793, 33491, 33993, 34151, 33755, 33934, 33955, 33793, 33743, 33705, 33744, 34229, and 34047.
 3/19/2009 12:53:04 PM -- Dispatching transactions ends.
 3/19/2009 12:53:04 PM -- Shutting down databases ...
 3/19/2009 12:53:26 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),

Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete),
 Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete),
 Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete),
 Instance2764.27 (complete), and Instance2764.28 (complete)
 3/19/2009 12:53:26 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.blg](#) has 140 samples.
 3/19/2009 12:53:26 PM -- Creating test report ...
 3/19/2009 12:53:27 PM -- Volume E: has 0.0116 for Avg. Disk sec/Read.
 3/19/2009 12:53:27 PM -- Volume G: has 0.0093 for Avg. Disk sec/Read.
 3/19/2009 12:53:27 PM -- Volume N: has 0.0084 for Avg. Disk sec/Read.
 3/19/2009 12:53:27 PM -- Volume X: has 0.0126 for Avg. Disk sec/Read.
 3/19/2009 12:53:28 PM -- Volume Y: has 0.0120 for Avg. Disk sec/Read.
 3/19/2009 12:53:28 PM -- Volume Z: has 0.0116 for Avg. Disk sec/Read.
 3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Read.
 3/19/2009 12:53:28 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/19/2009 12:53:28 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/19/2009 12:53:28 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.xml](#) has 139 samples queried.
 3/19/2009 12:53:28 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.html](#) is saved.
 3/19/2009 12:53:30 PM -- Performance logging begins (interval: 4000 ms).
 3/19/2009 12:53:30 PM -- Recovering databases ...
 3/19/2009 12:58:02 PM -- Performance logging ends.
 3/19/2009 12:58:02 PM -- Instance2764.1 (268.6944), Instance2764.2 (241.098),
 Instance2764.3 (262.8444), Instance2764.4 (268.9596), Instance2764.5 (258.6012),
 Instance2764.6 (259.662), Instance2764.7 (262.314), Instance2764.8 (227.838),
 Instance2764.9 (231.5508), Instance2764.10 (229.9596), Instance2764.11 (230.7552),
 Instance2764.12 (256.4796), Instance2764.13 (231.816), Instance2764.14 (267.618),
 Instance2764.15 (267.0876), Instance2764.16 (268.4292), Instance2764.17 (267.618),
 Instance2764.18 (268.164), Instance2764.19 (270.0204), Instance2764.20 (270.2856),
 Instance2764.21 (272.142), Instance2764.22 (268.164), Instance2764.23 (271.6116),
 Instance2764.24 (271.8768), Instance2764.25 (271.6116), Instance2764.26 (268.4292),
 Instance2764.27 (263.64), and Instance2764.28 (264.1704)
 3/19/2009 12:58:03 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\SoftRecovery 2009 3 19 12 53 28.blg](#) has 67 samples.
 3/19/2009 12:58:03 PM -- Creating test report ...
 3/19/2009 12:58:04 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\SoftRecovery 2009 3 19 12 53 28.html](#) is saved.
 3/19/2009 12:58:04 PM -- Jetstress testing ends.
 3/19/2009 1:09:01 PM -- Jetstress testing begins ...
 3/19/2009 1:09:01 PM -- Prepare testing begins ...
 3/19/2009 1:09:30 PM -- Attaching databases ...
 3/19/2009 1:09:30 PM -- Prepare testing ends.
 3/19/2009 1:09:30 PM -- Dispatching transactions begins ...
 3/19/2009 1:09:30 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
 3/19/2009 1:09:30 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
 3/19/2009 1:09:59 PM -- Database read latency thresholds: (average: 0.02 seconds/read,
 maximum: 0.1 seconds/read).
 3/19/2009 1:09:59 PM -- Log write latency thresholds: (average: 0.01 seconds/write,
 maximum: 0.1 seconds/write).
 3/19/2009 1:09:59 PM -- Attaining prerequisites:
 3/19/2009 1:15:53 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last:
 6764970000.0 (lower bound: 6764573000.0, upper bound: none)
 3/19/2009 1:15:55 PM -- Performance logging begins (interval: 5000 ms).
 3/19/2009 1:15:55 PM -- Automatic tuning begins ...
 3/19/2009 1:16:27 PM -- Volume E: has 0.00010 for read latency slope.
 3/19/2009 1:16:27 PM -- Volume G: has 0.00004 for read latency slope.
 3/19/2009 1:16:27 PM -- Volume N: has 0.00000 for read latency slope.

3/19/2009 1:16:27 PM -- Volume X: has 0.00014 for read latency slope.
 3/19/2009 1:16:27 PM -- Volume Y: has 0.00013 for read latency slope.
 3/19/2009 1:16:27 PM -- Volume Z: has 0.00005 for read latency slope.
 3/19/2009 1:18:29 PM -- 1938 batch transactions/sec and 16 sessions have 8094 IOPS.
 3/19/2009 1:18:29 PM -- 16 sessions have actual 8094 IOPS (target IOPS: 5000)
 3/19/2009 1:18:29 PM -- Volume E: has 0.0098 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume G: has 0.0091 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume N: has 0.0081 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume X: has 0.0107 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume Y: has 0.0105 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume Z: has 0.0114 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 1:18:29 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/19/2009 1:18:29 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%,
 Reads 25%, Lazy Commits 55%.
 3/19/2009 1:19:00 PM -- Volume E: has 0.00003 for read latency slope.
 3/19/2009 1:19:00 PM -- Volume G: has 0.00010 for read latency slope.
 3/19/2009 1:19:00 PM -- Volume N: has 0.00002 for read latency slope.
 3/19/2009 1:19:00 PM -- Volume X: has 0.00002 for read latency slope.
 3/19/2009 1:19:00 PM -- Volume Y: has 0.00007 for read latency slope.
 3/19/2009 1:19:00 PM -- Volume Z: has 0.00014 for read latency slope.
 3/19/2009 1:21:02 PM -- 1759 batch transactions/sec and 8 sessions have 7353 IOPS.
 3/19/2009 1:21:02 PM -- 8 sessions have actual 7353 IOPS (target IOPS: 5000)
 3/19/2009 1:21:02 PM -- Volume E: has 0.0094 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume G: has 0.0077 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume N: has 0.0073 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume X: has 0.0102 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume Y: has 0.0099 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume Z: has 0.0102 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 1:21:02 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Performance logging ends.
 3/19/2009 1:21:02 PM -- Automatic tuning succeeded.
 3/19/2009 1:21:04 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%,
 Reads 25%, Lazy Commits 55%.
 3/19/2009 1:21:04 PM -- Performance logging begins (interval: 15000 ms).
 3/19/2009 1:21:04 PM -- Attaining prerequisites:
 3/19/2009 1:21:04 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last:
 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/20/2009 1:21:05 PM -- Performance logging ends.
 3/20/2009 1:21:05 PM -- JetInterop batch transaction stats: 348761, 349051, 348416,
 348976, 349319, 348943, 349134, 348275, 348612, 349542, 350034, 349077, 348548,
 347965, 349969, 349884, 348877, 349223, 348345, 349586, 349373, 347991, 349517,
 347563, 349277, 348986, 348822, and 348322.
 3/20/2009 1:21:05 PM -- Dispatching transactions ends.
 3/20/2009 1:21:05 PM -- Shutting down databases ...
 3/20/2009 1:21:10 PM -- Instance2764.1 (complete), Instance2764.2 (complete),
 Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete),
 Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete),
 Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete),
 Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete),
 Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),
 Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete),
 Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete),
 Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete),
 Instance2764.27 (complete), and Instance2764.28 (complete)
 3/20/2009 1:21:10 PM -- Performance logging begins (interval: 30000 ms).
 3/20/2009 1:21:10 PM -- Verifying database checksums ...
 3/20/2009 2:29:07 PM -- E: (100% processed), G: (100% processed), N: (100% processed),

X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/20/2009 2:29:07 PM -- Performance logging ends.
 3/20/2009 2:29:07 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\DBChecksum 2009 3 20 13 21 10.blg](#) has 135 samples.
 3/20/2009 2:29:10 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\DBChecksum 2009 3 20 13 21 10.html](#) is saved.
 3/20/2009 2:29:10 PM -- Verifying log checksums ...
 3/20/2009 2:29:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed), and D:\L28 (2 logs passed)
 3/20/2009 2:29:19 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\Stress 2009 3 19 13 21 2.blg](#) has 5751 samples.
 3/20/2009 2:29:19 PM -- Creating test report ...
 3/20/2009 2:30:33 PM -- Volume E: has 0.0098 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume N: has 0.0077 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume X: has 0.0100 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume Y: has 0.0098 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume Z: has 0.0099 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/20/2009 2:30:33 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/20/2009 2:30:33 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/20/2009 2:30:33 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/20/2009 2:30:33 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Stress\Stress 2009 3 19 13 21 2.xml](#) has 5750 samples queried.

Appendix C: Streaming Backup Testing

Streaming backup Test Result Report

Streaming Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2764.1	183647.40	01:10:37	43.34
Instance2764.2	183647.40	01:10:01	43.71
Instance2764.3	183651.40	01:09:49	43.83
Instance2764.4	183657.40	01:10:06	43.66
Instance2764.5	183651.40	01:00:48	50.34
Instance2764.6	183659.40	01:01:04	50.11
Instance2764.7	183651.40	01:00:48	50.34
Instance2764.8	183641.40	01:01:13	50.00
Instance2764.9	183649.40	01:01:00	50.17
Instance2764.10	183661.40	01:01:18	49.93
Instance2764.11	183645.40	01:01:01	50.16
Instance2764.12	183665.40	01:01:24	49.84
Instance2764.13	183651.40	01:17:39	39.41

Instance2764.14	183665.40	01:18:27	39.01
Instance2764.15	183657.40	01:18:58	38.76
Instance2764.16	183657.40	01:17:03	39.72
Instance2764.17	183657.40	01:02:47	48.75
Instance2764.18	183637.40	01:02:47	48.74
Instance2764.19	183657.40	01:02:53	48.67
Instance2764.20	183655.40	01:02:47	48.74
Instance2764.21	183647.40	01:09:36	43.98
Instance2764.22	183651.40	01:09:27	44.07
Instance2764.23	183663.40	01:09:35	43.98
Instance2764.24	183669.40	01:09:41	43.93
Instance2764.25	183655.40	01:09:12	44.22
Instance2764.26	183655.40	01:02:43	48.80
Instance2764.27	183661.40	01:16:30	40.01
Instance2764.28	183651.40	01:09:32	44.01

Jetstress System Parameters

Thread count	16 (per-storage group)
Log buffers	9000
Minimum database cache	896.0 MB
Maximum database cache	7168.0 MB
Insert operations	40%
Delete operations	30%
Replace operations	5%
Read operations	25%
Lazy commits	55%

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (E:)	0.002	0.000	1557.690	0.025	(n/a)
Database (G:)	0.001	0.000	1244.281	0.020	(n/a)
Database (N:)	0.001	0.000	1244.289	0.020	(n/a)
Database (X:)	0.002	0.000	1551.855	0.022	(n/a)
Database (Y:)	0.001	0.000	1556.340	0.020	(n/a)
Database (Z:)	0.002	0.000	1557.617	0.024	(n/a)
Log (D:)	0.000	0.000	0.000	0.107	272.748

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	14.758	1.403	17.525
Available MBytes	30615.006	30607.000	30618.000
Free System Page Table Entries	33569180.471	33568858.000	33569354.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	60696432.510	60686336.000	60719104.000
Pool Paged Bytes	98137029.299	96641024.000	98435072.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log 3/18/2009 11:29:03 AM -- Jetstress testing begins ...

3/18/2009 11:29:09 AM -- Prepare testing begins ...

3/18/2009 11:29:37 AM -- Attaching databases ...

3/18/2009 11:29:37 AM -- Prepare testing ends.

3/18/2009 11:29:37 AM -- Dispatching transactions begins ...

3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 11:30:07 AM -- Attaining prerequisites:

3/18/2009 11:38:33 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).

3/18/2009 11:38:35 AM -- Automatic tuning begins ...

3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.

3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.

3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.

3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.

3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.

3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)

3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.

3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.

3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.

3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.

3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.

3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.

3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)

3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.

3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.

3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Performance logging ends.
3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
3/18/2009 11:48:47 AM -- Attaining prerequisites:
3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 1:48:48 PM -- Performance logging ends.
3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
3/18/2009 1:48:48 PM -- Dispatching transactions ends.
3/18/2009 1:48:48 PM -- Shutting down databases ...
3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete),

Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
3/18/2009 1:48:53 PM -- Verifying database checksums ...
3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
3/18/2009 2:54:42 PM -- Performance logging ends.
3/18/2009 2:54:42 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.blg](#) has 131 samples.
3/18/2009 2:54:45 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.html](#) is saved.
3/18/2009 2:54:45 PM -- Verifying log checksums ...
3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)
3/18/2009 2:54:54 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.blg](#) has 479 samples.
3/18/2009 2:54:54 PM -- Creating test report ...
3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/18/2009 2:55:01 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.xml](#) has 478 samples queried.
3/18/2009 2:55:02 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.html](#) is saved.
3/18/2009 2:55:02 PM -- Jetstress testing ends.
3/18/2009 4:11:48 PM -- Jetstress testing begins ...
3/18/2009 4:11:48 PM -- Prepare testing begins ...
3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.
3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)
3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)
3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).
3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).
3/18/2009 4:44:38 PM -- Duplicating 27 databases:
3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).
3/18/2009 7:53:54 PM -- Attaching databases ...
3/18/2009 7:53:54 PM -- Prepare testing ends.
3/18/2009 7:53:54 PM -- Dispatching transactions begins ...
3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
3/18/2009 7:54:23 PM -- Attaining prerequisites:
3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).
3/18/2009 8:02:43 PM -- Automatic tuning begins ...
3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.
3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.
3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.
3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.
3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)
3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.
3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.
3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.
3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.
3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)
3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 8:07:49 PM -- Performance logging ends.
3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).
3/18/2009 8:07:52 PM -- Attaining prerequisites:
3/18/2009 8:07:52 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 10:07:52 PM -- Performance logging ends.
3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507, 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524, 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and 32856.
3/18/2009 10:07:52 PM -- Dispatching transactions ends.
3/18/2009 10:07:52 PM -- Shutting down databases ...
3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete),

Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete),
 Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete),
 Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete),
 Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete),
 Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),
 Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete),
 Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete),
 Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete),
 Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 10:07:57 PM -- Verifying database checksums ...
 3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed),
 X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 11:13:08 PM -- Performance logging ends.
 3/18/2009 11:13:08 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.blg has 130 samples.
 3/18/2009 11:13:11 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.html is saved.
 3/18/2009 11:13:11 PM -- Verifying log checksums ...
 3/18/2009 11:13:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed),
 D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed),
 D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed),
 D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (3 logs passed),
 D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed),
 D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed),
 D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed),
 and D:\L28 (2 logs passed)
 3/18/2009 11:13:19 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.blg has 479 samples.
 3/18/2009 11:13:19 PM -- Creating test report ...
 3/18/2009 11:13:26 PM -- Volume E: has 0.0102 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume G: has 0.0084 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume N: has 0.0078 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume X: has 0.0103 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume Y: has 0.0101 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume Z: has 0.0105 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:13:26 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/18/2009 11:13:26 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/18/2009 11:13:26 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.xml has 478 samples queried.
 3/18/2009 11:13:26 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.html is saved.
 3/18/2009 11:13:26 PM -- Jetstress testing ends.
 3/19/2009 9:46:21 AM -- Jetstress testing begins ...
 3/19/2009 9:46:21 AM -- Prepare testing begins ...
 3/19/2009 9:46:50 AM -- Attaching databases ...
 3/19/2009 9:46:50 AM -- Prepare testing ends.
 3/19/2009 9:47:21 AM -- Performance logging begins (interval: 30000 ms).
 3/19/2009 9:47:21 AM -- Streaming backup databases ...
 3/19/2009 11:06:20 AM -- Performance logging ends.
 3/19/2009 11:06:20 AM -- Instance2764.1 (100% processed), Instance2764.2 (100% processed),
 Instance2764.3 (100% processed), Instance2764.4 (100% processed),
 Instance2764.5 (100% processed), Instance2764.6 (100% processed), Instance2764.7 (100% processed),
 Instance2764.8 (100% processed), Instance2764.9 (100% processed),
 Instance2764.10 (100% processed), Instance2764.11 (100% processed), Instance2764.12 (100% processed),
 Instance2764.13 (100% processed), Instance2764.14 (100% processed),
 Instance2764.15 (100% processed), Instance2764.16 (100% processed), Instance2764.17

(100% processed), Instance2764.18 (100% processed), Instance2764.19 (100% processed), Instance2764.20 (100% processed), Instance2764.21 (100% processed), Instance2764.22 (100% processed), Instance2764.23 (100% processed), Instance2764.24 (100% processed), Instance2764.25 (100% processed), Instance2764.26 (100% processed), Instance2764.27 (100% processed), and Instance2764.28 (100% processed)
 3/19/2009 11:06:20 AM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Streaming_BU\StreamingBackup_2009_3_19_9_46_50.blq](#) has 157 samples.
 3/19/2009 11:06:20 AM -- Creating test report ...

Database Checksum Test Result Report

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
E:\SG1\Jetstress1.edb	24519090	0	0	0	191555 MBytes / 1060 seconds
E:\SG2\Jetstress1.edb	24522418	0	0	0	191581 MBytes / 1084 seconds
E:\SG3\Jetstress1.edb	24515250	0	0	0	191525 MBytes / 807 seconds
E:\SG4\Jetstress1.edb	24521650	0	0	0	191575 MBytes / 521 seconds
E:\SG5\Jetstress1.edb	24515506	0	0	0	191527 MBytes / 513 seconds
G:\SG1\Jetstress1.edb	24517554	0	0	0	191543 MBytes / 338 seconds
G:\SG2\Jetstress1.edb	24523698	0	0	0	191591 MBytes / 339 seconds
G:\SG3\Jetstress1.edb	24521650	0	0	0	191575 MBytes / 347 seconds
G:\SG4\Jetstress1.edb	24515762	0	0	0	191529 MBytes / 352 seconds
N:\SG1\Jetstress1.edb	24519346	0	0	0	191557 MBytes / 467 seconds
N:\SG2\Jetstress1.edb	24523186	0	0	0	191587 MBytes / 460 seconds
N:\SG3\Jetstress1.edb	24528818	0	0	0	191631

				MBytes / 453 seconds
N:\SG4\Jetstress1.edb 24526002	0	0	0	191609 MBytes / 385 seconds
X:\SG1\Jetstress1.edb 24520370	0	0	0	191565 MBytes / 538 seconds
X:\SG2\Jetstress1.edb 24525234	0	0	0	191603 MBytes / 534 seconds
X:\SG3\Jetstress1.edb 24520882	0	0	0	191569 MBytes / 541 seconds
X:\SG4\Jetstress1.edb 24526258	0	0	0	191611 MBytes / 548 seconds
X:\SG5\Jetstress1.edb 24513458	0	0	0	191511 MBytes / 537 seconds
Y:\SG1\Jetstress1.edb 24522930	0	0	0	191585 MBytes / 478 seconds
Y:\SG2\Jetstress1.edb 24519346	0	0	0	191557 MBytes / 469 seconds
Y:\SG3\Jetstress1.edb 24525490	0	0	0	191605 MBytes / 454 seconds
Y:\SG4\Jetstress1.edb 24520114	0	0	0	191563 MBytes / 389 seconds
Y:\SG5\Jetstress1.edb 24522930	0	0	0	191585 MBytes / 245 seconds
Z:\SG1\Jetstress1.edb 24522418	0	0	0	191581 MBytes / 1113 seconds
Z:\SG2\Jetstress1.edb 24514738	0	0	0	191521 MBytes / 1127 seconds
Z:\SG3\Jetstress1.edb 24519602	0	0	0	191559 MBytes / 784 seconds
Z:\SG4\Jetstress1.edb 24522418	0	0	0	191581 MBytes / 570 seconds
Z:\SG5\Jetstress1.edb 24525234	0	0	0	191603 MBytes / 479

					seconds
(Sum)	686591352	0	0	0	5363994 MBytes / 4076 seconds

Disk Subsystem Performance (of checksum)

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec
E:	0.015	0.000	3833.995	0.000
G:	0.006	0.000	8891.695	0.000
N:	0.007	0.000	6927.529	0.000
X:	0.009	0.000	5673.361	0.000
Y:	0.007	0.000	7468.406	0.000
Z:	0.016	0.000	3723.182	0.000

Memory System Performance (of checksum)

Counter	Average	Minimum	Maximum
% Processor Time	35.273	12.058	68.247
Available MBytes	30561.511	30538.000	30573.000
Free System Page Table Entries	33570820.341	33569305.000	33571102.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	64928912.119	64925696.000	64937984.000
Pool Paged Bytes	104756899.081	103858176.000	118898688.000

Test Log3/18/2009 11:29:03 AM -- Jetstress testing begins ...

3/18/2009 11:29:09 AM -- Prepare testing begins ...

3/18/2009 11:29:37 AM -- Attaching databases ...

3/18/2009 11:29:37 AM -- Prepare testing ends.

3/18/2009 11:29:37 AM -- Dispatching transactions begins ...

3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 11:30:07 AM -- Attaining prerequisites:

3/18/2009 11:38:33 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).

3/18/2009 11:38:35 AM -- Automatic tuning begins ...

3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.

3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.

3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.

3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.

3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.

3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)

3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.

3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.
3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.
3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.
3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.
3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)
3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 11:48:45 AM -- Performance logging ends.
 3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
 3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
 3/18/2009 11:48:47 AM -- Attaining prerequisites:
 3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 1:48:48 PM -- Performance logging ends.
 3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
 3/18/2009 1:48:48 PM -- Dispatching transactions ends.
 3/18/2009 1:48:48 PM -- Shutting down databases ...
 3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 1:48:53 PM -- Verifying database checksums ...
 3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 2:54:42 PM -- Performance logging ends.
 3/18/2009 2:54:42 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum_2009_3_18_13_48_52.blg has 131 samples.
 3/18/2009 2:54:45 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum_2009_3_18_13_48_52.html is saved.
 3/18/2009 2:54:45 PM -- Verifying log checksums ...
 3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)
 3/18/2009 2:54:54 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance_2009_3_18_11_48_45.blg has 479 samples.
 3/18/2009 2:54:54 PM -- Creating test report ...
 3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/18/2009 2:55:01 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance_2009_3_18_11_48_45.xml has 478 samples queried.

3/18/2009 2:55:02 PM -- <C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.html> is saved.

3/18/2009 2:55:02 PM -- Jetstress testing ends.

3/18/2009 4:11:48 PM -- Jetstress testing begins ...

3/18/2009 4:11:48 PM -- Prepare testing begins ...

3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.

3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)

3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)

3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).

3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).

3/18/2009 4:44:38 PM -- Duplicating 27 databases:

3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).

3/18/2009 7:53:54 PM -- Attaching databases ...

3/18/2009 7:53:54 PM -- Prepare testing ends.

3/18/2009 7:53:54 PM -- Dispatching transactions begins ...

3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 7:54:23 PM -- Attaining prerequisites:

3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).

3/18/2009 8:02:43 PM -- Automatic tuning begins ...

3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.

3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.

3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.

3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.

3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)

3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.

3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.

3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.

3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.

3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.

3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.

3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)

3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.

3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Performance logging ends.
 3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
 3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).
 3/18/2009 8:07:52 PM -- Attaining prerequisites:
 3/18/2009 8:07:52 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 10:07:52 PM -- Performance logging ends.
 3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507, 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524, 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and 32856.
 3/18/2009 10:07:52 PM -- Dispatching transactions ends.
 3/18/2009 10:07:52 PM -- Shutting down databases ...
 3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 10:07:57 PM -- Verifying database checksums ...
 3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/18/2009 11:13:08 PM -- Performance logging ends.
 3/18/2009 11:13:08 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.blg has 130 samples.
 3/18/2009 11:13:11 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\DBChecksum_2009_3_18_22_7_57.html is saved.
 3/18/2009 11:13:11 PM -- Verifying log checksums ...
 3/18/2009 11:13:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (3 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed), and D:\L28 (2 logs passed)
 3/18/2009 11:13:19 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.blg has 479 samples.
 3/18/2009 11:13:19 PM -- Creating test report ...
 3/18/2009 11:13:26 PM -- Volume E: has 0.0102 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume G: has 0.0084 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume N: has 0.0078 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume X: has 0.0103 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume Y: has 0.0101 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume Z: has 0.0105 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:13:26 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:13:26 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 3/18/2009 11:13:26 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 3/18/2009 11:13:26 PM -- C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Performance_2009_3_18_20_7_49.xml has 478 samples queried.

3/18/2009 11:13:26 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance 2009 3 18 20 7 49.html](#) is saved.

3/18/2009 11:13:26 PM -- Jetstress testing ends.

3/19/2009 9:46:21 AM -- Jetstress testing begins ...

3/19/2009 9:46:21 AM -- Prepare testing begins ...

3/19/2009 9:46:50 AM -- Attaching databases ...

3/19/2009 9:46:50 AM -- Prepare testing ends.

3/19/2009 9:47:21 AM -- Performance logging begins (interval: 30000 ms).

3/19/2009 9:47:21 AM -- Streaming backup databases ...

3/19/2009 11:06:20 AM -- Performance logging ends.

3/19/2009 11:06:20 AM -- Instance2764.1 (100% processed), Instance2764.2 (100% processed), Instance2764.3 (100% processed), Instance2764.4 (100% processed), Instance2764.5 (100% processed), Instance2764.6 (100% processed), Instance2764.7 (100% processed), Instance2764.8 (100% processed), Instance2764.9 (100% processed), Instance2764.10 (100% processed), Instance2764.11 (100% processed), Instance2764.12 (100% processed), Instance2764.13 (100% processed), Instance2764.14 (100% processed), Instance2764.15 (100% processed), Instance2764.16 (100% processed), Instance2764.17 (100% processed), Instance2764.18 (100% processed), Instance2764.19 (100% processed), Instance2764.20 (100% processed), Instance2764.21 (100% processed), Instance2764.22 (100% processed), Instance2764.23 (100% processed), Instance2764.24 (100% processed), Instance2764.25 (100% processed), Instance2764.26 (100% processed), Instance2764.27 (100% processed), and Instance2764.28 (100% processed)

3/19/2009 11:06:20 AM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming BU\StreamingBackup 2009 3 19 9 46 50.blq](#) has 157 samples.

3/19/2009 11:06:20 AM -- Creating test report ...

3/19/2009 11:06:21 AM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming BU\StreamingBackup 2009 3 19 9 46 50.html](#) is saved.

3/19/2009 11:06:21 AM -- Jetstress testing ends.

3/19/2009 12:06:42 PM -- Jetstress testing begins ...

3/19/2009 12:06:42 PM -- Prepare testing begins ...

3/19/2009 12:07:10 PM -- Attaching databases ...

3/19/2009 12:07:10 PM -- Prepare testing ends.

3/19/2009 12:07:10 PM -- Dispatching transactions begins ...

3/19/2009 12:07:10 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/19/2009 12:07:10 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/19/2009 12:07:39 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/19/2009 12:07:39 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/19/2009 12:07:39 PM -- Attaining prerequisites:

3/19/2009 12:15:15 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6775407000.0 (lower bound: 6764573000.0, upper bound: none)

3/19/2009 12:15:17 PM -- Performance logging begins (interval: 5000 ms).

3/19/2009 12:15:17 PM -- Automatic tuning begins ...

3/19/2009 12:15:48 PM -- Volume E: has 0.00006 for read latency slope.

3/19/2009 12:15:48 PM -- Volume G: has 0.00005 for read latency slope.

3/19/2009 12:15:48 PM -- Volume N: has 0.00003 for read latency slope.

3/19/2009 12:15:48 PM -- Volume X: has 0.00006 for read latency slope.

3/19/2009 12:15:48 PM -- Volume Y: has 0.00006 for read latency slope.

3/19/2009 12:15:48 PM -- Volume Z: has 0.00007 for read latency slope.

3/19/2009 12:17:50 PM -- 1548 batch transactions/sec and 16 sessions have 6264 IOPS.

3/19/2009 12:17:50 PM -- 16 sessions have actual 6264 IOPS (target IOPS: 5000)

3/19/2009 12:17:50 PM -- Volume E: has 0.0079 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume G: has 0.0067 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume N: has 0.0065 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume X: has 0.0082 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume Y: has 0.0084 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.

3/19/2009 12:17:50 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/19/2009 12:17:50 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/19/2009 12:17:50 PM -- Performance logging ends.
3/19/2009 12:17:50 PM -- Automatic tuning succeeded.
3/19/2009 12:17:52 PM -- Operation mix: Sessions 16, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/19/2009 12:17:52 PM -- Performance logging begins (interval: 15000 ms).
3/19/2009 12:17:52 PM -- Generating log files ...
3/19/2009 12:53:02 PM -- D:\L1 (101.4% generated), D:\L2 (102.4% generated), D:\L3 (100.2% generated), D:\L4 (103.4% generated), D:\L5 (102.4% generated), D:\L6 (104.0% generated), D:\L7 (102.8% generated), D:\L8 (102.0% generated), D:\L9 (102.8% generated), D:\L10 (102.8% generated), D:\L11 (102.4% generated), D:\L12 (100.6% generated), D:\L13 (103.4% generated), D:\L14 (101.6% generated), D:\L15 (101.6% generated), D:\L16 (103.4% generated), D:\L17 (101.6% generated), D:\L18 (100.4% generated), D:\L19 (102.0% generated), D:\L20 (101.0% generated), D:\L21 (102.8% generated), D:\L22 (101.8% generated), D:\L23 (100.8% generated), D:\L24 (102.8% generated), D:\L25 (103.4% generated), D:\L26 (102.2% generated), D:\L27 (102.8% generated), and D:\L28 (100.2% generated)
3/19/2009 12:53:02 PM -- Performance logging ends.
3/19/2009 12:53:02 PM -- JetInterop batch transaction stats: 33774, 33707, 33516, 34288, 33971, 34313, 33950, 33970, 33765, 33893, 33954, 33701, 34238, 33919, 33752, 33793, 33491, 33993, 34151, 33755, 33934, 33955, 33793, 33743, 33705, 33744, 34229, and 34047.
3/19/2009 12:53:04 PM -- Dispatching transactions ends.
3/19/2009 12:53:04 PM -- Shutting down databases ...
3/19/2009 12:53:26 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/19/2009 12:53:26 PM -- <C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Soft Recovery\Performance 2009 3 19 12 17 50.blg> has 140 samples.
3/19/2009 12:53:26 PM -- Creating test report ...
3/19/2009 12:53:27 PM -- Volume E: has 0.0116 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume G: has 0.0093 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume N: has 0.0084 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume X: has 0.0126 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume Y: has 0.0120 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume Z: has 0.0116 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/19/2009 12:53:28 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/19/2009 12:53:28 PM -- <C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Soft Recovery\Performance 2009 3 19 12 17 50.xml> has 139 samples queried.
3/19/2009 12:53:28 PM -- <C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Soft Recovery\Performance 2009 3 19 12 17 50.html> is saved.
3/19/2009 12:53:30 PM -- Performance logging begins (interval: 4000 ms).
3/19/2009 12:53:30 PM -- Recovering databases ...
3/19/2009 12:58:02 PM -- Performance logging ends.
3/19/2009 12:58:02 PM -- Instance2764.1 (268.6944), Instance2764.2 (241.098), Instance2764.3 (262.8444), Instance2764.4 (268.9596), Instance2764.5 (258.6012), Instance2764.6 (259.662), Instance2764.7 (262.314), Instance2764.8 (227.838), Instance2764.9 (231.5508), Instance2764.10 (229.9596), Instance2764.11 (230.7552), Instance2764.12 (256.4796), Instance2764.13 (231.816), Instance2764.14 (267.618),

Instance2764.15 (267.0876), Instance2764.16 (268.4292), Instance2764.17 (267.618), Instance2764.18 (268.164), Instance2764.19 (270.0204), Instance2764.20 (270.2856), Instance2764.21 (272.142), Instance2764.22 (268.164), Instance2764.23 (271.6116), Instance2764.24 (271.8768), Instance2764.25 (271.6116), Instance2764.26 (268.4292), Instance2764.27 (263.64), and Instance2764.28 (264.1704)

3/19/2009 12:58:03 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\SoftRecovery 2009 3 19 12 53 28.blq](#) has 67 samples.

3/19/2009 12:58:03 PM -- Creating test report ...

3/19/2009 12:58:04 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\SoftRecovery 2009 3 19 12 53 28.html](#) is saved.

3/19/2009 12:58:04 PM -- Jetstress testing ends.

3/19/2009 1:09:01 PM -- Jetstress testing begins ...

3/19/2009 1:09:01 PM -- Prepare testing begins ...

3/19/2009 1:09:30 PM -- Attaching databases ...

3/19/2009 1:09:30 PM -- Prepare testing ends.

3/19/2009 1:09:30 PM -- Dispatching transactions begins ...

3/19/2009 1:09:30 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/19/2009 1:09:30 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/19/2009 1:09:59 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.1 seconds/read).

3/19/2009 1:09:59 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.1 seconds/write).

3/19/2009 1:09:59 PM -- Attaining prerequisites:

3/19/2009 1:15:53 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6764970000.0 (lower bound: 6764573000.0, upper bound: none)

3/19/2009 1:15:55 PM -- Performance logging begins (interval: 5000 ms).

3/19/2009 1:15:55 PM -- Automatic tuning begins ...

3/19/2009 1:16:27 PM -- Volume E: has 0.00010 for read latency slope.

3/19/2009 1:16:27 PM -- Volume G: has 0.00004 for read latency slope.

3/19/2009 1:16:27 PM -- Volume N: has 0.00000 for read latency slope.

3/19/2009 1:16:27 PM -- Volume X: has 0.00014 for read latency slope.

3/19/2009 1:16:27 PM -- Volume Y: has 0.00013 for read latency slope.

3/19/2009 1:16:27 PM -- Volume Z: has 0.00005 for read latency slope.

3/19/2009 1:18:29 PM -- 1938 batch transactions/sec and 16 sessions have 8094 IOPS.

3/19/2009 1:18:29 PM -- 16 sessions have actual 8094 IOPS (target IOPS: 5000)

3/19/2009 1:18:29 PM -- Volume E: has 0.0098 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume G: has 0.0091 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume N: has 0.0081 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume X: has 0.0107 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume Y: has 0.0105 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume Z: has 0.0114 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/19/2009 1:18:29 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/19/2009 1:18:29 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

3/19/2009 1:19:00 PM -- Volume E: has 0.00003 for read latency slope.

3/19/2009 1:19:00 PM -- Volume G: has 0.00010 for read latency slope.

3/19/2009 1:19:00 PM -- Volume N: has 0.00002 for read latency slope.

3/19/2009 1:19:00 PM -- Volume X: has 0.00002 for read latency slope.

3/19/2009 1:19:00 PM -- Volume Y: has 0.00007 for read latency slope.

3/19/2009 1:19:00 PM -- Volume Z: has 0.00014 for read latency slope.

3/19/2009 1:21:02 PM -- 1759 batch transactions/sec and 8 sessions have 7353 IOPS.

3/19/2009 1:21:02 PM -- 8 sessions have actual 7353 IOPS (target IOPS: 5000)

3/19/2009 1:21:02 PM -- Volume E: has 0.0094 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume G: has 0.0077 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume N: has 0.0073 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume X: has 0.0102 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume Y: has 0.0099 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume Z: has 0.0102 for Avg. Disk sec/Read.

3/19/2009 1:21:02 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 1:21:02 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/19/2009 1:21:02 PM -- Performance logging ends.
 3/19/2009 1:21:02 PM -- Automatic tuning succeeded.
 3/19/2009 1:21:04 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%,
 Reads 25%, Lazy Commits 55%.
 3/19/2009 1:21:04 PM -- Performance logging begins (interval: 15000 ms).
 3/19/2009 1:21:04 PM -- Attaining prerequisites:
 3/19/2009 1:21:04 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last:
 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/20/2009 1:21:05 PM -- Performance logging ends.
 3/20/2009 1:21:05 PM -- JetInterop batch transaction stats: 348761, 349051, 348416,
 348976, 349319, 348943, 349134, 348275, 348612, 349542, 350034, 349077, 348548,
 347965, 349969, 349884, 348877, 349223, 348345, 349586, 349373, 347991, 349517,
 347563, 349277, 348986, 348822, and 348322.
 3/20/2009 1:21:05 PM -- Dispatching transactions ends.
 3/20/2009 1:21:05 PM -- Shutting down databases ...
 3/20/2009 1:21:10 PM -- Instance2764.1 (complete), Instance2764.2 (complete),
 Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete),
 Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete),
 Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete),
 Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete),
 Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),
 Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete),
 Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete),
 Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete),
 Instance2764.27 (complete), and Instance2764.28 (complete)
 3/20/2009 1:21:10 PM -- Performance logging begins (interval: 30000 ms).
 3/20/2009 1:21:10 PM -- Verifying database checksums ...
 3/20/2009 2:29:07 PM -- E: (100% processed), G: (100% processed), N: (100% processed),
 X: (100% processed), Y: (100% processed), and Z: (100% processed)
 3/20/2009 2:29:07 PM -- Performance logging ends.
 3/20/2009 2:29:07 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-
 build\Stress\DBCchecksum_2009_3_20_13_21_10.blg](#) has 135 samples.

Appendix D: Soft Recovery Testing

SoftRecovery Performance Test Result Report

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2764.1	506	268.6944
Instance2764.2	511	241.098
Instance2764.3	500	262.8444
Instance2764.4	516	268.9596
Instance2764.5	511	258.6012
Instance2764.6	519	259.662
Instance2764.7	513	262.314
Instance2764.8	509	227.838
Instance2764.9	513	231.5508
Instance2764.10	513	229.9596
Instance2764.11	511	230.7552

Instance2764.12	502	256.4796
Instance2764.13	516	231.816
Instance2764.14	508	267.618
Instance2764.15	507	267.0876
Instance2764.16	516	268.4292
Instance2764.17	507	267.618
Instance2764.18	501	268.164
Instance2764.19	509	270.0204
Instance2764.20	504	270.2856
Instance2764.21	513	272.142
Instance2764.22	508	268.164
Instance2764.23	503	271.6116
Instance2764.24	514	271.8768
Instance2764.25	516	271.6116
Instance2764.26	510	268.4292
Instance2764.27	513	263.64
Instance2764.28	500	264.1704

Disk Subsystem Performance

LogicalDisk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (E:)	0.021	0.001	4446.214	87.468	(n/a)
Database (G:)	0.017	0.001	3608.451	71.037	(n/a)
Database (N:)	0.016	0.001	3580.460	70.624	(n/a)
Database (X:)	0.022	0.001	4504.349	88.621	(n/a)
Database (Y:)	0.020	0.001	4465.318	87.645	(n/a)
Database (Z:)	0.022	0.001	4485.558	87.684	(n/a)
Log (D:)	0.009	0.000	1762.038	2.206	870.555

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	31.626	24.806	59.205
Available MBytes	24013.731	23122.000	30179.000
Free System Page Table Entries	33569944.970	33569700.000	33570175.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	65522550.448	63696896.000	66584576.000
Pool Paged Bytes	98823458.388	97390592.000	98873344.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log3/18/2009 11:29:03 AM -- Jetstress testing begins ...
 3/18/2009 11:29:09 AM -- Prepare testing begins ...
 3/18/2009 11:29:37 AM -- Attaching databases ...
 3/18/2009 11:29:37 AM -- Prepare testing ends.
 3/18/2009 11:29:37 AM -- Dispatching transactions begins ...
 3/18/2009 11:29:37 AM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
 3/18/2009 11:29:37 AM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
 3/18/2009 11:30:07 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
 3/18/2009 11:30:07 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
 3/18/2009 11:30:07 AM -- Attaining prerequisites:
 3/18/2009 11:38:33 AM -- \\MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767469000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 11:38:35 AM -- Performance logging begins (interval: 5000 ms).
 3/18/2009 11:38:35 AM -- Automatic tuning begins ...
 3/18/2009 11:39:06 AM -- Volume E: has 0.00006 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume G: has 0.00005 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume N: has 0.00007 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume X: has 0.00002 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume Y: has 0.00001 for read latency slope.
 3/18/2009 11:39:06 AM -- Volume Z: has 0.00003 for read latency slope.
 3/18/2009 11:41:08 AM -- 1611 batch transactions/sec and 16 sessions have 7607 IOPS.
 3/18/2009 11:41:08 AM -- 16 sessions have actual 7607 IOPS (target IOPS: 5000)
 3/18/2009 11:41:08 AM -- Volume E: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume G: has 0.0067 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume N: has 0.0071 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume X: has 0.0081 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume Y: has 0.0088 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:41:08 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:41:08 AM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:41:39 AM -- Volume E: has 0.00004 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume G: has 0.00001 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume N: has 0.00001 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume X: has 0.00005 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume Y: has 0.00002 for read latency slope.
 3/18/2009 11:41:39 AM -- Volume Z: has 0.00004 for read latency slope.
 3/18/2009 11:43:40 AM -- 1670 batch transactions/sec and 8 sessions have 7834 IOPS.
 3/18/2009 11:43:40 AM -- 8 sessions have actual 7834 IOPS (target IOPS: 5000)
 3/18/2009 11:43:40 AM -- Volume E: has 0.0082 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume G: has 0.0078 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume Y: has 0.0092 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume Z: has 0.0084 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 11:43:40 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 11:43:40 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/18/2009 11:44:11 AM -- Volume E: has 0.00005 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume G: has 0.00001 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume N: has 0.00001 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume X: has 0.00002 for read latency slope.
 3/18/2009 11:44:11 AM -- Volume Y: has 0.00001 for read latency slope.

3/18/2009 11:44:11 AM -- Volume Z: has 0.00003 for read latency slope.
3/18/2009 11:46:13 AM -- 1126 batch transactions/sec and 4 sessions have 5065 IOPS.
3/18/2009 11:46:13 AM -- 4 sessions have actual 5065 IOPS (target IOPS: 5000)
3/18/2009 11:46:13 AM -- Volume E: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume G: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume N: has 0.0059 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume X: has 0.0063 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Y: has 0.0068 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume Z: has 0.0065 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:46:13 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:46:13 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:46:43 AM -- Volume E: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume G: has 0.00003 for read latency slope.
3/18/2009 11:46:43 AM -- Volume N: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume X: has 0.00002 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Y: has 0.00001 for read latency slope.
3/18/2009 11:46:43 AM -- Volume Z: has 0.00000 for read latency slope.
3/18/2009 11:48:45 AM -- 1293 batch transactions/sec and 5 sessions have 5835 IOPS.
3/18/2009 11:48:45 AM -- 5 sessions have actual 5835 IOPS (target IOPS: 5000)
3/18/2009 11:48:45 AM -- Volume E: has 0.0069 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume G: has 0.0064 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume N: has 0.0062 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume X: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Y: has 0.0076 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:48:45 AM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:48:45 AM -- Performance logging ends.
3/18/2009 11:48:45 AM -- Automatic tuning succeeded.
3/18/2009 11:48:47 AM -- Operation mix: Sessions 5, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
3/18/2009 11:48:47 AM -- Performance logging begins (interval: 15000 ms).
3/18/2009 11:48:47 AM -- Attaining prerequisites:
3/18/2009 11:48:47 AM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
3/18/2009 1:48:48 PM -- Performance logging ends.
3/18/2009 1:48:48 PM -- JetInterop batch transaction stats: 24549, 24394, 24173, 24354, 24148, 24386, 24359, 24485, 24211, 24110, 24219, 23900, 24194, 24289, 24441, 24666, 24355, 24497, 24331, 24306, 24258, 24515, 24192, 24383, 24293, 24106, 24399, and 24532.
3/18/2009 1:48:48 PM -- Dispatching transactions ends.
3/18/2009 1:48:48 PM -- Shutting down databases ...
3/18/2009 1:48:52 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete), Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/18/2009 1:48:53 PM -- Performance logging begins (interval: 30000 ms).
3/18/2009 1:48:53 PM -- Verifying database checksums ...
3/18/2009 2:54:42 PM -- E: (100% processed), G: (100% processed), N: (100% processed), X: (100% processed), Y: (100% processed), and Z: (100% processed)
3/18/2009 2:54:42 PM -- Performance logging ends.

3/18/2009 2:54:42 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.blq](#) has 131 samples.

3/18/2009 2:54:45 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\DBChecksum 2009 3 18 13 48 52.html](#) is saved.

3/18/2009 2:54:45 PM -- Verifying log checksums ...

3/18/2009 2:54:54 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (2 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (3 logs passed), D:\L22 (2 logs passed), D:\L23 (3 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (3 logs passed), and D:\L28 (2 logs passed)

3/18/2009 2:54:54 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.blq](#) has 479 samples.

3/18/2009 2:54:54 PM -- Creating test report ...

3/18/2009 2:55:01 PM -- Volume E: has 0.0068 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume G: has 0.0063 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume N: has 0.0063 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume X: has 0.0069 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume Y: has 0.0072 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume Z: has 0.0070 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.

3/18/2009 2:55:01 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.

3/18/2009 2:55:01 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

3/18/2009 2:55:01 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

3/18/2009 2:55:01 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.xml](#) has 478 samples queried.

3/18/2009 2:55:02 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Performance 2009 3 18 11 48 45.html](#) is saved.

3/18/2009 2:55:02 PM -- Jetstress testing ends.

3/18/2009 4:11:48 PM -- Jetstress testing begins ...

3/18/2009 4:11:48 PM -- Prepare testing begins ...

3/18/2009 4:11:48 PM -- Creating E:\SG1\Jetstress1.edb.

3/18/2009 4:11:48 PM -- Database cache settings: (minimum: 32.0 MB, maximum: 256.0 MB)

3/18/2009 4:11:48 PM -- Database flush thresholds: (start: 2.6 MB, stop: 5.1 MB)

3/18/2009 4:26:00 PM -- 60.0% of 178.6 GB complete (21802984 records inserted).

3/18/2009 4:44:34 PM -- 100.0% of 178.6 GB complete (33926189 records inserted).

3/18/2009 4:44:38 PM -- Duplicating 27 databases:

3/18/2009 7:53:25 PM -- 100.0% of 4.7 TB complete (4.7 TB duplicated).

3/18/2009 7:53:54 PM -- Attaching databases ...

3/18/2009 7:53:54 PM -- Prepare testing ends.

3/18/2009 7:53:54 PM -- Dispatching transactions begins ...

3/18/2009 7:53:54 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)

3/18/2009 7:53:54 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)

3/18/2009 7:54:23 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

3/18/2009 7:54:23 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

3/18/2009 7:54:23 PM -- Attaining prerequisites:

3/18/2009 8:02:41 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6767886000.0 (lower bound: 6764573000.0, upper bound: none)

3/18/2009 8:02:43 PM -- Performance logging begins (interval: 5000 ms).

3/18/2009 8:02:43 PM -- Automatic tuning begins ...

3/18/2009 8:03:14 PM -- Volume E: has 0.00004 for read latency slope.

3/18/2009 8:03:14 PM -- Volume G: has 0.00013 for read latency slope.

3/18/2009 8:03:14 PM -- Volume N: has 0.00002 for read latency slope.

3/18/2009 8:03:14 PM -- Volume X: has 0.00017 for read latency slope.

3/18/2009 8:03:14 PM -- Volume Y: has 0.00014 for read latency slope.
 3/18/2009 8:03:14 PM -- Volume Z: has 0.00005 for read latency slope.
 3/18/2009 8:05:17 PM -- 2308 batch transactions/sec and 16 sessions have 7917 IOPS.
 3/18/2009 8:05:17 PM -- 16 sessions have actual 7917 IOPS (target IOPS: 5000)
 3/18/2009 8:05:17 PM -- Volume E: has 0.0099 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume G: has 0.0095 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume N: has 0.0076 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume X: has 0.0109 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume Y: has 0.0107 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume Z: has 0.0113 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 8:05:17 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 8:05:17 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%,
 Reads 25%, Lazy Commits 55%.
 3/18/2009 8:05:47 PM -- Volume E: has 0.00004 for read latency slope.
 3/18/2009 8:05:47 PM -- Volume G: has 0.00003 for read latency slope.
 3/18/2009 8:05:47 PM -- Volume N: has 0.00004 for read latency slope.
 3/18/2009 8:05:47 PM -- Volume X: has 0.00000 for read latency slope.
 3/18/2009 8:05:47 PM -- Volume Y: has 0.00007 for read latency slope.
 3/18/2009 8:05:47 PM -- Volume Z: has 0.00005 for read latency slope.
 3/18/2009 8:07:49 PM -- 1873 batch transactions/sec and 8 sessions have 7212 IOPS.
 3/18/2009 8:07:49 PM -- 8 sessions have actual 7212 IOPS (target IOPS: 5000)
 3/18/2009 8:07:49 PM -- Volume E: has 0.0106 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume G: has 0.0083 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume N: has 0.0079 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume X: has 0.0105 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume Y: has 0.0103 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume Z: has 0.0107 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/18/2009 8:07:49 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/18/2009 8:07:49 PM -- Performance logging ends.
 3/18/2009 8:07:49 PM -- Automatic tuning succeeded.
 3/18/2009 8:07:52 PM -- Operation mix: Sessions 8, Inserts 40%, Deletes 30%, Replaces 5%,
 Reads 25%, Lazy Commits 55%.
 3/18/2009 8:07:52 PM -- Performance logging begins (interval: 15000 ms).
 3/18/2009 8:07:52 PM -- Attaining prerequisites:
 3/18/2009 8:07:52 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last:
 7516193000.0 (lower bound: 6764573000.0, upper bound: none)
 3/18/2009 10:07:52 PM -- Performance logging ends.
 3/18/2009 10:07:52 PM -- JetInterop batch transaction stats: 32622, 32428, 32371, 32507,
 32202, 32251, 32533, 32383, 32293, 32366, 32508, 32742, 32494, 32606, 32423, 32524,
 32489, 32003, 32691, 32637, 32486, 32582, 32644, 32606, 32348, 32646, 32734, and
 32856.
 3/18/2009 10:07:52 PM -- Dispatching transactions ends.
 3/18/2009 10:07:52 PM -- Shutting down databases ...
 3/18/2009 10:07:57 PM -- Instance2764.1 (complete), Instance2764.2 (complete),
 Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete),
 Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete),
 Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete),
 Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete),
 Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),
 Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete),
 Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete),
 Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete),
 Instance2764.27 (complete), and Instance2764.28 (complete)
 3/18/2009 10:07:57 PM -- Performance logging begins (interval: 30000 ms).
 3/18/2009 10:07:57 PM -- Verifying database checksums ...
 3/18/2009 11:13:08 PM -- E: (100% processed), G: (100% processed), N: (100% processed),
 X: (100% processed), Y: (100% processed), and Z: (100% processed)

3/18/2009 11:13:08 PM -- Performance logging ends.
3/18/2009 11:13:08 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\DBChecksum_2009_3_18_22_7_57.blg](#) has 130 samples.
3/18/2009 11:13:11 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\DBChecksum_2009_3_18_22_7_57.html](#) is saved.
3/18/2009 11:13:11 PM -- Verifying log checksums ...
3/18/2009 11:13:19 PM -- D:\L1 (2 logs passed), D:\L2 (2 logs passed), D:\L3 (2 logs passed), D:\L4 (2 logs passed), D:\L5 (2 logs passed), D:\L6 (2 logs passed), D:\L7 (2 logs passed), D:\L8 (2 logs passed), D:\L9 (2 logs passed), D:\L10 (2 logs passed), D:\L11 (2 logs passed), D:\L12 (2 logs passed), D:\L13 (2 logs passed), D:\L14 (2 logs passed), D:\L15 (3 logs passed), D:\L16 (2 logs passed), D:\L17 (2 logs passed), D:\L18 (2 logs passed), D:\L19 (2 logs passed), D:\L20 (2 logs passed), D:\L21 (2 logs passed), D:\L22 (2 logs passed), D:\L23 (2 logs passed), D:\L24 (2 logs passed), D:\L25 (2 logs passed), D:\L26 (2 logs passed), D:\L27 (2 logs passed), and D:\L28 (2 logs passed)
3/18/2009 11:13:19 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.blg](#) has 479 samples.
3/18/2009 11:13:19 PM -- Creating test report ...
3/18/2009 11:13:26 PM -- Volume E: has 0.0102 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume G: has 0.0084 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume N: has 0.0078 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume X: has 0.0103 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Y: has 0.0101 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume Z: has 0.0105 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/18/2009 11:13:26 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
3/18/2009 11:13:26 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/18/2009 11:13:26 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/18/2009 11:13:26 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.xml](#) has 478 samples queried.
3/18/2009 11:13:26 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Performance_2009_3_18_20_7_49.html](#) is saved.
3/18/2009 11:13:26 PM -- Jetstress testing ends.
3/19/2009 9:46:21 AM -- Jetstress testing begins ...
3/19/2009 9:46:21 AM -- Prepare testing begins ...
3/19/2009 9:46:50 AM -- Attaching databases ...
3/19/2009 9:46:50 AM -- Prepare testing ends.
3/19/2009 9:47:21 AM -- Performance logging begins (interval: 30000 ms).
3/19/2009 9:47:21 AM -- Streaming backup databases ...
3/19/2009 11:06:20 AM -- Performance logging ends.
3/19/2009 11:06:20 AM -- Instance2764.1 (100% processed), Instance2764.2 (100% processed), Instance2764.3 (100% processed), Instance2764.4 (100% processed), Instance2764.5 (100% processed), Instance2764.6 (100% processed), Instance2764.7 (100% processed), Instance2764.8 (100% processed), Instance2764.9 (100% processed), Instance2764.10 (100% processed), Instance2764.11 (100% processed), Instance2764.12 (100% processed), Instance2764.13 (100% processed), Instance2764.14 (100% processed), Instance2764.15 (100% processed), Instance2764.16 (100% processed), Instance2764.17 (100% processed), Instance2764.18 (100% processed), Instance2764.19 (100% processed), Instance2764.20 (100% processed), Instance2764.21 (100% processed), Instance2764.22 (100% processed), Instance2764.23 (100% processed), Instance2764.24 (100% processed), Instance2764.25 (100% processed), Instance2764.26 (100% processed), Instance2764.27 (100% processed), and Instance2764.28 (100% processed)
3/19/2009 11:06:20 AM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming_BU\StreamingBackup_2009_3_19_9_46_50.blg](#) has 157 samples.
3/19/2009 11:06:20 AM -- Creating test report ...
3/19/2009 11:06:21 AM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Rebuild\Streaming_BU\StreamingBackup_2009_3_19_9_46_50.html](#) is saved.
3/19/2009 11:06:21 AM -- Jetstress testing ends.
3/19/2009 12:06:42 PM -- Jetstress testing begins ...
3/19/2009 12:06:42 PM -- Prepare testing begins ...

3/19/2009 12:07:10 PM -- Attaching databases ...
 3/19/2009 12:07:10 PM -- Prepare testing ends.
 3/19/2009 12:07:10 PM -- Dispatching transactions begins ...
 3/19/2009 12:07:10 PM -- Database cache settings: (minimum: 896.0 MB, maximum: 7.0 GB)
 3/19/2009 12:07:10 PM -- Database flush thresholds: (start: 71.7 MB, stop: 143.4 MB)
 3/19/2009 12:07:39 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
 3/19/2009 12:07:39 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
 3/19/2009 12:07:39 PM -- Attaining prerequisites:
 3/19/2009 12:15:15 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 6775407000.0 (lower bound: 6764573000.0, upper bound: none)
 3/19/2009 12:15:17 PM -- Performance logging begins (interval: 5000 ms).
 3/19/2009 12:15:17 PM -- Automatic tuning begins ...
 3/19/2009 12:15:48 PM -- Volume E: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume G: has 0.00005 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume N: has 0.00003 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume X: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume Y: has 0.00006 for read latency slope.
 3/19/2009 12:15:48 PM -- Volume Z: has 0.00007 for read latency slope.
 3/19/2009 12:17:50 PM -- 1548 batch transactions/sec and 16 sessions have 6264 IOPS.
 3/19/2009 12:17:50 PM -- 16 sessions have actual 6264 IOPS (target IOPS: 5000)
 3/19/2009 12:17:50 PM -- Volume E: has 0.0079 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume G: has 0.0067 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume N: has 0.0065 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume X: has 0.0082 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume Y: has 0.0084 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume Z: has 0.0079 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
 3/19/2009 12:17:50 PM -- Volume D: has 0.0000 for Avg. Disk sec/Read.
 3/19/2009 12:17:50 PM -- Performance logging ends.
 3/19/2009 12:17:50 PM -- Automatic tuning succeeded.
 3/19/2009 12:17:52 PM -- Operation mix: Sessions 16, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 3/19/2009 12:17:52 PM -- Performance logging begins (interval: 15000 ms).
 3/19/2009 12:17:52 PM -- Generating log files ...
 3/19/2009 12:53:02 PM -- D:\L1 (101.4% generated), D:\L2 (102.4% generated), D:\L3 (100.2% generated), D:\L4 (103.4% generated), D:\L5 (102.4% generated), D:\L6 (104.0% generated), D:\L7 (102.8% generated), D:\L8 (102.0% generated), D:\L9 (102.8% generated), D:\L10 (102.8% generated), D:\L11 (102.4% generated), D:\L12 (100.6% generated), D:\L13 (103.4% generated), D:\L14 (101.6% generated), D:\L15 (101.6% generated), D:\L16 (103.4% generated), D:\L17 (101.6% generated), D:\L18 (100.4% generated), D:\L19 (102.0% generated), D:\L20 (101.0% generated), D:\L21 (102.8% generated), D:\L22 (101.8% generated), D:\L23 (100.8% generated), D:\L24 (102.8% generated), D:\L25 (103.4% generated), D:\L26 (102.2% generated), D:\L27 (102.8% generated), and D:\L28 (100.2% generated)
 3/19/2009 12:53:02 PM -- Performance logging ends.
 3/19/2009 12:53:02 PM -- JetInterop batch transaction stats: 33774, 33707, 33516, 34288, 33971, 34313, 33950, 33970, 33765, 33893, 33954, 33701, 34238, 33919, 33752, 33793, 33491, 33993, 34151, 33755, 33934, 33955, 33793, 33743, 33705, 33744, 34229, and 34047.
 3/19/2009 12:53:04 PM -- Dispatching transactions ends.
 3/19/2009 12:53:04 PM -- Shutting down databases ...
 3/19/2009 12:53:26 PM -- Instance2764.1 (complete), Instance2764.2 (complete), Instance2764.3 (complete), Instance2764.4 (complete), Instance2764.5 (complete), Instance2764.6 (complete), Instance2764.7 (complete), Instance2764.8 (complete), Instance2764.9 (complete), Instance2764.10 (complete), Instance2764.11 (complete), Instance2764.12 (complete), Instance2764.13 (complete), Instance2764.14 (complete), Instance2764.15 (complete), Instance2764.16 (complete), Instance2764.17 (complete),

Instance2764.18 (complete), Instance2764.19 (complete), Instance2764.20 (complete), Instance2764.21 (complete), Instance2764.22 (complete), Instance2764.23 (complete), Instance2764.24 (complete), Instance2764.25 (complete), Instance2764.26 (complete), Instance2764.27 (complete), and Instance2764.28 (complete)
3/19/2009 12:53:26 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.blg](#) has 140 samples.
3/19/2009 12:53:26 PM -- Creating test report ...
3/19/2009 12:53:27 PM -- Volume E: has 0.0116 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume G: has 0.0093 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume N: has 0.0084 for Avg. Disk sec/Read.
3/19/2009 12:53:27 PM -- Volume X: has 0.0126 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume Y: has 0.0120 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume Z: has 0.0116 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Write.
3/19/2009 12:53:28 PM -- Volume D: has 0.0001 for Avg. Disk sec/Read.
3/19/2009 12:53:28 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
3/19/2009 12:53:28 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
3/19/2009 12:53:28 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.xml](#) has 139 samples queried.
3/19/2009 12:53:28 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\Performance 2009 3 19 12 17 50.html](#) is saved.
3/19/2009 12:53:30 PM -- Performance logging begins (interval: 4000 ms).
3/19/2009 12:53:30 PM -- Recovering databases ...
3/19/2009 12:58:02 PM -- Performance logging ends.
3/19/2009 12:58:02 PM -- Instance2764.1 (268.6944), Instance2764.2 (241.098), Instance2764.3 (262.8444), Instance2764.4 (268.9596), Instance2764.5 (258.6012), Instance2764.6 (259.662), Instance2764.7 (262.314), Instance2764.8 (227.838), Instance2764.9 (231.5508), Instance2764.10 (229.9596), Instance2764.11 (230.7552), Instance2764.12 (256.4796), Instance2764.13 (231.816), Instance2764.14 (267.618), Instance2764.15 (267.0876), Instance2764.16 (268.4292), Instance2764.17 (267.618), Instance2764.18 (268.164), Instance2764.19 (270.0204), Instance2764.20 (270.2856), Instance2764.21 (272.142), Instance2764.22 (268.164), Instance2764.23 (271.6116), Instance2764.24 (271.8768), Instance2764.25 (271.6116), Instance2764.26 (268.4292), Instance2764.27 (263.64), and Instance2764.28 (264.1704)
3/19/2009 12:58:03 PM -- [C:\Program Files\Exchange Jetstress\Performance\RUN2\Re-build\Soft Recovery\SoftRecovery 2009 3 19 12 53 28.blg](#) has 67 samples.
3/19/2009 12:58:03 PM -- Creating test report ...