

Hitachi Adaptable Modular Storage 2500 Dynamically Provisioned 80,000 User Exchange 2007 Storage Solution

Tested with: ESRP – Storage Version 2.1

Test Date: November 2009

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Overview

This document provides information on a Hitachi Adaptable Modular Storage 2500 storage solution using Hitachi Dynamic Provisioning for Microsoft Exchange Server 2007, based on the Microsoft® Exchange Solution Reviewed Program (ESRP) – Storage program. For more information about the contents of this document or Hitachi Data Systems' best practice recommendations for Microsoft Exchange Server 2007 storage design, see <http://www.hds.com/solutions/microsoft/exchange.html>.

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 information about the Microsoft ESRP – Storage program, see <http://www.microsoft.com/technet/prodtechnol/exchange/2007/esrp.msp>.

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Features

The purpose of this testing was to measure the ESRP 2.1 results on a Microsoft Exchange 2007 environment with 80,000 users and sixteen servers. This testing used a Hitachi Adaptable Modular Storage 2500 storage system using Hitachi Dynamic Provisioning software in a two-pool RAID-1+0 configuration (one for databases and one for logs). These results help answer questions about the kind of performance capabilities to expect with a large-scale Exchange deployment on the 2500.

The test configuration was capable of supporting 80,000 users with a 0.216 IOPS per user profile and user mailbox size of 500MB. A 2500 with 480 450GB 15K RPM SAS disks, 32GB of cache and sixteen 4Gbit/s host paths was used for these tests. Testing used 16 Sun Fire 4270 servers with 32GB of RAM, two quad-core Intel E5540 2.53GHz CPUs each, 32 Emulex 4Gbit/s Fibre Channel adapters, and Windows Server 2008 Enterprise with Service Pack 1.

The 2500 is a high-performance, highly reliable high-range storage system that can scale to 480 disks while maintaining 99.999% availability. It is highly suitable for a variety of applications and host platforms and is modular in scale. With the option of in-system and cross-system replication functionality, the 2500 is fully capable of being used as the core underlying storage platform for high-performance Exchange Server 2007 architectures.

Solution Description

Deploying Microsoft Exchange Server 2007 requires careful consideration of all aspects of the solution architecture. Host servers need to be configured so that they are robust enough to handle the required Exchange load. The storage solution must be designed to provide the necessary performance while also being reliable and easy to administer. Of course, an effective backup and recovery plan should be incorporated into the solution as well. The aim of this solution report is to provide a tested configuration that utilizes the 2500 to meet the needs of a large Exchange Server deployment.

This solution uses Hitachi Dynamic Provisioning software, which is enabled on the 2500 via a license key. In the most basic sense, Hitachi Dynamic Provisioning software is similar to the use of a host-based logical volume manager (LVM), but with several additional features available within the 2500 and without the need to install software on the host or incur host processing overhead. Hitachi Dynamic Provisioning software is a superior solution. Hitachi Dynamic Provisioning software provides for one or more pools of wide striping across many RAID groups within a 2500. One or more Dynamic Provisioning virtual volumes (DP-VOLs) of a user-specified logical size (with no initial physical space allocated) are created against each pool.

Primarily, Hitachi Dynamic Provisioning software is deployed to avoid the routine issue of hot spots that occur on logical units (LUs) from individual RAID groups when the host workload exceeds the IOPS or throughput capacity of that RAID group. By using many RAID groups as members of a striped Dynamic Provisioning pool underneath the virtual or logical volumes seen by the hosts, a host workload is distributed across many RAID groups, which provides a smoothing effect that dramatically reduces hot spots and results in fewer mailbox moves for the Exchange administrator.

Hitachi Dynamic Provisioning software also carries the side benefit of thin provisioning, where physical space is mapped as needed from the shared pool to the DP-VOL in 32MB segments, up to the logical size specified for each DP-VOL. A pool can also be dynamically expanded by adding more RAID groups without disruption or requiring downtime. Upon expansion, a pool can easily be rebalanced so that the data and workload is wide striped evenly across the current and newly added RAID groups that make up the pool.

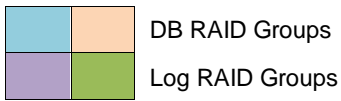
For an Exchange Server 2007 environment the performance and capacity utilization improvements of wide-striped Pools and the enhanced management efficiencies are the primary benefits of Hitachi Dynamic Provisioning software when compared with a traditional, static storage configuration. For more information about Hitachi Dynamic Provisioning software, see <http://www.hds.com/products/storage-software/hitachi-dynamic-provisioning.html>.

For the targeted 80,000-user Exchange environment, a 2500 configured with 480 disks (the maximum) and 16 servers were used. Table 1 illustrates how the 2500's disks were organized into RAID groups for use by databases and logs. Each set of colored disks represents a RAID-1+0 (4D+4D) RAID group. Each RKA is an external disk enclosure with 15 SAS disks.

Table 1. Adaptable Modular Storage 2500 RAID Groups by RKA Tray Layout

Drive Slot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RKA 31	59	59	59	59	59	59	59	60	60	60	60	60	60	60	60
RKA 30	57	57	57	57	57	57	58	58	58	58	58	58	58	58	59
RKA 29	55	55	55	55	55	56	56	56	56	56	56	56	56	57	57
RKA 28	53	53	53	53	54	54	54	54	54	54	54	54	55	55	55
RKA 27	51	51	51	52	52	52	52	52	52	52	52	53	53	53	53
RKA 26	49	49	50	50	50	50	50	50	50	50	51	51	51	51	51
RKA 25	47	48	48	48	48	48	48	48	48	49	49	49	49	49	49
RKA 24	46	46	46	46	46	46	46	46	47	47	47	47	47	47	47
RKA 23	44	44	44	44	44	44	44	45	45	45	45	45	45	45	45
RKA 22	42	42	42	42	42	42	43	43	43	43	43	43	43	43	44
RKA 21	40	40	40	40	40	41	41	41	41	41	41	41	41	42	42
RKA 20	38	38	38	38	39	39	39	39	39	39	39	39	40	40	40
RKA 19	36	36	36	37	37	37	37	37	37	37	37	38	38	38	38
RKA 18	34	34	35	35	35	35	35	35	35	35	36	36	36	36	36
RKA 17	32	33	33	33	33	33	33	33	33	34	34	34	34	34	34
RKA 16	31	31	31	31	31	31	31	31	32	32	32	32	32	32	32
RKA 15	29	29	29	29	29	29	29	30	30	30	30	30	30	30	30
RKA 14	27	27	27	27	27	27	28	28	28	28	28	28	28	28	29
RKA 13	25	25	25	25	25	26	26	26	26	26	26	26	26	27	27
RKA 12	23	23	23	23	24	24	24	24	24	24	24	24	25	25	25
RKA 11	21	21	21	22	22	22	22	22	22	22	22	23	23	23	23
RKA 10	19	19	20	20	20	20	20	20	20	20	21	21	21	21	21

Drive Slot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RKA 9	17	18	18	18	18	18	18	18	18	19	19	19	19	19	19
RKA 8	16	16	16	16	16	16	16	16	17	17	17	17	17	17	17
RKA 7	14	14	14	14	14	14	14	15	15	15	15	15	15	15	15
RKA 6	12	12	12	12	12	12	13	13	13	13	13	13	13	13	14
RKA 5	10	10	10	10	10	11	11	11	11	11	11	11	11	12	12
RKA 4	8	8	8	8	9	9	9	9	9	9	9	9	10	10	10
RKA 3	6	6	6	7	7	7	7	7	7	7	7	8	8	8	8
RKA 2	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6
RKA 1	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4
RKA 0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2



Two Dynamic Provisioning pools were created, one for the databases and other for the logs. The database pool was created from 54 RAID-10 RAID groups and the log pool was created from six RAID-1+0 groups. From the database pool, 192 DP-VOLs (each specified to have 400GB size limit) were created for 768 storage groups (48 per server). From the log pool, 192 DP-VOLs (each specified to have a size limit of 40GB) were created for 768 logs (48 per server).

Table 2 outlines the port layout for the servers.

Table 2. Adaptable Modular Storage 2500 Port Layout

<i>Server</i>	<i>Primary Path</i>	<i>Secondary Path</i>
SUN141	0A	1A
SUN142	0B	1B
SUN143	0C	1C
SUN144	0D	1D
SUN145	0E	1E
SUN146	0F	1F
SUN147	0G	1G
SUN148	0H	1H
SUN149	1A	0A
SUN150	1B	0B
SUN151	1C	0C
SUN152	1D	0D
SUN153	1E	0E
SUN154	1F	0F
SUN155	1G	0G
SUN156	1H	0H

Table 3 outlines the port layout with the database DP-VOL assignments for the servers.

Table 3. Adaptable Modular Storage 2500 Port to Database DP-VOL Layout

<i>Port</i>	<i>Database DP-VOL</i>	
0A	0-11	96-107
0B	12-23	108-119
0C	24-35	120-131
0D	36-47	132-143
0E	48-59	144-155
0F	60-71	156-167
0G	72-83	168-179
0H	84-95	180-191
1A	96-107	0-11
1B	108-119	12-23
1C	120-131	24-35
1D	132-143	36-47
1E	144-155	48-59
1F	156-167	60-71
1G	168-179	72-83
1H	180-191	84-95

Table 4 outlines the port layout with the log DP-VOL assignments for the servers.

Table 4. Adaptable Modular Storage 2500 Port to Log DP-VOL Layout

Port	Log DP-VOL	
0A	192-203	288-299
0B	204-215	300-311
0C	216-227	312-323
0D	228-239	324-335
0E	240-251	336-347
0F	252-263	348-359
0G	264-275	360-371
0H	276-287	372-383
1A	288-299	192-203
1B	300-311	204-215
1C	312-323	216-227
1D	324-335	228-239
1E	336-347	240-251
1F	348-359	252-263
1G	360-371	264-275
1H	372-383	276-287

Table 5 provides the detailed specifications for the storage configuration that uses RAID-1+0 (4+4) groups and 450GB 15K disks. Dynamic Provisioning pool 0 is dedicated for the databases and Dynamic Provisioning pool 1 is dedicated for the logs.

Table 5. Adaptable Modular Storage 2500 Configuration Details

<i>Host</i>	<i>Port</i>	<i>DP-Pool</i>	<i>DP-VOL</i>	<i>Description</i>
SUN141	0A/1A	0	0-11	Storage groups 1-48
SUN142	0B/1B	0	12-23	Storage groups 49-96
SUN143	0C/1C	0	24-35	Storage groups 97-144
SUN144	0D/1D	0	36-47	Storage groups 145-192
SUN145	0A/1A	0	48-59	Storage groups 193-240
SUN146	0B/1B	0	60-71	Storage groups 241-288
SUN147	0C/1C	0	72-83	Storage groups 289-336
SUN148	0D/1D	0	84-95	Storage groups 337-384

SUN149	1A/0A	0	96-107	Storage groups 385-432
SUN150	1B/0B	0	108-119	Storage groups 433-480
SUN151	C1/0C	0	120-131	Storage groups 481-528
SUN152	1D/0D	0	132-143	Storage groups 529-576
SUN153	1E/0E	0	144-155	Storage groups 577-624
SUN154	1F/0F	0	156-167	Storage groups 625-672
SUN155	1G/0G	0	168-179	Storage groups 673-720
SUN156	1H/0H	0	180-191	Storage groups 721-768
SUN141	0A/1A	1	192-203	Logs 1-48
SUN142	0B/1B	1	204-215	Logs 49-96
SUN143	0C/1C	1	216-227	Logs 97-144
SUN144	0D/1D	1	228-239	Logs 145-192
SUN145	0A/1A	1	240-251	Logs 193-240
SUN146	0B/1B	1	252-263	Logs 241-288
SUN147	0C/1C	1	264-275	Logs 289-336
SUN148	0D/1D	1	276-287	Logs 337-384
SUN149	1A/0A	1	288-299	Logs 385-432
SUN150	1B/0B	1	300-311	Logs 433-480
SUN151	C1/0C	1	312-323	Logs 481-528
SUN152	1D/0D	1	324-335	Logs 529-576
SUN153	1E/0E	1	336-347	Logs 577-624
SUN154	1F/0F	1	348-359	Logs 625-672
SUN155	1G/0G	1	360-371	Logs 673-720
SUN156	1H/0H	1	372-383	Logs 721-768

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. These factors also affect server scalability:

- 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

These factors are all beyond the scope of the ESRP – Storage program. Therefore, the number of mailboxes hosted per server as part of the tested configuration might not necessarily be viable for some customer deployments.

For more information about identifying and addressing performance bottlenecks in an Exchange system, see Microsoft's [Troubleshooting Microsoft Exchange Server Performance](#).

Targeted Customer Profile

This solution is designed for medium to large organizations that plan to consolidate their Exchange Server 2007 storage on high-performance, high-reliability storage systems. This configuration supports 80,000 Exchange users with the following specifications:

- 16 Exchange servers
- 5,000 users on a single Exchange Server
- 0.216 IOPS per user
- 500MB mailbox size
- 768 storage groups (48 per server)
- One database per storage group (768 total)

Tested Deployment

The following tables summarize the testing environment.

Table 6. Simulated Exchange Configuration

<i>Number of Exchange mailboxes simulated</i>	80,000
<i>Number of hosts</i>	16
<i>Number of mailboxes per host</i>	5,000
<i>Number of storage groups per host</i>	48
<i>Number of mailbox stores per storage group</i>	1
<i>Number of mailboxes per mailbox store</i>	104
<i>Number of mailbox store LUs per storage group</i>	1
<i>Simulated profile: I/Os per second per mailbox (IOPS, include 20% headroom)</i>	0.216
<i>Database LU size</i>	100GB
<i>Log LU size</i>	10GB
<i>Total database size for performance testing</i>	40,000GB
<i>% storage capacity used by Exchange database**</i>	40.7%

Table 7. Primary Storage Hardware

<i>Storage type</i>	SAN
<i>Storage connectivity</i>	Fibre Channel
<i>Storage model and OS/firmware revision</i>	1 Hitachi Adaptable Modular Storage 2500 Firmware :0872/E-H WHQL listing: Hitachi Adaptable Modular Storage 2500
<i>Storage cache</i>	32GB
<i>Number of storage controllers</i>	2
<i>Number of storage ports</i>	16
<i>Maximum bandwidth of storage connectivity to host</i>	32Gbit/s (8 x 4Gbit/s ports)
<i>Switch type/model/firmware revision</i>	Brocade 5320, Fabric OS v6.1.1c
<i>HBA model and firmware</i>	Emulex LPe11002,FW: 2.82A3
<i>Number of HBAs/host</i>	2 dual-ported HBA per host, 1 4Gbit/s port used per HBA
<i>Host server type</i>	Sun Fire 4270 2 2.54GHz quad-core Intel Xeon CPUs, 32GB memory
<i>Total number of disks tested in solution</i>	480
<i>Maximum number of spindles can be hosted in the storage</i>	480

Table 8. Primary Storage Software

<i>HBA driver</i>	STOR Miniport 7.2.1.4
<i>HBA QueueTarget setting</i>	0
<i>HBA QueueDepth setting</i>	32
<i>Multipathing</i>	Hitachi Dynamic Link Manager v6.2.0
<i>Host OS</i>	Microsoft Windows Server 2008 Enterprise x64 Edition Service Pack 1
<i>ESE.dll file version</i>	08.01.0240.005
<i>Replication solution name/version</i>	N/A

Table 9. Primary Storage Disk Configuration (Mailbox Store Disks)

<i>Disk type, speed and firmware revision</i>	SAS Disk 450GB 15K 4C57
<i>Raw capacity per disk (GB)</i>	450GB
<i>Number of physical disks in test</i>	432 (Dynamic Provisioning pool)
<i>Total raw storage capacity (GB)</i>	194,400GB
<i>Disk slice size (GB)</i>	N/A
<i>Number of slices per LU or number of disks per LU</i>	N/A
<i>RAID level</i>	RAID-1+0 (4+4) at storage level
<i>Total formatted capacity</i>	88,344GB (Dynamic Provisioning database pool)
<i>Storage capacity utilization</i>	45.4%
<i>Database capacity utilization</i>	78.2%

Table 10. Primary Storage Disk Configuration (Transaction Log Disks)

<i>Disk type, speed and firmware revision</i>	SAS disk 450 GB 15K 4C57
<i>Raw capacity per disk (GB)</i>	450GB
<i>Number of spindles in test</i>	48 (Dynamic Provisioning pool)
<i>Total raw storage capacity (GB)</i>	21,600GB
<i>Disk slice size (GB)</i>	N/A
<i>Number of slices per LU or number of disks per LU</i>	N/A
<i>RAID level</i>	RAID-1+0 (4+4) at storage level
<i>Total formatted capacity</i>	9,816GB (Dynamic Provisioning log pool)

Streaming Backup

N/A

Replication

N/A

Best Practices

Microsoft Exchange Server 2007 is a very disk-intensive application. It presents two distinct workload patterns to the storage, with 8KB random read/write operations to the databases, and sequential write operations of varying size (between 512 bytes up to the log buffer size) to the transaction logs. For this reason, designing an optimal storage configuration can prove challenging in practice. Based on the testing run using the ESRP framework, Hitachi Data Systems recommends these best practices to improve the performance of the Hitachi Adaptable Modular Storage 2500 running Exchange.

For more information about Exchange 2007 best practices for storage design, see the Microsoft TechNet article [Planning Storage Configurations](#).

Core Storage

1. Use Microsoft's diskpart or diskpar to create track-aligned disk partitions. For the 2500, using an offset of 64KB is optimal. This is optional in the case of using Windows Server 2008.
2. Keep the Exchange workload isolated from other applications. Mixing another I/O intensive application whose workload differs from Exchange can cause the performance for both applications to degrade.
3. Due to the difference in I/O patterns and to enhance availability and recoverability, isolate the Exchange database DP-VOLs from the log DP-VOLs by creating one dedicated Dynamic Provisioning pool for the databases and a separate Pool dedicated for the logs.
4. Hitachi Data Systems recommends using RAID-5 or RAID-1+0 groups for the database pools and RAID-1 or RAID-1+0 groups for the log pool. Use of RAID-1+0 allows for more writes at a lower response time under heavier loads. RAID-1+0 also has a shorter RAID group rebuild time on failure of a disk. Hitachi Data Systems does not recommend LU concatenation.
5. Size the storage solution for Exchange based primarily on IOPS performance criteria. The number of disks, RAID level and percent utilization of each disk directly affect the level of achievable performance. Factor in capacity requirements only after performance is addressed.
6. Disk size is unrelated to performance with regards to IOPS or throughput rates. Disk size is related to the usable capacity of all of the LUs from a RAID group, which is a choice users make.
7. The number of disks, coupled with the RAID level, determines the physical IOPS capacity of the RAID group and all of its LUs. If there are too few RAID groups (disks), the response times grow to large values very quickly.

Backup Strategy

N/A

Test Result Summary

This section provides a high-level summary of the test data from ESRP and the link to the detailed HTML reports that are generated by ESRP testing framework.

Reliability

A number of tests in the framework check reliability spanning a 24-hour window. The goal is to verify the storage can handle high I/O load for a long period of time. Following these stress tests, both log and database files are analyzed for integrity to ensure that no database or log corruption occurs.

- No errors were reported in the event log file for the storage reliability testing
- No errors were reported for the database and log checksum process
- Backup to disk test is N/A
- Database checksum on the remote storage database is N/A

Primary Storage Performance Results

The primary storage performance testing exercises the storage with maximum sustainable Exchange type of I/O for two hours. The test shows how long it takes for the storage to respond to an I/O under load. The following data is the sum of all of the logical disk I/Os and average of all the logical disks I/O latency in the two-hour test duration.

Individual Server Metrics

Individual server metrics show the sum of I/Os across storage groups and the average latency across all storage groups.

Table 11. Individual Server Metrics for Exchange Server (SUN141)

Database I/O	
<i>Database Disk Transfers/sec</i>	1160 IOPS
<i>Database Disk Reads/sec</i>	642 IOPS
<i>Database Disk Writes/sec</i>	518 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	412 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 12. Individual Server Metrics for Exchange Server (SUN142)

Database I/O	
<i>Database Disk Transfers/sec</i>	1173 IOPS
<i>Database Disk Reads/sec</i>	647 IOPS
<i>Database Disk Writes/sec</i>	525 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	416 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 13. Individual Server Metrics for Exchange Server (SUN143)

Database I/O	
<i>Database Disk Transfers/sec</i>	1124 IOPS
<i>Database Disk Reads/sec</i>	620 IOPS
<i>Database Disk Writes/sec</i>	503 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	400 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 14. Individual Server Metrics for Exchange Server (SUN144)

Database I/O	
<i>Database Disk Transfers/sec</i>	1158 IOPS
<i>Database Disk Reads/sec</i>	637 IOPS
<i>Database Disk Writes/sec</i>	521 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	411 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 15. Individual Server Metrics for Exchange Server (SUN145)

Database I/O	
<i>Database Disk Transfers/sec</i>	1159 IOPS
<i>Database Disk Reads/sec</i>	641 IOPS
<i>Database Disk Writes/sec</i>	518 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	411 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 16. Individual Server Metrics for Exchange Server (SUN146)

Database I/O	
<i>Database Disk Transfers/sec</i>	1161 IOPS
<i>Database Disk Reads/sec</i>	642 IOPS
<i>Database Disk Writes/sec</i>	518 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	413 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 17. Individual Server Metrics for Exchange Server (SUN147)

Database I/O	
<i>Database Disk Transfers/sec</i>	1168 IOPS
<i>Database Disk Reads/sec</i>	643 IOPS
<i>Database Disk Writes/sec</i>	525 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	416 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 18. Individual Server Metrics for Exchange Server (SUN148)

Database I/O	
<i>Database Disk Transfers/sec</i>	1163 IOPS
<i>Database Disk Reads/sec</i>	641 IOPS
<i>Database Disk Writes/sec</i>	522 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	413 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 19. Individual Server Metrics for Exchange Server (SUN149)

Database I/O	
<i>Database Disk Transfers/sec</i>	1151 IOPS
<i>Database Disk Reads/sec</i>	637 IOPS
<i>Database Disk Writes/sec</i>	513 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	409 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 20. Individual Server Metrics for Exchange Server (SUN150)

Database I/O	
<i>Database Disk Transfers/sec</i>	1168 IOPS
<i>Database Disk Reads/sec</i>	646 IOPS
<i>Database Disk Writes/sec</i>	522 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	414 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 21. Individual Server Metrics for Exchange Server (SUN151)

Database I/O	
<i>Database Disk Transfers/sec</i>	1165 IOPS
<i>Database Disk Reads/sec</i>	642 IOPS
<i>Database Disk Writes/sec</i>	522 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	415 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 22. Individual Server Metrics for Exchange Server (SUN152)

Database I/O	
<i>Database Disk Transfers/sec</i>	1150 IOPS
<i>Database Disk Reads/sec</i>	635 IOPS
<i>Database Disk Writes/sec</i>	515 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	410 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 23. Individual Server Metrics for Exchange Server (SUN153)

Database I/O	
<i>Database Disk Transfers/sec</i>	1165 IOPS
<i>Database Disk Reads/sec</i>	643 IOPS
<i>Database Disk Writes/sec</i>	522 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	414 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 24. Individual Server Metrics for Exchange Server (SUN154)

Database I/O	
<i>Database Disk Transfers/sec</i>	1143 IOPS
<i>Database Disk Reads/sec</i>	633 IOPS
<i>Database Disk Writes/sec</i>	510 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	405 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 25. Individual Server Metrics for Exchange Server (SUN155)

Database I/O	
<i>Database Disk Transfers/sec</i>	1172 IOPS
<i>Database Disk Reads/sec</i>	645 IOPS
<i>Database Disk Writes/sec</i>	527 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	418 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Table 26. Individual Server Metrics for Exchange Server (SUN156)

Database I/O	
<i>Database Disk Transfers/sec</i>	1160 IOPS
<i>Database Disk Reads/sec</i>	640 IOPS
<i>Database Disk Writes/sec</i>	519 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	411 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Aggregate Performance Across All Servers Metrics

The aggregate performance across all server metrics shows the sum of I/Os across all servers in the solution and the average latency across all servers in the solution.

Table 27. Aggregate Performance for Exchange Server 2007

Database I/O	
<i>Database Disk Transfers/sec</i>	18,547 IOPS
<i>Database Disk Reads/sec</i>	10,240 IOPS
<i>Database Disk Writes/sec</i>	8,307 IOPS
<i>Average Database Disk Read Latency (ms)</i>	9
<i>Average Database Disk Write Latency (ms)</i>	4
Transaction Log I/O	
<i>Average Log Disk Writes/sec</i>	6,588 IOPS
<i>Average Log Disk Write Latency (ms)</i>	2

Streaming Backup Performance

For the ESRP Version 2.1 release, only the streaming backup type is supported for testing in the framework. This section has two tests: The first measures the read I/O performance metrics by running checksums on all of the database and log files and the second measures the end-to-end performance when the databases are backed up to disks.

Database Read-only Performance

This test measures the maximum rate at which databases can be recovered. The following tables show the average rate for a single database file.

Table 28. Database Read-only Performance for Exchange Server (SUN141)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.0

Table 29. Database Read-only Performance for Exchange Server (SUN142)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.0

Table 30. Database Read-only Performance for Exchange Server (SUN143)

<i>MB read/sec per storage group</i>	1.4
<i>MB read/sec total</i>	66.7

Table 31. Database Read-only Performance for Exchange Server (SUN144)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.6

Table 32. Database Read-only Performance for Exchange Server (SUN145)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	61.8

Table 33. Database Read-only Performance for Exchange Server (SUN146)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.2

Table 34. Database Read-only Performance for Exchange Server (SUN147)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.4

Table 35. Database Read-only Performance for Exchange Server (SUN148)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.2

Table 36. Database Read-only Performance for Exchange Server (SUN149)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.0

Table 37. Database Read-only Performance for Exchange Server (SUN150)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	61.8

Table 38. Database Read-only Performance for Exchange Server (SUN151)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.1

Table 39. Database Read-only Performance for Exchange Server (SUN152)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.1

Table 40. Database Read-only Performance for Exchange Server (SUN153)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.1

Table 41. Database Read-only Performance for Exchange Server (SUN154)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	61.7

Table 42. Database Read-only Performance for Exchange Server (SUN155)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.0

Table 43. Database Read-only Performance for Exchange Server (SUN156)

<i>MB read/sec per storage group</i>	1.3
<i>MB read/sec total</i>	62.0

Log Read-only Performance

This test measures the maximum rate at which the log files can be played against the databases. The following tables show the average rate for 500 log files played in a single storage group. Each log file is 1MB in size.

Table 44. Log Read-only Performance for Exchange Server (SUN141)

<i>Average time to play one log file (sec)</i>	9.59
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Table 45. Log Read-only Performance for Exchange Server (SUN142)

<i>Average time to play one log file (sec)</i>	9.56
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Table 46. Log Read-only Performance for Exchange Server (SUN143)

<i>Average time to play one log file (sec)</i>	9.56
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Table 47. Log Read-only Performance for Exchange Server (SUN144)

<i>Average time to play one log file (sec)</i>	9.55
--	------

Table 48. Log Read-only Performance for Exchange Server (SUN145)

<i>Average time to play one log file (sec)</i>	9.51
--	------

Table 49. Log Read-only Performance for Exchange Server (SUN146)

<i>Average time to play one log file (sec)</i>	9.54
--	------

Table 50. Log Read-only Performance for Exchange Server (SUN147)

<i>Average time to play one log file (sec)</i>	9.53
--	------

Table 51. Log Read-only Performance for Exchange Server (SUN148)

Average time to play one log file (sec) 9.67

Table 52. Log Read-only Performance for Exchange Server (SUN149)

Average time to play one log file (sec) 9.49

Table 53. Log Read-only Performance for Exchange Server (SUN150)

Average time to play one log file (sec) 9.52

Table 54. Log Read-only Performance for Exchange Server (SUN151)

Average time to play one log file (sec) 8.71

Table 55. Log Read-only Performance for Exchange Server (SUN152)

Average time to play one log file (sec) 9.57

Table 56. Log Read-only Performance for Exchange Server (SUN153)

Average time to play one log file (sec) 9.51

Table 57. Log Read-only Performance for Exchange Server (SUN154)

Average time to play one log file (sec) 9.50

Table 58. Log Read-only Performance for Exchange Server (SUN155)

Average time to play one log file (sec) 9.64

Table 59. Log Read-only Performance for Exchange Server (SUN156)

Average time to play one log file (sec) 9.42

Conclusion

This document details a tested configuration capable of supporting 80,000 users with a 0.216 IOPS per user profile and user mailbox size of 500MB. A Hitachi Adaptable Modular Storage 2500, configured with 32GB of cache, 16 4Gbit/s Fibre Channel host paths, using Hitachi Dynamic Provisioning software (with two pools) and 480 450GB 15K RPM SAS disks in a RAID-1+0 configuration, was used for these tests. Testing confirmed that the 2500 is capable of delivering the IOPS and capacity requirements needed to support 80,000 Exchange mailboxes configured with the specified user profile, while maintaining additional headroom to support peak throughput.

The solution outlined in this document does not include data protection components such as local or remote replication. Adding these technologies can affect performance and capacity requirements and each needs to be factored into the storage design accordingly.

For additional information to assist in planning Exchange Server 2007 storage architectures for the Hitachi Adaptable Modular Storage 2000 family, see <http://www.hds.com/assets/pdf/hitachi-ams-2000-family.pdf>.

This document is developed by Hitachi Data Systems and reviewed by Microsoft Exchange Product team. The test results and data presented in this document are based on the tests introduced in the ESRP test framework. Do not quote the data directly for pre-deployment verification. It is still necessary to validate the storage design for a specific customer environment.

The ESRP program is not designed to be a benchmarking program; tests do not generate the maximum throughput for a given solution. Rather, it is focused on producing recommendations from vendors for Exchange application. Thus, do not use the data presented in this document for direct comparisons among the solutions.

Appendix A – Test Reports

This appendix contains Jetstress test results for one of the servers used in testing this storage solution. These test results are representative of the results obtained for all of the servers tested.

Performance Test Result: SUN141

Test Summary

Overall Test Result	Pass
Machine Name	SUN141
Test Description	
Test Start Time	11/2/2009 3:07:45 PM
Test End Time	11/2/2009 7:28:33 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:\ESRP HDP_500MB\Final\Performance_2009_11_2_15_9_26.blg C:\ESRP HDP_500MB\Final\DBChecksum_2009_11_2_19_28_33.blg

Database Sizing and Throughput

Achieved I/O per Second	1160.979
Target I/O per Second	1080
Initial database size	2804494893056
Final database size	2811912519680
Database files (count)	48

Jetstress System Parameters

Thread count	2 (per storage group)
Log buffers	9000
Minimum database cache	1536.0 MB
Maximum database cache	12288.0 MB
Insert operations	40%
Delete operations	30%
Replace operations	5%
Read operations	25%
Lazy commits	55%

Disk Subsystem Performance

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database	0.009	0.004	13.160	10.671	(n/a)

(C:\asgluns\sg1)					
Database (C:\asgluns\sg2)	0.009	0.004	13.371	10.861	(n/a)
Database (C:\asgluns\sg3)	0.009	0.004	13.551	10.844	(n/a)
Database (C:\asgluns\sg4)	0.009	0.004	13.376	10.601	(n/a)
Database (C:\asgluns\sg5)	0.009	0.004	13.403	10.567	(n/a)
Database (C:\asgluns\sg6)	0.009	0.004	13.182	10.873	(n/a)
Database (C:\asgluns\sg7)	0.009	0.004	13.227	10.641	(n/a)
Database (C:\asgluns\sg8)	0.009	0.004	13.898	11.111	(n/a)
Database (C:\asgluns\sg9)	0.009	0.004	13.751	11.152	(n/a)
Database (C:\asgluns\sg10)	0.009	0.004	13.108	10.592	(n/a)
Database (C:\asgluns\sg11)	0.009	0.004	13.503	10.857	(n/a)
Database (C:\asgluns\sg12)	0.009	0.004	13.550	10.865	(n/a)
Database (C:\asgluns\sg13)	0.009	0.004	13.395	10.585	(n/a)
Database (C:\asgluns\sg14)	0.009	0.004	12.935	10.294	(n/a)
Database (C:\asgluns\sg15)	0.009	0.004	13.185	10.692	(n/a)
Database (C:\asgluns\sg16)	0.009	0.004	13.300	10.991	(n/a)
Database (C:\asgluns\sg17)	0.009	0.004	13.877	11.222	(n/a)
Database (C:\asgluns\sg18)	0.009	0.004	13.391	10.672	(n/a)
Database (C:\asgluns\sg19)	0.009	0.004	13.597	10.866	(n/a)
Database (C:\asgluns\sg20)	0.009	0.004	13.713	11.251	(n/a)
Database (C:\asgluns\sg21)	0.009	0.004	13.758	11.093	(n/a)
Database (C:\asgluns\sg22)	0.009	0.004	13.357	10.929	(n/a)
Database (C:\asgluns\sg23)	0.009	0.004	13.114	10.688	(n/a)
Database (C:\asgluns\sg24)	0.009	0.004	13.253	10.775	(n/a)

Database (C:\asgluns\sg25)	0.009	0.004	13.060	10.455	(n/a)
Database (C:\asgluns\sg26)	0.009	0.004	12.949	10.293	(n/a)
Database (C:\asgluns\sg27)	0.009	0.004	13.524	10.772	(n/a)
Database (C:\asgluns\sg28)	0.009	0.004	13.332	10.661	(n/a)
Database (C:\asgluns\sg29)	0.009	0.004	13.568	11.117	(n/a)
Database (C:\asgluns\sg30)	0.009	0.004	13.023	10.554	(n/a)
Database (C:\asgluns\sg31)	0.009	0.004	13.171	10.439	(n/a)
Database (C:\asgluns\sg32)	0.009	0.004	13.971	11.325	(n/a)
Database (C:\asgluns\sg33)	0.009	0.004	13.014	10.425	(n/a)
Database (C:\asgluns\sg34)	0.009	0.004	13.468	10.698	(n/a)
Database (C:\asgluns\sg35)	0.009	0.004	13.409	10.873	(n/a)
Database (C:\asgluns\sg36)	0.009	0.004	13.251	10.583	(n/a)
Database (C:\asgluns\sg37)	0.009	0.004	13.534	10.995	(n/a)
Database (C:\asgluns\sg38)	0.009	0.004	13.433	10.785	(n/a)
Database (C:\asgluns\sg39)	0.009	0.004	13.337	10.808	(n/a)
Database (C:\asgluns\sg40)	0.009	0.004	13.249	10.767	(n/a)
Database (C:\asgluns\sg41)	0.009	0.004	12.986	10.533	(n/a)
Database (C:\asgluns\sg42)	0.009	0.004	13.842	11.053	(n/a)
Database (C:\asgluns\sg43)	0.009	0.004	13.972	11.256	(n/a)
Database (C:\asgluns\sg44)	0.009	0.004	13.095	10.459	(n/a)
Database (C:\asgluns\sg45)	0.009	0.004	13.715	10.963	(n/a)
Database (C:\asgluns\sg46)	0.009	0.004	13.517	10.819	(n/a)
Database (C:\asgluns\sg47)	0.009	0.004	13.299	10.875	(n/a)
Database	0.009	0.004	13.271	10.832	(n/a)

(C:\asgluns\sg48)					
Log (C:\alogluns\log1)	0.000	0.002	0.000	8.604	4164.817
Log (C:\alogluns\log2)	0.000	0.002	0.000	8.707	4017.010
Log (C:\alogluns\log3)	0.000	0.002	0.000	8.539	3975.832
Log (C:\alogluns\log4)	0.000	0.002	0.000	8.479	4162.520
Log (C:\alogluns\log5)	0.000	0.002	0.000	8.525	3975.340
Log (C:\alogluns\log6)	0.000	0.002	0.000	8.763	4225.688
Log (C:\alogluns\log7)	0.000	0.002	0.000	8.554	4158.090
Log (C:\alogluns\log8)	0.000	0.002	0.000	8.589	4005.944
Log (C:\alogluns\log9)	0.000	0.002	0.000	8.698	4209.898
Log (C:\alogluns\log10)	0.000	0.002	0.000	8.521	4130.802
Log (C:\alogluns\log11)	0.000	0.002	0.000	8.518	4179.535
Log (C:\alogluns\log12)	0.000	0.002	0.000	8.618	3971.570
Log (C:\alogluns\log13)	0.000	0.002	0.000	8.353	3984.253
Log (C:\alogluns\log14)	0.000	0.002	0.000	8.375	3980.807
Log (C:\alogluns\log15)	0.000	0.002	0.000	8.530	4095.981
Log (C:\alogluns\log16)	0.000	0.002	0.000	8.824	4318.649
Log (C:\alogluns\log17)	0.000	0.002	0.000	8.862	4087.239
Log (C:\alogluns\log18)	0.000	0.002	0.000	8.453	4087.014
Log (C:\alogluns\log19)	0.000	0.002	0.000	8.717	4127.805
Log (C:\alogluns\log20)	0.000	0.002	0.000	9.045	4090.105
Log (C:\alogluns\log21)	0.000	0.002	0.000	8.863	4049.450
Log (C:\alogluns\log22)	0.000	0.002	0.000	8.584	4036.987
Log (C:\alogluns\log23)	0.000	0.002	0.000	8.804	4131.961
Log (C:\alogluns\log24)	0.000	0.002	0.000	8.671	4291.712
Log (C:\alogluns\log25)	0.000	0.002	0.000	8.444	4042.703
Log (C:\alogluns\log26)	0.000	0.002	0.000	8.124	4029.961
Log (C:\alogluns\log27)	0.000	0.002	0.000	8.515	4054.792
Log (C:\alogluns\log28)	0.000	0.002	0.000	8.510	4122.124
Log (C:\alogluns\log29)	0.000	0.002	0.000	8.759	3973.329
Log (C:\alogluns\log30)	0.000	0.002	0.000	8.471	4097.996
Log (C:\alogluns\log31)	0.000	0.002	0.000	8.211	3958.739
Log (C:\alogluns\log32)	0.000	0.002	0.000	8.981	4032.778
Log (C:\alogluns\log33)	0.000	0.002	0.000	8.204	4055.970
Log (C:\alogluns\log34)	0.000	0.002	0.000	8.421	4152.979
Log (C:\alogluns\log35)	0.000	0.002	0.000	8.758	4185.429
Log (C:\alogluns\log36)	0.000	0.002	0.000	8.451	4055.852
Log (C:\alogluns\log37)	0.000	0.002	0.000	8.771	4219.731

Log (C:\alogluns\log38)	0.000	0.002	0.000	8.355	4038.238
Log (C:\alogluns\log39)	0.000	0.002	0.000	8.530	4085.197
Log (C:\alogluns\log40)	0.000	0.002	0.000	8.496	4089.482
Log (C:\alogluns\log41)	0.000	0.002	0.000	8.416	4151.944
Log (C:\alogluns\log42)	0.000	0.002	0.000	8.778	4194.997
Log (C:\alogluns\log43)	0.000	0.002	0.000	8.925	4013.326
Log (C:\alogluns\log44)	0.000	0.002	0.000	8.353	4046.652
Log (C:\alogluns\log45)	0.000	0.002	0.000	8.676	4148.688
Log (C:\alogluns\log46)	0.000	0.002	0.000	8.447	4111.105
Log (C:\alogluns\log47)	0.000	0.002	0.000	8.582	4127.993
Log (C:\alogluns\log48)	0.000	0.002	0.000	8.748	4177.881

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.676	0.381	1.176
Available MBytes	17940.801	17808.000	19035.000
Free System Page Table Entries	33565976.793	33565693.000	33566423.000
Transition Pages RePurposed/sec	44.955	0.000	1294.076
Pool Nonpaged Bytes	127783537.540	127782912.000	127791104.000
Pool Paged Bytes	230145585.272	230105088.000	230211584.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

```

11/2/2009 3:07:45 PM -- Jetstress testing begins ...
11/2/2009 3:07:45 PM -- Prepare testing begins ...
11/2/2009 3:08:34 PM -- Attaching databases ...
11/2/2009 3:08:34 PM -- Prepare testing ends.
11/2/2009 3:08:34 PM -- Dispatching transactions begins ...
11/2/2009 3:08:34 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0
GB)
11/2/2009 3:08:34 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8
MB)
11/2/2009 3:09:26 PM -- Database read latency thresholds: (average: 0.02
seconds/read, maximum: 0.05 seconds/read).
11/2/2009 3:09:26 PM -- Log write latency thresholds: (average: 0.01 seconds/write,
maximum: 0.05 seconds/write).
11/2/2009 3:09:31 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%,
Replaces 5%, Reads 25%, Lazy Commits 55%.
11/2/2009 3:09:31 PM -- Performance logging begins (interval: 15000 ms).
11/2/2009 3:09:31 PM -- Attaining prerequisites:
11/2/2009 4:38:42 PM -- \MSExchange Database(Jetstresswin)\Database Cache Size,
Last: 11597040000.0 (lower bound: 11596410000.0, upper bound: none)
11/2/2009 6:38:43 PM -- Performance logging ends.
11/2/2009 7:28:25 PM -- JetInterop batch transaction stats: 6415, 6280, 6316, 6258,
6292, 6407, 6355, 6391, 6291, 6318, 6393, 6343, 6371, 6281, 6263, 6376, 6473, 6357,
6326, 6468, 6398, 6437, 6494, 6332, 6269, 6205, 6225, 6301, 6339, 6199, 6174, 6438,
6269, 6252, 6361, 6268, 6417, 6227, 6301, 6331, 6197, 6369, 6439, 6245, 6346, 6404,
6369, and 6363.
11/2/2009 7:28:25 PM -- Dispatching transactions ends.

```

11/2/2009 7:28:25 PM -- Shutting down databases ...

11/2/2009 7:28:33 PM -- Instance1608.1 (complete), Instance1608.2 (complete), Instance1608.3 (complete), Instance1608.4 (complete), Instance1608.5 (complete), Instance1608.6 (complete), Instance1608.7 (complete), Instance1608.8 (complete), Instance1608.9 (complete), Instance1608.10 (complete), Instance1608.11 (complete), Instance1608.12 (complete), Instance1608.13 (complete), Instance1608.14 (complete), Instance1608.15 (complete), Instance1608.16 (complete), Instance1608.17 (complete), Instance1608.18 (complete), Instance1608.19 (complete), Instance1608.20 (complete), Instance1608.21 (complete), Instance1608.22 (complete), Instance1608.23 (complete), Instance1608.24 (complete), Instance1608.25 (complete), Instance1608.26 (complete), Instance1608.27 (complete), Instance1608.28 (complete), Instance1608.29 (complete), Instance1608.30 (complete), Instance1608.31 (complete), Instance1608.32 (complete), Instance1608.33 (complete), Instance1608.34 (complete), Instance1608.35 (complete), Instance1608.36 (complete), Instance1608.37 (complete), Instance1608.38 (complete), Instance1608.39 (complete), Instance1608.40 (complete), Instance1608.41 (complete), Instance1608.42 (complete), Instance1608.43 (complete), Instance1608.44 (complete), Instance1608.45 (complete), Instance1608.46 (complete), Instance1608.47 (complete), and Instance1608.48 (complete)

11/2/2009 7:28:33 PM -- Performance logging begins (interval: 30000 ms).

11/2/2009 7:28:33 PM -- Verifying database checksums ...

11/3/2009 6:53:40 AM -- C:\asgluns\sg1 (100% processed), C:\asgluns\sg2 (100% processed), C:\asgluns\sg3 (100% processed), C:\asgluns\sg4 (100% processed), C:\asgluns\sg5 (100% processed), C:\asgluns\sg6 (100% processed), C:\asgluns\sg7 (100% processed), C:\asgluns\sg8 (100% processed), C:\asgluns\sg9 (100% processed), C:\asgluns\sg10 (100% processed), C:\asgluns\sg11 (100% processed), C:\asgluns\sg12 (100% processed), C:\asgluns\sg13 (100% processed), C:\asgluns\sg14 (100% processed), C:\asgluns\sg15 (100% processed), C:\asgluns\sg16 (100% processed), C:\asgluns\sg17 (100% processed), C:\asgluns\sg18 (100% processed), C:\asgluns\sg19 (100% processed), C:\asgluns\sg20 (100% processed), C:\asgluns\sg21 (100% processed), C:\asgluns\sg22 (100% processed), C:\asgluns\sg23 (100% processed), C:\asgluns\sg24 (100% processed), C:\asgluns\sg25 (100% processed), C:\asgluns\sg26 (100% processed), C:\asgluns\sg27 (100% processed), C:\asgluns\sg28 (100% processed), C:\asgluns\sg29 (100% processed), C:\asgluns\sg30 (100% processed), C:\asgluns\sg31 (100% processed), C:\asgluns\sg32 (100% processed), C:\asgluns\sg33 (100% processed), C:\asgluns\sg34 (100% processed), C:\asgluns\sg35 (100% processed), C:\asgluns\sg36 (100% processed), C:\asgluns\sg37 (100% processed), C:\asgluns\sg38 (100% processed), C:\asgluns\sg39 (100% processed), C:\asgluns\sg40 (100% processed), C:\asgluns\sg41 (100% processed), C:\asgluns\sg42 (100% processed), C:\asgluns\sg43 (100% processed), C:\asgluns\sg44 (100% processed), C:\asgluns\sg45 (100% processed), C:\asgluns\sg46 (100% processed), C:\asgluns\sg47 (100% processed), and C:\asgluns\sg48 (100% processed)

11/3/2009 6:53:40 AM -- Performance logging ends.

11/3/2009 6:53:40 AM -- C:\ESRP

HDP_500MB\Final\DBChecksum_2009_11_2_19_28_33.blg has 1368 samples.

11/3/2009 7:01:22 AM -- C:\ESRP

HDP_500MB\Final\DBChecksum_2009_11_2_19_28_33.html is saved.

11/3/2009 7:01:22 AM -- Verifying log checksums ...

11/3/2009 7:01:35 AM -- C:\alogluns\log1 (2 logs passed), C:\alogluns\log2 (3 logs passed), C:\alogluns\log3 (2 logs passed), C:\alogluns\log4 (2 logs passed), C:\alogluns\log5 (2 logs passed), C:\alogluns\log6 (3 logs passed), C:\alogluns\log7 (2 logs passed), C:\alogluns\log8 (2 logs passed), C:\alogluns\log9 (2 logs passed), C:\alogluns\log10 (3 logs passed), C:\alogluns\log11 (2 logs passed), C:\alogluns\log12 (3 logs passed), C:\alogluns\log13 (2 logs passed), C:\alogluns\log14 (2 logs passed), C:\alogluns\log15 (2 logs passed), C:\alogluns\log16 (2 logs passed), C:\alogluns\log17 (2 logs passed), C:\alogluns\log18 (2 logs passed), C:\alogluns\log19 (2 logs passed), C:\alogluns\log20 (2 logs passed), C:\alogluns\log21 (2 logs passed), C:\alogluns\log22 (2 logs passed), C:\alogluns\log23 (2 logs passed), C:\alogluns\log24 (2 logs passed), C:\alogluns\log25 (2 logs passed), C:\alogluns\log26 (2 logs passed), C:\alogluns\log27 (2 logs passed), C:\alogluns\log28 (2 logs passed), C:\alogluns\log29 (2 logs passed), C:\alogluns\log30 (2 logs passed), C:\alogluns\log31 (2 logs passed), C:\alogluns\log32 (2 logs passed), C:\alogluns\log33 (3 logs passed), C:\alogluns\log34 (2 logs passed), C:\alogluns\log35 (2 logs passed), C:\alogluns\log36 (3 logs passed), C:\alogluns\log37 (2 logs passed), C:\alogluns\log38 (3 logs passed), C:\alogluns\log39 (2 logs passed), C:\alogluns\log40 (2 logs passed), C:\alogluns\log41 (2 logs passed), C:\alogluns\log42 (2 logs passed),


```

sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log31 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log32 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log32 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log33 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log33 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log34 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log34 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log35 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log35 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log36 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log36 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log37 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log37 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log38 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log38 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log39 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log39 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log40 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log40 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log41 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log41 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log42 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log42 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log43 has 0.0019 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log43 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log44 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log44 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log45 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log45 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log46 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log46 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log47 has 0.0020 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log47 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- volume C:\alogluns\log48 has 0.0021 for Avg. Disk
sec/write.
11/3/2009 7:02:20 AM -- Volume C:\alogluns\log48 has 0.0000 for Avg. Disk sec/Read.
11/3/2009 7:02:20 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
11/3/2009 7:02:20 AM -- Test has 0 Database Page Fault Stalls/sec samples higher
than 0.
11/3/2009 7:02:20 AM -- C:\ESRP
HDP_500MB\Final\Performance_2009_11_2_15_9_26.xml has 477 samples queried.

```

Performance Test Database Checksums Result: SUN141

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
C:\asgluns\sg1\Jetstress1.edb	7146818	0	0	0	55834 MBytes / 41106

					seconds
C:\asgluns\sg2\Jetstress1.edb	7149890	0	0	0	55858 MBytes / 41028 seconds
C:\asgluns\sg3\Jetstress1.edb	7152194	0	0	0	55876 MBytes / 41034 seconds
C:\asgluns\sg4\Jetstress1.edb	7152962	0	0	0	55882 MBytes / 41032 seconds
C:\asgluns\sg5\Jetstress1.edb	7153218	0	0	0	55884 MBytes / 39227 seconds
C:\asgluns\sg6\Jetstress1.edb	7151938	0	0	0	55874 MBytes / 39200 seconds
C:\asgluns\sg7\Jetstress1.edb	7152450	0	0	0	55878 MBytes / 39203 seconds
C:\asgluns\sg8\Jetstress1.edb	7149890	0	0	0	55858 MBytes / 39193 seconds
C:\asgluns\sg9\Jetstress1.edb	7149890	0	0	0	55858 MBytes / 40593 seconds
C:\asgluns\sg10\Jetstress1.edb	7148354	0	0	0	55846 MBytes / 40551 seconds
C:\asgluns\sg11\Jetstress1.edb	7150402	0	0	0	55862 MBytes / 40534 seconds
C:\asgluns\sg12\Jetstress1.edb	7153474	0	0	0	55886 MBytes / 40577 seconds
C:\asgluns\sg13\Jetstress1.edb	7150658	0	0	0	55864 MBytes / 39901 seconds
C:\asgluns\sg14\Jetstress1.edb	7156546	0	0	0	55910 MBytes / 39908 seconds
C:\asgluns\sg15\Jetstress1.edb	7151938	0	0	0	55874 MBytes / 39913 seconds
C:\asgluns\sg16\Jetstress1.edb	7150146	0	0	0	55860 MBytes / 39896 seconds
C:\asgluns\sg17\Jetstress1.edb	7149378	0	0	0	55854 MBytes / 41051 seconds
C:\asgluns\sg18\Jetstress1.edb	7154498	0	0	0	55894 MBytes / 41051 seconds
C:\asgluns\sg19\Jetstress1.edb	7146562	0	0	0	55832 MBytes / 41049 seconds
C:\asgluns\sg20\Jetstress1.edb	7150914	0	0	0	55866 MBytes / 41055 seconds
C:\asgluns\sg21\Jetstress1.edb	7154242	0	0	0	55892 MBytes / 39363 seconds
C:\asgluns\sg22\Jetstress1.edb	7152450	0	0	0	55878 MBytes / 39359 seconds
C:\asgluns\sg23\Jetstress1.edb	7146050	0	0	0	55828 MBytes / 39341 seconds
C:\asgluns\sg24\Jetstress1.edb	7147330	0	0	0	55838 MBytes / 39354 seconds

C:\asgluns\sg25\Jetstress1.edb	7150402	0	0	0	55862 MBytes / 40704 seconds
C:\asgluns\sg26\Jetstress1.edb	7155010	0	0	0	55898 MBytes / 40692 seconds
C:\asgluns\sg27\Jetstress1.edb	7147842	0	0	0	55842 MBytes / 40701 seconds
C:\asgluns\sg28\Jetstress1.edb	7150402	0	0	0	55862 MBytes / 40682 seconds
C:\asgluns\sg29\Jetstress1.edb	7147330	0	0	0	55838 MBytes / 39982 seconds
C:\asgluns\sg30\Jetstress1.edb	7147586	0	0	0	55840 MBytes / 39979 seconds
C:\asgluns\sg31\Jetstress1.edb	7149890	0	0	0	55858 MBytes / 39981 seconds
C:\asgluns\sg32\Jetstress1.edb	7155010	0	0	0	55898 MBytes / 39982 seconds
C:\asgluns\sg33\Jetstress1.edb	7148866	0	0	0	55850 MBytes / 41061 seconds
C:\asgluns\sg34\Jetstress1.edb	7152194	0	0	0	55876 MBytes / 41057 seconds
C:\asgluns\sg35\Jetstress1.edb	7152194	0	0	0	55876 MBytes / 41058 seconds
C:\asgluns\sg36\Jetstress1.edb	7153474	0	0	0	55886 MBytes / 41058 seconds
C:\asgluns\sg37\Jetstress1.edb	7152706	0	0	0	55880 MBytes / 39234 seconds
C:\asgluns\sg38\Jetstress1.edb	7149378	0	0	0	55854 MBytes / 39198 seconds
C:\asgluns\sg39\Jetstress1.edb	7146818	0	0	0	55834 MBytes / 39230 seconds
C:\asgluns\sg40\Jetstress1.edb	7151938	0	0	0	55874 MBytes / 39216 seconds
C:\asgluns\sg41\Jetstress1.edb	7149634	0	0	0	55856 MBytes / 40567 seconds
C:\asgluns\sg42\Jetstress1.edb	7151682	0	0	0	55872 MBytes / 40595 seconds
C:\asgluns\sg43\Jetstress1.edb	7152962	0	0	0	55882 MBytes / 40563 seconds
C:\asgluns\sg44\Jetstress1.edb	7152450	0	0	0	55878 MBytes / 40581 seconds
C:\asgluns\sg45\Jetstress1.edb	7150146	0	0	0	55860 MBytes / 39709 seconds
C:\asgluns\sg46\Jetstress1.edb	7151938	0	0	0	55874 MBytes / 39617 seconds
C:\asgluns\sg47\Jetstress1.edb	7150658	0	0	0	55864 MBytes / 39604 seconds
C:\asgluns\sg48\Jetstress1.edb	7158338	0	0	0	55924 MBytes / 39632 seconds

					seconds
(Sum)	343251040	0	0	0	2681648 MBytes / 41106 seconds

Disk Subsystem Performance of Checksum

<i>Logical Disk</i>	<i>Avg. Disk sec/Read</i>	<i>Avg. Disk sec/Write</i>	<i>Disk Reads/sec</i>	<i>Disk Writes/sec</i>
C:\asgluns\sg1	0.800	0.001	21.681	0.000
C:\asgluns\sg2	0.781	0.000	21.749	0.000
C:\asgluns\sg3	0.782	0.000	21.743	0.000
C:\asgluns\sg4	0.781	0.000	21.755	0.000
C:\asgluns\sg5	0.756	0.000	22.771	0.000
C:\asgluns\sg6	0.758	0.000	22.782	0.000
C:\asgluns\sg7	0.758	0.000	22.781	0.000
C:\asgluns\sg8	0.758	0.000	22.781	0.000
C:\asgluns\sg9	0.769	0.000	22.009	0.000
C:\asgluns\sg10	0.770	0.000	22.022	0.000
C:\asgluns\sg11	0.769	0.001	22.042	0.000
C:\asgluns\sg12	0.769	0.001	22.022	0.000
C:\asgluns\sg13	0.765	0.001	22.363	0.000
C:\asgluns\sg14	0.766	0.001	22.396	0.000
C:\asgluns\sg15	0.768	0.000	22.369	0.000
C:\asgluns\sg16	0.765	0.001	22.370	0.000
C:\asgluns\sg17	0.771	0.002	21.730	0.000
C:\asgluns\sg18	0.773	0.001	21.746	0.000
C:\asgluns\sg19	0.773	0.001	21.737	0.000
C:\asgluns\sg20	0.774	0.001	21.703	0.000
C:\asgluns\sg21	0.761	0.001	22.699	0.000
C:\asgluns\sg22	0.763	0.001	22.645	0.000
C:\asgluns\sg23	0.763	0.001	22.671	0.000
C:\asgluns\sg24	0.763	0.001	22.648	0.000
C:\asgluns\sg25	0.775	0.001	21.881	0.000
C:\asgluns\sg26	0.775	0.000	21.946	0.000
C:\asgluns\sg27	0.776	0.001	21.892	0.000
C:\asgluns\sg28	0.775	0.001	21.921	0.000
C:\asgluns\sg29	0.768	0.001	22.238	0.000
C:\asgluns\sg30	0.770	0.001	22.277	0.000
C:\asgluns\sg31	0.771	0.001	22.257	0.000
C:\asgluns\sg32	0.769	0.001	22.259	0.000

C:\asgluns\sg33	0.776	0.001	21.644	0.000
C:\asgluns\sg34	0.776	0.000	21.697	0.000
C:\asgluns\sg35	0.776	0.002	21.672	0.000
C:\asgluns\sg36	0.776	0.000	21.696	0.000
C:\asgluns\sg37	0.752	0.000	22.758	0.000
C:\asgluns\sg38	0.753	0.000	22.774	0.000
C:\asgluns\sg39	0.754	0.000	22.747	0.000
C:\asgluns\sg40	0.754	0.000	22.784	0.000
C:\asgluns\sg41	0.764	0.001	22.021	0.000
C:\asgluns\sg42	0.767	0.000	22.013	0.000
C:\asgluns\sg43	0.766	0.001	22.035	0.000
C:\asgluns\sg44	0.767	0.001	22.017	0.000
C:\asgluns\sg45	0.763	0.000	22.496	0.000
C:\asgluns\sg46	0.763	0.001	22.556	0.000
C:\asgluns\sg47	0.764	0.001	22.559	0.000
C:\asgluns\sg48	0.763	0.000	22.566	0.000

Memory System Performance of Checksum

Counter	Average	Minimum	Maximum
% Processor Time	0.547	0.231	0.944
Available MBytes	30522.066	30412.000	30633.000
Free System Page Table Entries	33563502.593	33562957.000	33566667.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	127778959.719	127774720.000	127807488.000
Pool Paged Bytes	255509857.310	229122048.000	283099136.000

Test Log

```

11/2/2009 3:07:45 PM -- Jetstress testing begins ...
11/2/2009 3:07:45 PM -- Prepare testing begins ...
11/2/2009 3:08:34 PM -- Attaching databases ...
11/2/2009 3:08:34 PM -- Prepare testing ends.
11/2/2009 3:08:34 PM -- Dispatching transactions begins ...
11/2/2009 3:08:34 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0
GB)
11/2/2009 3:08:34 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8
MB)
11/2/2009 3:09:26 PM -- Database read latency thresholds: (average: 0.02
seconds/read, maximum: 0.05 seconds/read).
11/2/2009 3:09:26 PM -- Log write latency thresholds: (average: 0.01 seconds/write,
maximum: 0.05 seconds/write).
11/2/2009 3:09:31 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%,
Replaces 5%, Reads 25%, Lazy Commits 55%.
11/2/2009 3:09:31 PM -- Performance logging begins (interval: 15000 ms).
11/2/2009 3:09:31 PM -- Attaining prerequisites:
11/2/2009 4:38:42 PM -- \MSExchange Database(Jetstresswin)\Database Cache Size,
Last: 11597040000.0 (lower bound: 11596410000.0, upper bound: none)

```

11/2/2009 6:38:43 PM -- Performance logging ends.
 11/2/2009 7:28:25 PM -- JetInterop batch transaction stats: 6415, 6280, 6316, 6258, 6292, 6407, 6355, 6391, 6291, 6318, 6393, 6343, 6371, 6281, 6263, 6376, 6473, 6357, 6326, 6468, 6398, 6437, 6494, 6332, 6269, 6205, 6225, 6301, 6339, 6199, 6174, 6438, 6269, 6252, 6361, 6268, 6417, 6227, 6301, 6331, 6197, 6369, 6439, 6245, 6346, 6404, 6369, and 6363.
 11/2/2009 7:28:25 PM -- Dispatching transactions ends.
 11/2/2009 7:28:25 PM -- Shutting down databases ...
 11/2/2009 7:28:33 PM -- Instance1608.1 (complete), Instance1608.2 (complete), Instance1608.3 (complete), Instance1608.4 (complete), Instance1608.5 (complete), Instance1608.6 (complete), Instance1608.7 (complete), Instance1608.8 (complete), Instance1608.9 (complete), Instance1608.10 (complete), Instance1608.11 (complete), Instance1608.12 (complete), Instance1608.13 (complete), Instance1608.14 (complete), Instance1608.15 (complete), Instance1608.16 (complete), Instance1608.17 (complete), Instance1608.18 (complete), Instance1608.19 (complete), Instance1608.20 (complete), Instance1608.21 (complete), Instance1608.22 (complete), Instance1608.23 (complete), Instance1608.24 (complete), Instance1608.25 (complete), Instance1608.26 (complete), Instance1608.27 (complete), Instance1608.28 (complete), Instance1608.29 (complete), Instance1608.30 (complete), Instance1608.31 (complete), Instance1608.32 (complete), Instance1608.33 (complete), Instance1608.34 (complete), Instance1608.35 (complete), Instance1608.36 (complete), Instance1608.37 (complete), Instance1608.38 (complete), Instance1608.39 (complete), Instance1608.40 (complete), Instance1608.41 (complete), Instance1608.42 (complete), Instance1608.43 (complete), Instance1608.44 (complete), Instance1608.45 (complete), Instance1608.46 (complete), Instance1608.47 (complete), and Instance1608.48 (complete)
 11/2/2009 7:28:33 PM -- Performance logging begins (interval: 30000 ms).
 11/2/2009 7:28:33 PM -- Verifying database checksums ...
 11/3/2009 6:53:40 AM -- C:\asgluns\sg1 (100% processed), C:\asgluns\sg2 (100% processed), C:\asgluns\sg3 (100% processed), C:\asgluns\sg4 (100% processed), C:\asgluns\sg5 (100% processed), C:\asgluns\sg6 (100% processed), C:\asgluns\sg7 (100% processed), C:\asgluns\sg8 (100% processed), C:\asgluns\sg9 (100% processed), C:\asgluns\sg10 (100% processed), C:\asgluns\sg11 (100% processed), C:\asgluns\sg12 (100% processed), C:\asgluns\sg13 (100% processed), C:\asgluns\sg14 (100% processed), C:\asgluns\sg15 (100% processed), C:\asgluns\sg16 (100% processed), C:\asgluns\sg17 (100% processed), C:\asgluns\sg18 (100% processed), C:\asgluns\sg19 (100% processed), C:\asgluns\sg20 (100% processed), C:\asgluns\sg21 (100% processed), C:\asgluns\sg22 (100% processed), C:\asgluns\sg23 (100% processed), C:\asgluns\sg24 (100% processed), C:\asgluns\sg25 (100% processed), C:\asgluns\sg26 (100% processed), C:\asgluns\sg27 (100% processed), C:\asgluns\sg28 (100% processed), C:\asgluns\sg29 (100% processed), C:\asgluns\sg30 (100% processed), C:\asgluns\sg31 (100% processed), C:\asgluns\sg32 (100% processed), C:\asgluns\sg33 (100% processed), C:\asgluns\sg34 (100% processed), C:\asgluns\sg35 (100% processed), C:\asgluns\sg36 (100% processed), C:\asgluns\sg37 (100% processed), C:\asgluns\sg38 (100% processed), C:\asgluns\sg39 (100% processed), C:\asgluns\sg40 (100% processed), C:\asgluns\sg41 (100% processed), C:\asgluns\sg42 (100% processed), C:\asgluns\sg43 (100% processed), C:\asgluns\sg44 (100% processed), C:\asgluns\sg45 (100% processed), C:\asgluns\sg46 (100% processed), C:\asgluns\sg47 (100% processed), and C:\asgluns\sg48 (100% processed)
 11/3/2009 6:53:40 AM -- Performance logging ends.
 11/3/2009 6:53:40 AM -- C:\ESRP
 HDP_500MB\Final\DBChecksum_2009_11_2_19_28_33.b1g has 1368 samples.

Stress Test Database Performance Result: SUN141

Test Summary

Overall Test Result	Pass
Machine Name	SUN141
Test Description	
Test Start Time	10/31/2009 11:08:43 PM
Test End Time	11/2/2009 12:53:49 AM
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:\ESRP HDP_500MB\Final\Stress_2009_10_31_23_10_24.blg C:\ESRP HDP_500MB\Final\DBChecksum_2009_11_2_0_53_49.blg

Database Sizing and Throughput

Achieved I/O per Second	1161.544
Target I/O per Second	1080
Initial database size	2755669000192
Final database size	2804494893056
Database files (count)	48

Jetstress System Parameters

Thread count	2 (per storage group)
Log buffers	9000
Minimum database cache	1536.0 MB
Maximum database cache	12288.0 MB
Insert operations	40%
Delete operations	30%
Replace operations	5%
Read operations	25%
Lazy commits	55%

Disk Subsystem Performance

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (C:\asgluns\sg1)	0.009	0.004	13.346	10.715	(n/a)
Database (C:\asgluns\sg2)	0.009	0.004	13.316	10.855	(n/a)
Database (C:\asgluns\sg3)	0.009	0.004	13.430	10.898	(n/a)
Database (C:\asgluns\sg4)	0.009	0.004	13.400	10.845	(n/a)
Database (C:\asgluns\sg5)	0.009	0.004	13.365	10.853	(n/a)
Database (C:\asgluns\sg6)	0.009	0.004	13.281	10.782	(n/a)
Database (C:\asgluns\sg7)	0.009	0.004	13.269	10.705	(n/a)
Database	0.009	0.004	13.351	10.839	(n/a)

(C:\asgluns\sg8)					
Database (C:\asgluns\sg9)	0.009	0.004	13.359	10.833	(n/a)
Database (C:\asgluns\sg10)	0.009	0.004	13.466	10.917	(n/a)
Database (C:\asgluns\sg11)	0.009	0.004	13.390	10.834	(n/a)
Database (C:\asgluns\sg12)	0.009	0.004	13.455	10.881	(n/a)
Database (C:\asgluns\sg13)	0.009	0.004	13.350	10.764	(n/a)
Database (C:\asgluns\sg14)	0.009	0.004	13.302	10.781	(n/a)
Database (C:\asgluns\sg15)	0.009	0.004	13.269	10.796	(n/a)
Database (C:\asgluns\sg16)	0.009	0.004	13.493	10.965	(n/a)
Database (C:\asgluns\sg17)	0.009	0.004	13.304	10.747	(n/a)
Database (C:\asgluns\sg18)	0.009	0.004	13.280	10.833	(n/a)
Database (C:\asgluns\sg19)	0.009	0.004	13.303	10.749	(n/a)
Database (C:\asgluns\sg20)	0.009	0.004	13.359	10.809	(n/a)
Database (C:\asgluns\sg21)	0.009	0.004	13.454	10.897	(n/a)
Database (C:\asgluns\sg22)	0.009	0.004	13.377	10.953	(n/a)
Database (C:\asgluns\sg23)	0.009	0.004	13.249	10.776	(n/a)
Database (C:\asgluns\sg24)	0.009	0.004	13.275	10.766	(n/a)
Database (C:\asgluns\sg25)	0.009	0.004	13.332	10.871	(n/a)
Database (C:\asgluns\sg26)	0.009	0.004	13.417	10.923	(n/a)
Database (C:\asgluns\sg27)	0.009	0.004	13.316	10.855	(n/a)
Database (C:\asgluns\sg28)	0.009	0.004	13.341	10.758	(n/a)
Database (C:\asgluns\sg29)	0.009	0.004	13.357	10.821	(n/a)
Database (C:\asgluns\sg30)	0.009	0.004	13.376	10.814	(n/a)
Database (C:\asgluns\sg31)	0.009	0.004	13.430	10.928	(n/a)

Database (C:\asgluns\sg32)	0.009	0.004	13.349	10.850	(n/a)
Database (C:\asgluns\sg33)	0.009	0.004	13.421	10.800	(n/a)
Database (C:\asgluns\sg34)	0.009	0.004	13.384	10.868	(n/a)
Database (C:\asgluns\sg35)	0.009	0.004	13.322	10.808	(n/a)
Database (C:\asgluns\sg36)	0.009	0.004	13.292	10.841	(n/a)
Database (C:\asgluns\sg37)	0.009	0.004	13.333	10.817	(n/a)
Database (C:\asgluns\sg38)	0.009	0.004	13.558	10.970	(n/a)
Database (C:\asgluns\sg39)	0.009	0.004	13.442	10.872	(n/a)
Database (C:\asgluns\sg40)	0.009	0.004	13.419	10.929	(n/a)
Database (C:\asgluns\sg41)	0.009	0.004	13.350	10.783	(n/a)
Database (C:\asgluns\sg42)	0.009	0.004	13.374	10.831	(n/a)
Database (C:\asgluns\sg43)	0.009	0.004	13.392	10.948	(n/a)
Database (C:\asgluns\sg44)	0.009	0.004	13.195	10.696	(n/a)
Database (C:\asgluns\sg45)	0.009	0.004	13.390	10.801	(n/a)
Database (C:\asgluns\sg46)	0.009	0.004	13.361	10.849	(n/a)
Database (C:\asgluns\sg47)	0.009	0.004	13.420	10.864	(n/a)
Database (C:\asgluns\sg48)	0.009	0.004	13.329	10.908	(n/a)
Log (C:\alogluns\log1)	0.000	0.002	0.000	8.631	4036.828
Log (C:\alogluns\log2)	0.000	0.002	0.000	8.709	4106.028
Log (C:\alogluns\log3)	0.000	0.002	0.000	8.701	4055.401
Log (C:\alogluns\log4)	0.000	0.002	0.000	8.686	4081.878
Log (C:\alogluns\log5)	0.000	0.002	0.000	8.651	4057.143
Log (C:\alogluns\log6)	0.000	0.002	0.000	8.662	4069.607
Log (C:\alogluns\log7)	0.000	0.002	0.000	8.592	4072.465
Log (C:\alogluns\log8)	0.000	0.002	0.000	8.614	4070.462
Log (C:\alogluns\log9)	0.000	0.002	0.000	8.703	4109.906
Log (C:\alogluns\log10)	0.000	0.002	0.000	8.722	4084.837

Log (C:\alogluns\log11)	0.000	0.002	0.000	8.649	4079.568
Log (C:\alogluns\log12)	0.000	0.002	0.000	8.742	4067.918
Log (C:\alogluns\log13)	0.000	0.002	0.000	8.629	4071.739
Log (C:\alogluns\log14)	0.000	0.002	0.000	8.641	4068.432
Log (C:\alogluns\log15)	0.000	0.002	0.000	8.615	4074.950
Log (C:\alogluns\log16)	0.000	0.002	0.000	8.688	4078.119
Log (C:\alogluns\log17)	0.000	0.002	0.000	8.640	4079.299
Log (C:\alogluns\log18)	0.000	0.002	0.000	8.678	4082.920
Log (C:\alogluns\log19)	0.000	0.002	0.000	8.585	4071.997
Log (C:\alogluns\log20)	0.000	0.002	0.000	8.641	4090.226
Log (C:\alogluns\log21)	0.000	0.002	0.000	8.682	4076.167
Log (C:\alogluns\log22)	0.000	0.002	0.000	8.781	4131.816
Log (C:\alogluns\log23)	0.000	0.002	0.000	8.563	4065.041
Log (C:\alogluns\log24)	0.000	0.002	0.000	8.632	4082.097
Log (C:\alogluns\log25)	0.000	0.002	0.000	8.696	4081.040
Log (C:\alogluns\log26)	0.000	0.002	0.000	8.749	4106.832
Log (C:\alogluns\log27)	0.000	0.002	0.000	8.701	4098.573
Log (C:\alogluns\log28)	0.000	0.002	0.000	8.628	4082.222
Log (C:\alogluns\log29)	0.000	0.002	0.000	8.582	4106.359
Log (C:\alogluns\log30)	0.000	0.002	0.000	8.614	4084.299
Log (C:\alogluns\log31)	0.000	0.002	0.000	8.730	4086.223
Log (C:\alogluns\log32)	0.000	0.002	0.000	8.673	4137.572
Log (C:\alogluns\log33)	0.000	0.002	0.000	8.670	4082.413
Log (C:\alogluns\log34)	0.000	0.002	0.000	8.769	4093.456
Log (C:\alogluns\log35)	0.000	0.002	0.000	8.663	4067.237
Log (C:\alogluns\log36)	0.000	0.002	0.000	8.622	4075.483
Log (C:\alogluns\log37)	0.000	0.002	0.000	8.654	4076.222
Log (C:\alogluns\log38)	0.000	0.002	0.000	8.716	4082.557
Log (C:\alogluns\log39)	0.000	0.002	0.000	8.639	4071.869
Log (C:\alogluns\log40)	0.000	0.002	0.000	8.696	4119.865
Log (C:\alogluns\log41)	0.000	0.002	0.000	8.634	4049.140
Log (C:\alogluns\log42)	0.000	0.002	0.000	8.643	4053.700
Log (C:\alogluns\log43)	0.000	0.002	0.000	8.768	4085.685
Log (C:\alogluns\log44)	0.000	0.002	0.000	8.615	4079.222
Log (C:\alogluns\log45)	0.000	0.002	0.000	8.638	4109.246
Log (C:\alogluns\log46)	0.000	0.002	0.000	8.635	4109.959
Log (C:\alogluns\log47)	0.000	0.002	0.000	8.652	4068.370
Log (C:\alogluns\log48)	0.000	0.002	0.000	8.708	4108.958

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.668	0.349	1.398
Available MBytes	17914.546	17794.000	19129.000
Free System Page Table Entries	33564355.624	33563128.000	33566509.000
Transition Pages RePurposed/sec	5.206	0.000	1433.311
Pool Nonpaged Bytes	127953326.471	127909888.000	127979520.000
Pool Paged Bytes	231828825.682	224669696.000	233689088.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

```
10/31/2009 11:08:43 PM -- Jetstress testing begins ...
10/31/2009 11:08:43 PM -- Prepare testing begins ...
10/31/2009 11:09:32 PM -- Attaching databases ...
10/31/2009 11:09:32 PM -- Prepare testing ends.
10/31/2009 11:09:32 PM -- Dispatching transactions begins ...
10/31/2009 11:09:32 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0
GB)
10/31/2009 11:09:32 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8
MB)
10/31/2009 11:10:24 PM -- Database read latency thresholds: (average: 0.02
seconds/read, maximum: 0.1 seconds/read).
10/31/2009 11:10:24 PM -- Log write latency thresholds: (average: 0.01
seconds/write, maximum: 0.1 seconds/write).
10/31/2009 11:10:29 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%,
Replaces 5%, Reads 25%, Lazy Commits 55%.
10/31/2009 11:10:29 PM -- Performance logging begins (interval: 15000 ms).
10/31/2009 11:10:29 PM -- Attaining prerequisites:
11/1/2009 12:36:20 AM -- \MSExchange Database(Jetstresswin)\Database Cache Size,
Last: 11597580000.0 (lower bound: 11596410000.0, upper bound: none)
11/2/2009 12:36:20 AM -- Performance logging ends.
11/2/2009 12:53:40 AM -- JetInterop batch transaction stats: 40470, 40436, 40657,
40369, 40514, 40543, 40240, 40593, 40527, 40600, 40331, 40791, 40624, 40293, 40331,
40734, 40355, 40330, 40301, 40225, 40726, 40758, 39969, 40307, 40311, 40567, 40487,
40397, 40299, 40421, 40698, 40462, 40554, 40641, 40535, 40201, 40315, 40871, 40616,
40710, 40336, 40336, 40646, 40323, 40588, 40329, 40526, and 40563.
11/2/2009 12:53:40 AM -- Dispatching transactions ends.
11/2/2009 12:53:40 AM -- Shutting down databases ...
11/2/2009 12:53:49 AM -- Instance1608.1 (complete), Instance1608.2 (complete),
Instance1608.3 (complete), Instance1608.4 (complete), Instance1608.5 (complete),
Instance1608.6 (complete), Instance1608.7 (complete), Instance1608.8 (complete),
Instance1608.9 (complete), Instance1608.10 (complete), Instance1608.11 (complete),
Instance1608.12 (complete), Instance1608.13 (complete), Instance1608.14 (complete),
Instance1608.15 (complete), Instance1608.16 (complete), Instance1608.17 (complete),
Instance1608.18 (complete), Instance1608.19 (complete), Instance1608.20 (complete),
Instance1608.21 (complete), Instance1608.22 (complete), Instance1608.23 (complete),
Instance1608.24 (complete), Instance1608.25 (complete), Instance1608.26 (complete),
Instance1608.27 (complete), Instance1608.28 (complete), Instance1608.29 (complete),
Instance1608.30 (complete), Instance1608.31 (complete), Instance1608.32 (complete),
Instance1608.33 (complete), Instance1608.34 (complete), Instance1608.35 (complete),
Instance1608.36 (complete), Instance1608.37 (complete), Instance1608.38 (complete),
Instance1608.39 (complete), Instance1608.40 (complete), Instance1608.41 (complete),
Instance1608.42 (complete), Instance1608.43 (complete), Instance1608.44 (complete),
Instance1608.45 (complete), Instance1608.46 (complete), Instance1608.47 (complete),
and Instance1608.48 (complete)
11/2/2009 12:53:51 AM -- Performance logging begins (interval: 30000 ms).
11/2/2009 12:53:51 AM -- Verifying database checksums ...
11/2/2009 12:30:59 PM -- C:\asgluns\sg1 (100% processed), C:\asgluns\sg2 (100%
```

processed), C:\asgluns\sg3 (100% processed), C:\asgluns\sg4 (100% processed),
 C:\asgluns\sg5 (100% processed), C:\asgluns\sg6 (100% processed), C:\asgluns\sg7
 (100% processed), C:\asgluns\sg8 (100% processed), C:\asgluns\sg9 (100% processed),
 C:\asgluns\sg10 (100% processed), C:\asgluns\sg11 (100% processed), C:\asgluns\sg12
 (100% processed), C:\asgluns\sg13 (100% processed), C:\asgluns\sg14 (100%
 processed), C:\asgluns\sg15 (100% processed), C:\asgluns\sg16 (100% processed),
 C:\asgluns\sg17 (100% processed), C:\asgluns\sg18 (100% processed), C:\asgluns\sg19
 (100% processed), C:\asgluns\sg20 (100% processed), C:\asgluns\sg21 (100%
 processed), C:\asgluns\sg22 (100% processed), C:\asgluns\sg23 (100% processed),
 C:\asgluns\sg24 (100% processed), C:\asgluns\sg25 (100% processed), C:\asgluns\sg26
 (100% processed), C:\asgluns\sg27 (100% processed), C:\asgluns\sg28 (100%
 processed), C:\asgluns\sg29 (100% processed), C:\asgluns\sg30 (100% processed),
 C:\asgluns\sg31 (100% processed), C:\asgluns\sg32 (100% processed), C:\asgluns\sg33
 (100% processed), C:\asgluns\sg34 (100% processed), C:\asgluns\sg35 (100%
 processed), C:\asgluns\sg36 (100% processed), C:\asgluns\sg37 (100% processed),
 C:\asgluns\sg38 (100% processed), C:\asgluns\sg39 (100% processed), C:\asgluns\sg40
 (100% processed), C:\asgluns\sg41 (100% processed), C:\asgluns\sg42 (100%
 processed), C:\asgluns\sg43 (100% processed), C:\asgluns\sg44 (100% processed),
 C:\asgluns\sg45 (100% processed), C:\asgluns\sg46 (100% processed), C:\asgluns\sg47
 (100% processed), and C:\asgluns\sg48 (100% processed)
 11/2/2009 12:30:59 PM -- Performance logging ends.
 11/2/2009 12:30:59 PM -- C:\ESRP
 HDP_500MB\Final\DBChecksum_2009_11_2_0_53_49.blg has 1392 samples.
 11/2/2009 12:38:56 PM -- C:\ESRP
 HDP_500MB\Final\DBChecksum_2009_11_2_0_53_49.html is saved.
 11/2/2009 12:38:56 PM -- Verifying log checksums ...
 11/2/2009 12:39:09 PM -- C:\alogluns\log1 (2 logs passed), C:\alogluns\log2 (2 logs
 passed), C:\alogluns\log3 (2 logs passed), C:\alogluns\log4 (2 logs passed),
 C:\alogluns\log5 (2 logs passed), C:\alogluns\log6 (2 logs passed),
 C:\alogluns\log7 (2 logs passed), C:\alogluns\log8 (2 logs passed),
 C:\alogluns\log9 (2 logs passed), C:\alogluns\log10 (2 logs passed),
 C:\alogluns\log11 (2 logs passed), C:\alogluns\log12 (2 logs passed),
 C:\alogluns\log13 (2 logs passed), C:\alogluns\log14 (3 logs passed),
 C:\alogluns\log15 (2 logs passed), C:\alogluns\log16 (2 logs passed),
 C:\alogluns\log17 (2 logs passed), C:\alogluns\log18 (2 logs passed),
 C:\alogluns\log19 (2 logs passed), C:\alogluns\log20 (2 logs passed),
 C:\alogluns\log21 (2 logs passed), C:\alogluns\log22 (2 logs passed),
 C:\alogluns\log23 (2 logs passed), C:\alogluns\log24 (2 logs passed),
 C:\alogluns\log25 (2 logs passed), C:\alogluns\log26 (2 logs passed),
 C:\alogluns\log27 (2 logs passed), C:\alogluns\log28 (2 logs passed),
 C:\alogluns\log29 (2 logs passed), C:\alogluns\log30 (2 logs passed),
 C:\alogluns\log31 (2 logs passed), C:\alogluns\log32 (2 logs passed),
 C:\alogluns\log33 (2 logs passed), C:\alogluns\log34 (2 logs passed),
 C:\alogluns\log35 (2 logs passed), C:\alogluns\log36 (2 logs passed),
 C:\alogluns\log37 (2 logs passed), C:\alogluns\log38 (2 logs passed),
 C:\alogluns\log39 (2 logs passed), C:\alogluns\log40 (2 logs passed),
 C:\alogluns\log41 (2 logs passed), C:\alogluns\log42 (2 logs passed),
 C:\alogluns\log43 (2 logs passed), C:\alogluns\log44 (2 logs passed),
 C:\alogluns\log45 (2 logs passed), C:\alogluns\log46 (2 logs passed),
 C:\alogluns\log47 (2 logs passed), and C:\alogluns\log48 (2 logs passed)
 11/2/2009 12:39:09 PM -- C:\ESRP HDP_500MB\Final\Stress_2009_10_31_23_10_24.blg has
 6313 samples.
 11/2/2009 12:39:09 PM -- Creating test report ...
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg1 has 0.0092 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg2 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg3 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- volume C:\asgluns\sg4 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg5 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg6 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- volume C:\asgluns\sg7 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg8 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg9 has 0.0087 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- volume C:\asgluns\sg10 has 0.0087 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg11 has 0.0087 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg12 has 0.0087 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- volume C:\asgluns\sg13 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg14 has 0.0088 for Avg. Disk sec/Read.
 11/2/2009 12:45:01 PM -- Volume C:\asgluns\sg15 has 0.0088 for Avg. Disk sec/Read.

11/2/2009 12:45:04 PM -- Volume C:\alogluns\log46 has 0.0020 for Avg. Disk sec/write.
 11/2/2009 12:45:04 PM -- volume C:\alogluns\log46 has 0.0000 for Avg. Disk sec/Read.
 11/2/2009 12:45:04 PM -- Volume C:\alogluns\log47 has 0.0020 for Avg. Disk sec/write.
 11/2/2009 12:45:04 PM -- Volume C:\alogluns\log47 has 0.0000 for Avg. Disk sec/Read.
 11/2/2009 12:45:05 PM -- volume C:\alogluns\log48 has 0.0020 for Avg. Disk sec/write.
 11/2/2009 12:45:05 PM -- Volume C:\alogluns\log48 has 0.0000 for Avg. Disk sec/Read.
 11/2/2009 12:45:05 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 11/2/2009 12:45:05 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 11/2/2009 12:45:05 PM -- C:\ESRP HDP_500MB\Final\Stress_2009_10_31_23_10_24.xml has 5944 samples queried.

Stress Test Database Checksums Result: SUN141

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
C:\asgluns\sg1\Jetstress1.edb	7127362	0	0	0	55682 MBytes / 41827 seconds
C:\asgluns\sg2\Jetstress1.edb	7131202	0	0	0	55712 MBytes / 41749 seconds
C:\asgluns\sg3\Jetstress1.edb	7133762	0	0	0	55732 MBytes / 41761 seconds
C:\asgluns\sg4\Jetstress1.edb	7134274	0	0	0	55736 MBytes / 41749 seconds
C:\asgluns\sg5\Jetstress1.edb	7134786	0	0	0	55740 MBytes / 39338 seconds
C:\asgluns\sg6\Jetstress1.edb	7132482	0	0	0	55722 MBytes / 39245 seconds
C:\asgluns\sg7\Jetstress1.edb	7132994	0	0	0	55726 MBytes / 39280 seconds
C:\asgluns\sg8\Jetstress1.edb	7131458	0	0	0	55714 MBytes / 39248 seconds
C:\asgluns\sg9\Jetstress1.edb	7131970	0	0	0	55718 MBytes / 41635 seconds
C:\asgluns\sg10\Jetstress1.edb	7129154	0	0	0	55696 MBytes / 41633 seconds
C:\asgluns\sg11\Jetstress1.edb	7131458	0	0	0	55714 MBytes / 41619 seconds
C:\asgluns\sg12\Jetstress1.edb	7134530	0	0	0	55738 MBytes / 41631 seconds
C:\asgluns\sg13\Jetstress1.edb	7132482	0	0	0	55722 MBytes / 40442 seconds
C:\asgluns\sg14\Jetstress1.edb	7137602	0	0	0	55762 MBytes / 40436 seconds
C:\asgluns\sg15\Jetstress1.edb	7133250	0	0	0	55728 MBytes / 40447 seconds

C:\asgluns\sg16\Jetstress1.edb	7130178	0	0	0	55704 MBytes / 40433 seconds
C:\asgluns\sg17\Jetstress1.edb	7130178	0	0	0	55704 MBytes / 41760 seconds
C:\asgluns\sg18\Jetstress1.edb	7135554	0	0	0	55746 MBytes / 41748 seconds
C:\asgluns\sg19\Jetstress1.edb	7128130	0	0	0	55688 MBytes / 41725 seconds
C:\asgluns\sg20\Jetstress1.edb	7131202	0	0	0	55712 MBytes / 41755 seconds
C:\asgluns\sg21\Jetstress1.edb	7134530	0	0	0	55738 MBytes / 39567 seconds
C:\asgluns\sg22\Jetstress1.edb	7132994	0	0	0	55726 MBytes / 39567 seconds
C:\asgluns\sg23\Jetstress1.edb	7126338	0	0	0	55674 MBytes / 39530 seconds
C:\asgluns\sg24\Jetstress1.edb	7127874	0	0	0	55686 MBytes / 39498 seconds
C:\asgluns\sg25\Jetstress1.edb	7131970	0	0	0	55718 MBytes / 41635 seconds
C:\asgluns\sg26\Jetstress1.edb	7136322	0	0	0	55752 MBytes / 41628 seconds
C:\asgluns\sg27\Jetstress1.edb	7129922	0	0	0	55702 MBytes / 41619 seconds
C:\asgluns\sg28\Jetstress1.edb	7131458	0	0	0	55714 MBytes / 41643 seconds
C:\asgluns\sg29\Jetstress1.edb	7128642	0	0	0	55692 MBytes / 40029 seconds
C:\asgluns\sg30\Jetstress1.edb	7129410	0	0	0	55698 MBytes / 39974 seconds
C:\asgluns\sg31\Jetstress1.edb	7131970	0	0	0	55718 MBytes / 40026 seconds
C:\asgluns\sg32\Jetstress1.edb	7136578	0	0	0	55754 MBytes / 40111 seconds
C:\asgluns\sg33\Jetstress1.edb	7129922	0	0	0	55702 MBytes / 41615 seconds
C:\asgluns\sg34\Jetstress1.edb	7134530	0	0	0	55738 MBytes / 41648 seconds
C:\asgluns\sg35\Jetstress1.edb	7133250	0	0	0	55728 MBytes / 41630 seconds
C:\asgluns\sg36\Jetstress1.edb	7134530	0	0	0	55738 MBytes / 41612 seconds
C:\asgluns\sg37\Jetstress1.edb	7132994	0	0	0	55726 MBytes / 39702 seconds
C:\asgluns\sg38\Jetstress1.edb	7131458	0	0	0	55714 MBytes / 39693 seconds
C:\asgluns\sg39\Jetstress1.edb	7128130	0	0	0	55688 MBytes / 39721 seconds

					seconds
C:\asgluns\sg40\Jetstress1.edb	7133250	0	0	0	55728 MBytes / 39732 seconds
C:\asgluns\sg41\Jetstress1.edb	7131202	0	0	0	55712 MBytes / 41613 seconds
C:\asgluns\sg42\Jetstress1.edb	7132226	0	0	0	55720 MBytes / 41604 seconds
C:\asgluns\sg43\Jetstress1.edb	7134786	0	0	0	55740 MBytes / 41604 seconds
C:\asgluns\sg44\Jetstress1.edb	7134018	0	0	0	55734 MBytes / 41609 seconds
C:\asgluns\sg45\Jetstress1.edb	7131202	0	0	0	55712 MBytes / 40074 seconds
C:\asgluns\sg46\Jetstress1.edb	7133250	0	0	0	55728 MBytes / 39982 seconds
C:\asgluns\sg47\Jetstress1.edb	7130690	0	0	0	55708 MBytes / 40034 seconds
C:\asgluns\sg48\Jetstress1.edb	7138114	0	0	0	55766 MBytes / 40045 seconds
(Sum)	342345568	0	0	0	2674574 MBytes / 41828 seconds

Disk Subsystem Performance of Checksum

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec
C:\asgluns\sg1	0.816	0.002	21.180	0.000
C:\asgluns\sg2	0.796	0.000	21.326	0.000
C:\asgluns\sg3	0.796	0.002	21.337	0.000
C:\asgluns\sg4	0.795	0.002	21.338	0.000
C:\asgluns\sg5	0.753	0.001	22.664	0.000
C:\asgluns\sg6	0.753	0.002	22.713	0.000
C:\asgluns\sg7	0.754	0.002	22.697	0.000
C:\asgluns\sg8	0.754	0.001	22.705	0.000
C:\asgluns\sg9	0.783	0.002	21.323	0.000
C:\asgluns\sg10	0.785	0.001	21.326	0.000
C:\asgluns\sg11	0.784	0.002	21.394	0.000
C:\asgluns\sg12	0.784	0.001	21.358	0.000
C:\asgluns\sg13	0.775	0.002	22.020	0.000
C:\asgluns\sg14	0.776	0.001	22.038	0.000
C:\asgluns\sg15	0.777	0.001	22.010	0.000
C:\asgluns\sg16	0.774	0.003	22.020	0.000
C:\asgluns\sg17	0.787	0.000	21.319	0.000
C:\asgluns\sg18	0.786	0.002	21.344	0.000

C:\asgluns\sg19	0.786	0.001	21.330	0.000
C:\asgluns\sg20	0.786	0.002	21.314	0.000
C:\asgluns\sg21	0.760	0.002	22.538	0.000
C:\asgluns\sg22	0.761	0.002	22.533	0.000
C:\asgluns\sg23	0.761	0.000	22.534	0.000
C:\asgluns\sg24	0.760	0.001	22.559	0.000
C:\asgluns\sg25	0.788	0.001	21.409	0.000
C:\asgluns\sg26	0.787	0.001	21.374	0.000
C:\asgluns\sg27	0.787	0.001	21.391	0.000
C:\asgluns\sg28	0.792	0.001	21.295	0.000
C:\asgluns\sg29	0.763	0.002	22.262	0.000
C:\asgluns\sg30	0.765	0.001	22.293	0.000
C:\asgluns\sg31	0.766	0.001	22.276	0.000
C:\asgluns\sg32	0.764	0.001	22.240	0.000
C:\asgluns\sg33	0.785	0.003	21.412	0.000
C:\asgluns\sg34	0.786	0.002	21.411	0.000
C:\asgluns\sg35	0.786	0.002	21.422	0.000
C:\asgluns\sg36	0.786	0.001	21.431	0.000
C:\asgluns\sg37	0.758	0.002	22.438	0.000
C:\asgluns\sg38	0.758	0.001	22.447	0.000
C:\asgluns\sg39	0.760	0.002	22.419	0.000
C:\asgluns\sg40	0.769	0.001	22.404	0.000
C:\asgluns\sg41	0.782	0.001	21.401	0.000
C:\asgluns\sg42	0.784	0.001	21.426	0.000
C:\asgluns\sg43	0.782	0.002	21.432	0.000
C:\asgluns\sg44	0.784	0.002	21.420	0.000
C:\asgluns\sg45	0.768	0.001	22.249	0.000
C:\asgluns\sg46	0.767	0.000	22.310	0.000
C:\asgluns\sg47	0.769	0.001	22.270	0.000
C:\asgluns\sg48	0.768	0.001	22.287	0.000

Memory System Performance of Checksum

<i>Counter</i>	<i>Average</i>	<i>Minimum</i>	<i>Maximum</i>
% Processor Time	0.535	0.211	0.955
Available MBytes	30574.426	30463.000	30681.000
Free System Page Table Entries	33563030.209	33562546.000	33566234.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	127959022.345	127954944.000	128008192.000

Test Log

10/31/2009 11:08:43 PM -- Jetstress testing begins ...
10/31/2009 11:08:43 PM -- Prepare testing begins ...
10/31/2009 11:09:32 PM -- Attaching databases ...
10/31/2009 11:09:32 PM -- Prepare testing ends.
10/31/2009 11:09:32 PM -- Dispatching transactions begins ...
10/31/2009 11:09:32 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0 GB)
10/31/2009 11:09:32 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8 MB)
10/31/2009 11:10:24 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.1 seconds/read).
10/31/2009 11:10:24 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.1 seconds/write).
10/31/2009 11:10:29 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
10/31/2009 11:10:29 PM -- Performance logging begins (interval: 15000 ms).
10/31/2009 11:10:29 PM -- Attaining prerequisites:
11/1/2009 12:36:20 AM -- \MSEExchange Database(Jetstresswin)\Database Cache Size, Last: 11597580000.0 (lower bound: 11596410000.0, upper bound: none)
11/2/2009 12:36:20 AM -- Performance logging ends.
11/2/2009 12:53:40 AM -- JetInterop batch transaction stats: 40470, 40436, 40657, 40369, 40514, 40543, 40240, 40593, 40527, 40600, 40331, 40791, 40624, 40293, 40331, 40734, 40355, 40330, 40301, 40225, 40726, 40758, 39969, 40307, 40311, 40567, 40487, 40397, 40299, 40421, 40698, 40462, 40554, 40641, 40535, 40201, 40315, 40871, 40616, 40710, 40336, 40336, 40646, 40323, 40588, 40329, 40526, and 40563.
11/2/2009 12:53:40 AM -- Dispatching transactions ends.
11/2/2009 12:53:40 AM -- Shutting down databases ...
11/2/2009 12:53:49 AM -- Instance1608.1 (complete), Instance1608.2 (complete), Instance1608.3 (complete), Instance1608.4 (complete), Instance1608.5 (complete), Instance1608.6 (complete), Instance1608.7 (complete), Instance1608.8 (complete), Instance1608.9 (complete), Instance1608.10 (complete), Instance1608.11 (complete), Instance1608.12 (complete), Instance1608.13 (complete), Instance1608.14 (complete), Instance1608.15 (complete), Instance1608.16 (complete), Instance1608.17 (complete), Instance1608.18 (complete), Instance1608.19 (complete), Instance1608.20 (complete), Instance1608.21 (complete), Instance1608.22 (complete), Instance1608.23 (complete), Instance1608.24 (complete), Instance1608.25 (complete), Instance1608.26 (complete), Instance1608.27 (complete), Instance1608.28 (complete), Instance1608.29 (complete), Instance1608.30 (complete), Instance1608.31 (complete), Instance1608.32 (complete), Instance1608.33 (complete), Instance1608.34 (complete), Instance1608.35 (complete), Instance1608.36 (complete), Instance1608.37 (complete), Instance1608.38 (complete), Instance1608.39 (complete), Instance1608.40 (complete), Instance1608.41 (complete), Instance1608.42 (complete), Instance1608.43 (complete), Instance1608.44 (complete), Instance1608.45 (complete), Instance1608.46 (complete), Instance1608.47 (complete), and Instance1608.48 (complete)
11/2/2009 12:53:51 AM -- Performance logging begins (interval: 30000 ms).
11/2/2009 12:53:51 AM -- Verifying database checksums ...
11/2/2009 12:30:59 PM -- C:\asgluns\sg1 (100% processed), C:\asgluns\sg2 (100% processed), C:\asgluns\sg3 (100% processed), C:\asgluns\sg4 (100% processed), C:\asgluns\sg5 (100% processed), C:\asgluns\sg6 (100% processed), C:\asgluns\sg7 (100% processed), C:\asgluns\sg8 (100% processed), C:\asgluns\sg9 (100% processed), C:\asgluns\sg10 (100% processed), C:\asgluns\sg11 (100% processed), C:\asgluns\sg12 (100% processed), C:\asgluns\sg13 (100% processed), C:\asgluns\sg14 (100% processed), C:\asgluns\sg15 (100% processed), C:\asgluns\sg16 (100% processed), C:\asgluns\sg17 (100% processed), C:\asgluns\sg18 (100% processed), C:\asgluns\sg19 (100% processed), C:\asgluns\sg20 (100% processed), C:\asgluns\sg21 (100% processed), C:\asgluns\sg22 (100% processed), C:\asgluns\sg23 (100% processed), C:\asgluns\sg24 (100% processed), C:\asgluns\sg25 (100% processed), C:\asgluns\sg26 (100% processed), C:\asgluns\sg27 (100% processed), C:\asgluns\sg28 (100% processed), C:\asgluns\sg29 (100% processed), C:\asgluns\sg30 (100% processed), C:\asgluns\sg31 (100% processed), C:\asgluns\sg32 (100% processed), C:\asgluns\sg33 (100% processed), C:\asgluns\sg34 (100% processed), C:\asgluns\sg35 (100% processed), C:\asgluns\sg36 (100% processed), C:\asgluns\sg37 (100% processed),

C:\asgluns\sg38 (100% processed), C:\asgluns\sg39 (100% processed), C:\asgluns\sg40 (100% processed), C:\asgluns\sg41 (100% processed), C:\asgluns\sg42 (100% processed), C:\asgluns\sg43 (100% processed), C:\asgluns\sg44 (100% processed), C:\asgluns\sg45 (100% processed), C:\asgluns\sg46 (100% processed), C:\asgluns\sg47 (100% processed), and C:\asgluns\sg48 (100% processed)
 11/2/2009 12:30:59 PM -- Performance logging ends.
 11/2/2009 12:30:59 PM -- C:\ESRP
 HDP_500MB\Final\DBChecksum_2009_11_2_0_53_49.blg has 1392 samples

Streaming Backup Test Result: SUN141

Streaming Backup Statistics - All

<i>Database Instance</i>	<i>Database Size (MBytes)</i>	<i>Elapsed Backup Time</i>	<i>MBytes Transferred/sec</i>
Instance4564.1	55832.52	12:28:20	1.24
Instance4564.2	55856.52	12:29:07	1.24
Instance4564.3	55874.52	12:14:22	1.27
Instance4564.4	55880.52	12:29:07	1.24
Instance4564.5	55882.52	11:44:12	1.32
Instance4564.6	55872.52	11:43:56	1.32
Instance4564.7	55876.52	11:55:03	1.30
Instance4564.8	55856.52	11:07:59	1.39
Instance4564.9	55856.52	11:43:41	1.32
Instance4564.10	55844.52	11:49:02	1.31
Instance4564.11	55860.52	11:59:19	1.29
Instance4564.12	55884.52	11:56:49	1.30
Instance4564.13	55862.52	11:33:58	1.34
Instance4564.14	55908.52	11:50:58	1.31
Instance4564.15	55872.52	11:43:25	1.32
Instance4564.16	55858.52	11:05:41	1.40
Instance4564.17	55852.52	12:06:29	1.28
Instance4564.18	55892.52	12:16:36	1.26
Instance4564.19	55830.52	12:19:57	1.26
Instance4564.20	55864.52	12:09:14	1.28
Instance4564.21	55890.52	11:38:23	1.33
Instance4564.22	55876.52	11:16:11	1.38
Instance4564.23	55826.52	11:42:26	1.32
Instance4564.24	55836.52	11:54:04	1.30
Instance4564.25	55860.52	11:41:05	1.33
Instance4564.26	55896.52	12:08:00	1.28
Instance4564.27	55840.52	12:01:17	1.29
Instance4564.28	55860.52	12:08:23	1.28
Instance4564.29	55836.52	11:43:36	1.32
Instance4564.30	55838.52	10:47:53	1.44

Instance4564.31	55856.52	11:45:49	1.32
Instance4564.32	55896.52	11:19:49	1.37
Instance4564.33	55848.52	12:13:30	1.27
Instance4564.34	55874.52	12:13:57	1.27
Instance4564.35	55874.52	12:14:38	1.27
Instance4564.36	55884.52	11:48:45	1.31
Instance4564.37	55878.52	11:44:42	1.32
Instance4564.38	55852.52	10:57:53	1.41
Instance4564.39	55832.52	11:47:38	1.31
Instance4564.40	55872.52	11:24:34	1.36
Instance4564.41	55854.52	12:04:49	1.28
Instance4564.42	55870.52	11:58:43	1.30
Instance4564.43	55880.52	12:05:02	1.28
Instance4564.44	55876.52	12:04:31	1.29
Instance4564.45	55858.52	11:45:05	1.32
Instance4564.46	55872.52	10:44:17	1.45
Instance4564.47	55862.52	11:28:12	1.35
Instance4564.48	55922.52	10:37:03	1.46

Jetstress System Parameters

Thread count	2 (per storage group)
Log buffers	9000
Minimum database cache	1536.0 MB
Maximum database cache	12288.0 MB
Insert operations	40%
Delete operations	30%
Replace operations	5%
Read operations	25%
Lazy commits	55%

Disk Subsystem Performance

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (C:\asgluns\sg1)	0.326	0.000	9.939	0.001	(n/a)
Database (C:\asgluns\sg2)	0.318	0.000	9.839	0.000	(n/a)
Database (C:\asgluns\sg3)	0.302	0.000	9.944	0.001	(n/a)

Database (C:\asgluns\sg4)	0.326	0.000	9.834	0.000	(n/a)
Database (C:\asgluns\sg5)	0.267	0.000	9.946	0.001	(n/a)
Database (C:\asgluns\sg6)	0.270	0.000	9.944	0.001	(n/a)
Database (C:\asgluns\sg7)	0.277	0.000	9.940	0.001	(n/a)
Database (C:\asgluns\sg8)	0.244	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg9)	0.312	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg10)	0.320	0.000	9.939	0.001	(n/a)
Database (C:\asgluns\sg11)	0.338	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg12)	0.322	0.000	9.946	0.001	(n/a)
Database (C:\asgluns\sg13)	0.292	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg14)	0.312	0.000	9.950	0.001	(n/a)
Database (C:\asgluns\sg15)	0.297	0.000	9.943	0.001	(n/a)
Database (C:\asgluns\sg16)	0.275	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg17)	0.300	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg18)	0.303	0.000	9.949	0.001	(n/a)
Database (C:\asgluns\sg19)	0.322	0.000	9.938	0.001	(n/a)
Database (C:\asgluns\sg20)	0.300	0.000	9.943	0.001	(n/a)
Database (C:\asgluns\sg21)	0.265	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg22)	0.254	0.000	9.940	0.001	(n/a)
Database (C:\asgluns\sg23)	0.270	0.000	9.931	0.001	(n/a)
Database (C:\asgluns\sg24)	0.279	0.000	9.933	0.001	(n/a)
Database (C:\asgluns\sg25)	0.314	0.000	9.943	0.001	(n/a)
Database (C:\asgluns\sg26)	0.333	0.000	9.950	0.001	(n/a)
Database	0.322	0.000	9.940	0.001	(n/a)

(C:\asgluns\sg27)					
Database (C:\asgluns\sg28)	0.338	0.000	9.944	0.001	(n/a)
Database (C:\asgluns\sg29)	0.305	0.000	9.932	0.001	(n/a)
Database (C:\asgluns\sg30)	0.269	0.000	9.932	0.001	(n/a)
Database (C:\asgluns\sg31)	0.303	0.000	9.935	0.001	(n/a)
Database (C:\asgluns\sg32)	0.289	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg33)	0.303	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg34)	0.303	0.000	9.946	0.001	(n/a)
Database (C:\asgluns\sg35)	0.304	0.000	9.946	0.001	(n/a)
Database (C:\asgluns\sg36)	0.287	0.000	9.948	0.001	(n/a)
Database (C:\asgluns\sg37)	0.269	0.000	9.944	0.001	(n/a)
Database (C:\asgluns\sg38)	0.247	0.000	9.925	0.001	(n/a)
Database (C:\asgluns\sg39)	0.275	0.000	9.936	0.001	(n/a)
Database (C:\asgluns\sg40)	0.254	0.000	9.944	0.001	(n/a)
Database (C:\asgluns\sg41)	0.326	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg42)	0.329	0.000	9.920	0.001	(n/a)
Database (C:\asgluns\sg43)	0.328	0.000	9.945	0.001	(n/a)
Database (C:\asgluns\sg44)	0.325	0.000	9.945	0.001	(n/a)
Database (C:\asgluns\sg45)	0.309	0.000	9.941	0.001	(n/a)
Database (C:\asgluns\sg46)	0.264	0.000	9.943	0.001	(n/a)
Database (C:\asgluns\sg47)	0.290	0.000	9.942	0.001	(n/a)
Database (C:\asgluns\sg48)	0.260	0.000	9.952	0.001	(n/a)
Log (C:\alogluns\log1)	0.000	0.000	0.000	0.001	4.287
Log (C:\alogluns\log2)	0.000	0.000	0.000	0.000	0.000
Log (C:\alogluns\log3)	0.000	0.000	0.000	0.001	9.823

Log (C:\alogluns\log4)	0.000	0.000	0.000	0.000	0.000
Log (C:\alogluns\log5)	0.000	0.000	0.000	0.001	10.037
Log (C:\alogluns\log6)	0.000	0.000	0.000	0.001	7.619
Log (C:\alogluns\log7)	0.000	0.000	0.000	0.001	7.561
Log (C:\alogluns\log8)	0.000	0.000	0.000	0.001	7.490
Log (C:\alogluns\log9)	0.000	0.000	0.000	0.001	10.037
Log (C:\alogluns\log10)	0.000	0.000	0.000	0.001	4.787
Log (C:\alogluns\log11)	0.000	0.000	0.000	0.001	7.080
Log (C:\alogluns\log12)	0.000	0.000	0.000	0.001	4.315
Log (C:\alogluns\log13)	0.000	0.000	0.000	0.001	7.530
Log (C:\alogluns\log14)	0.000	0.000	0.000	0.001	4.876
Log (C:\alogluns\log15)	0.000	0.000	0.000	0.001	7.530
Log (C:\alogluns\log16)	0.000	0.000	0.000	0.001	7.110
Log (C:\alogluns\log17)	0.000	0.000	0.000	0.001	4.876
Log (C:\alogluns\log18)	0.000	0.000	0.000	0.001	7.527
Log (C:\alogluns\log19)	0.000	0.000	0.000	0.001	4.876
Log (C:\alogluns\log20)	0.000	0.000	0.000	0.001	7.403
Log (C:\alogluns\log21)	0.000	0.000	0.000	0.001	4.787
Log (C:\alogluns\log22)	0.000	0.000	0.000	0.001	7.335
Log (C:\alogluns\log23)	0.000	0.000	0.000	0.001	7.619
Log (C:\alogluns\log24)	0.000	0.000	0.000	0.001	10.271
Log (C:\alogluns\log25)	0.000	0.000	0.000	0.001	10.147
Log (C:\alogluns\log26)	0.000	0.000	0.000	0.001	4.876
Log (C:\alogluns\log27)	0.000	0.000	0.000	0.001	7.335
Log (C:\alogluns\log28)	0.000	0.000	0.000	0.001	7.212
Log (C:\alogluns\log29)	0.000	0.000	0.000	0.001	10.193
Log (C:\alogluns\log30)	0.000	0.000	0.000	0.001	7.561
Log (C:\alogluns\log31)	0.000	0.000	0.000	0.001	4.087
Log (C:\alogluns\log32)	0.000	0.000	0.000	0.001	4.787
Log (C:\alogluns\log33)	0.000	0.000	0.000	0.001	7.619
Log (C:\alogluns\log34)	0.000	0.000	0.000	0.001	7.591
Log (C:\alogluns\log35)	0.000	0.000	0.000	0.001	10.304
Log (C:\alogluns\log36)	0.000	0.000	0.000	0.001	7.453
Log (C:\alogluns\log37)	0.000	0.000	0.000	0.001	10.095
Log (C:\alogluns\log38)	0.000	0.000	0.000	0.001	7.430
Log (C:\alogluns\log39)	0.000	0.000	0.000	0.001	7.403
Log (C:\alogluns\log40)	0.000	0.000	0.000	0.001	10.234
Log (C:\alogluns\log41)	0.000	0.000	0.000	0.001	9.956

Log (C:\alogluns\log42)	0.000	0.000	0.000	0.001	7.352
Log (C:\alogluns\log43)	0.000	0.000	0.000	0.001	7.500
Log (C:\alogluns\log44)	0.000	0.000	0.000	0.001	7.619
Log (C:\alogluns\log45)	0.000	0.000	0.000	0.001	7.561
Log (C:\alogluns\log46)	0.000	0.000	0.000	0.001	4.876
Log (C:\alogluns\log47)	0.000	0.000	0.000	0.001	7.572
Log (C:\alogluns\log48)	0.000	0.000	0.000	0.001	7.110

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.410	0.120	0.898
Available MBytes	30659.943	30557.000	30755.000
Free System Page Table Entries	33565420.102	33565075.000	33565778.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	127791131.416	127787008.000	127832064.000
Pool Paged Bytes	233856782.736	232493056.000	235134976.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

```

11/3/2009 7:34:07 AM -- Jetstress testing begins ...
11/3/2009 7:34:07 AM -- Prepare testing begins ...
11/3/2009 7:34:56 AM -- Attaching databases ...
11/3/2009 7:34:56 AM -- Prepare testing ends.
11/3/2009 7:35:50 AM -- Performance logging begins (interval: 30000 ms).
11/3/2009 7:35:50 AM -- Streaming backup databases ...
11/3/2009 8:04:58 PM -- Performance logging ends.
11/3/2009 8:04:58 PM -- Instance4564.1 (100% processed), Instance4564.2 (100%
processed), Instance4564.3 (100% processed), Instance4564.4 (100% processed),
Instance4564.5 (100% processed), Instance4564.6 (100% processed), Instance4564.7
(100% processed), Instance4564.8 (100% processed), Instance4564.9 (100% processed),
Instance4564.10 (100% processed), Instance4564.11 (100% processed), Instance4564.12
(100% processed), Instance4564.13 (100% processed), Instance4564.14 (100%
processed), Instance4564.15 (100% processed), Instance4564.16 (100% processed),
Instance4564.17 (100% processed), Instance4564.18 (100% processed), Instance4564.19
(100% processed), Instance4564.20 (100% processed), Instance4564.21 (100%
processed), Instance4564.22 (100% processed), Instance4564.23 (100% processed),
Instance4564.24 (100% processed), Instance4564.25 (100% processed), Instance4564.26
(100% processed), Instance4564.27 (100% processed), Instance4564.28 (100%
processed), Instance4564.29 (100% processed), Instance4564.30 (100% processed),
Instance4564.31 (100% processed), Instance4564.32 (100% processed), Instance4564.33
(100% processed), Instance4564.34 (100% processed), Instance4564.35 (100%
processed), Instance4564.36 (100% processed), Instance4564.37 (100% processed),
Instance4564.38 (100% processed), Instance4564.39 (100% processed), Instance4564.40
(100% processed), Instance4564.41 (100% processed), Instance4564.42 (100%
processed), Instance4564.43 (100% processed), Instance4564.44 (100% processed),
Instance4564.45 (100% processed), Instance4564.46 (100% processed), Instance4564.47
(100% processed), and Instance4564.48 (100% processed)
11/3/2009 8:04:58 PM -- C:\ESRP HDP_500MB\Final\Streaming Backup
Test\StreamingBackup_2009_11_3_7_34_56.blg has 1494 samples.

```

Soft Recovery Test Result: SUN141

Soft Recovery Statistics - All

<i>Database Instance</i>	<i>Log files replayed</i>	<i>Elapsed seconds</i>
Instance5836.1	507	4981.2991312
Instance5836.2	500	4904.1254365
Instance5836.3	511	4948.4141204
Instance5836.4	509	4948.4141204
Instance5836.5	510	4803.0835888
Instance5836.6	514	4883.7049056
Instance5836.7	505	4832.7861792
Instance5836.8	512	4866.2015934
Instance5836.9	511	4909.1642688
Instance5836.10	505	4872.3012325
Instance5836.11	515	4911.8162858
Instance5836.12	508	4903.8602348
Instance5836.13	517	4857.1847356
Instance5836.14	506	4807.8572194
Instance5836.15	514	4887.9481328
Instance5836.16	505	4813.6916568
Instance5836.17	517	4977.5863074
Instance5836.18	509	4972.8126768
Instance5836.19	516	4975.4646938
Instance5836.20	514	4974.403887
Instance5836.21	511	4830.1341622
Instance5836.22	519	4892.4565617
Instance5836.23	516	4884.5005107
Instance5836.24	511	4841.0074319
Instance5836.25	521	4934.0932286
Instance5836.26	511	4923.2199589
Instance5836.27	504	4900.9430161
Instance5836.28	506	4894.5781753
Instance5836.29	508	4858.5107441
Instance5836.30	500	4809.7136313
Instance5836.31	513	4866.7319968
Instance5836.32	516	4892.7217634
Instance5836.33	513	4972.0170717
Instance5836.34	518	4975.1994921
Instance5836.35	512	4979.707921

Instance5836.36	514	4966.7130377
Instance5836.37	518	4883.4397039
Instance5836.38	502	4756.1428879
Instance5836.39	504	4795.1275378
Instance5836.40	516	4846.3114659
Instance5836.41	506	4896.4345872
Instance5836.42	503	4900.9430161
Instance5836.43	500	4863.5495764
Instance5836.44	503	4896.1693855
Instance5836.45	507	4875.7488546
Instance5836.46	507	4853.7371135
Instance5836.47	514	4884.5005107
Instance5836.48	501	4812.3656483

Disk Subsystem Performance

<i>Logical Disk</i>	<i>Avg. Disk sec/Read</i>	<i>Avg. Disk sec/Write</i>	<i>Disk Reads/sec</i>	<i>Disk Writes/sec</i>	<i>Avg. Disk Bytes/Write</i>
Database (C:\asgluns\sg1)	0.204	0.048	52.750	1.352	(n/a)
Database (C:\asgluns\sg2)	0.159	0.041	52.888	1.345	(n/a)
Database (C:\asgluns\sg3)	0.164	0.039	52.889	1.367	(n/a)
Database (C:\asgluns\sg4)	0.156	0.040	52.684	1.362	(n/a)
Database (C:\asgluns\sg5)	0.145	0.040	52.905	1.360	(n/a)
Database (C:\asgluns\sg6)	0.140	0.032	53.177	1.365	(n/a)
Database (C:\asgluns\sg7)	0.130	0.030	53.090	1.350	(n/a)
Database (C:\asgluns\sg8)	0.130	0.033	54.158	1.362	(n/a)
Database (C:\asgluns\sg9)	0.145	0.043	52.723	1.365	(n/a)
Database (C:\asgluns\sg10)	0.150	0.033	53.062	1.355	(n/a)
Database (C:\asgluns\sg11)	0.156	0.033	53.960	1.375	(n/a)
Database (C:\asgluns\sg12)	0.159	0.033	53.872	1.357	(n/a)
Database (C:\asgluns\sg13)	0.142	0.036	54.329	1.373	(n/a)

Database (C:\asgluns\sg14)	0.137	0.031	53.965	1.349	(n/a)
Database (C:\asgluns\sg15)	0.139	0.030	54.005	1.370	(n/a)
Database (C:\asgluns\sg16)	0.140	0.029	52.583	1.347	(n/a)
Database (C:\asgluns\sg17)	0.178	0.048	54.136	1.384	(n/a)
Database (C:\asgluns\sg18)	0.171	0.041	53.670	1.368	(n/a)
Database (C:\asgluns\sg19)	0.159	0.038	53.826	1.378	(n/a)
Database (C:\asgluns\sg20)	0.164	0.037	53.518	1.372	(n/a)
Database (C:\asgluns\sg21)	0.133	0.035	52.833	1.359	(n/a)
Database (C:\asgluns\sg22)	0.146	0.029	54.560	1.380	(n/a)
Database (C:\asgluns\sg23)	0.152	0.030	54.850	1.370	(n/a)
Database (C:\asgluns\sg24)	0.137	0.029	52.599	1.355	(n/a)
Database (C:\asgluns\sg25)	0.156	0.038	53.477	1.385	(n/a)
Database (C:\asgluns\sg26)	0.153	0.031	53.847	1.365	(n/a)
Database (C:\asgluns\sg27)	0.168	0.031	52.718	1.348	(n/a)
Database (C:\asgluns\sg28)	0.160	0.030	53.672	1.355	(n/a)
Database (C:\asgluns\sg29)	0.137	0.035	53.742	1.352	(n/a)
Database (C:\asgluns\sg30)	0.136	0.033	53.368	1.338	(n/a)
Database (C:\asgluns\sg31)	0.135	0.030	53.725	1.365	(n/a)
Database (C:\asgluns\sg32)	0.136	0.029	53.536	1.375	(n/a)
Database (C:\asgluns\sg33)	0.172	0.042	53.762	1.380	(n/a)
Database (C:\asgluns\sg34)	0.166	0.038	53.525	1.383	(n/a)
Database (C:\asgluns\sg35)	0.168	0.035	53.831	1.375	(n/a)
Database (C:\asgluns\sg36)	0.169	0.035	52.870	1.378	(n/a)
Database	0.128	0.031	53.624	1.373	(n/a)

(C:\asgluns\sg37)					
Database (C:\asgluns\sg38)	0.128	0.029	52.737	1.337	(n/a)
Database (C:\asgluns\sg39)	0.145	0.029	52.823	1.345	(n/a)
Database (C:\asgluns\sg40)	0.130	0.027	53.706	1.371	(n/a)
Database (C:\asgluns\sg41)	0.158	0.036	53.134	1.351	(n/a)
Database (C:\asgluns\sg42)	0.152	0.032	53.151	1.346	(n/a)
Database (C:\asgluns\sg43)	0.147	0.031	52.814	1.347	(n/a)
Database (C:\asgluns\sg44)	0.155	0.028	53.040	1.349	(n/a)
Database (C:\asgluns\sg45)	0.136	0.034	53.044	1.362	(n/a)
Database (C:\asgluns\sg46)	0.124	0.029	53.155	1.356	(n/a)
Database (C:\asgluns\sg47)	0.134	0.026	53.908	1.371	(n/a)
Database (C:\asgluns\sg48)	0.132	0.028	52.811	1.341	(n/a)
Log (C:\alogluns\log1)	0.055	0.000	3.357	0.002	11.235
Log (C:\alogluns\log2)	0.050	0.001	3.316	0.009	31.365
Log (C:\alogluns\log3)	0.052	0.000	3.389	0.007	22.961
Log (C:\alogluns\log4)	0.051	0.000	3.377	0.007	22.716
Log (C:\alogluns\log5)	0.046	0.000	3.382	0.009	36.886
Log (C:\alogluns\log6)	0.048	0.000	3.409	0.008	25.379
Log (C:\alogluns\log7)	0.049	0.000	3.348	0.010	37.136
Log (C:\alogluns\log8)	0.046	0.000	3.395	0.009	31.522
Log (C:\alogluns\log9)	0.048	0.000	3.390	0.008	27.721
Log (C:\alogluns\log10)	0.049	0.000	3.349	0.009	32.866
Log (C:\alogluns\log11)	0.051	0.000	3.416	0.008	21.125
Log (C:\alogluns\log12)	0.048	0.000	3.369	0.008	31.235
Log (C:\alogluns\log13)	0.046	0.000	3.428	0.008	33.129
Log (C:\alogluns\log14)	0.047	0.000	3.355	0.010	41.218
Log (C:\alogluns\log15)	0.048	0.000	3.410	0.008	34.546
Log (C:\alogluns\log16)	0.048	0.000	3.349	0.009	33.783
Log (C:\alogluns\log17)	0.056	0.000	3.429	0.007	19.304
Log (C:\alogluns\log18)	0.055	0.000	3.376	0.007	24.938
Log (C:\alogluns\log19)	0.057	0.000	3.423	0.007	21.476

Log (C:\alogluns\log20)	0.056	0.000	3.409	0.007	22.618
Log (C:\alogluns\log21)	0.046	0.000	3.389	0.010	41.987
Log (C:\alogluns\log22)	0.047	0.000	3.442	0.009	31.130
Log (C:\alogluns\log23)	0.049	0.000	3.423	0.008	37.626
Log (C:\alogluns\log24)	0.047	0.000	3.389	0.009	37.017
Log (C:\alogluns\log25)	0.054	0.000	3.456	0.008	29.385
Log (C:\alogluns\log26)	0.051	0.000	3.389	0.008	37.761
Log (C:\alogluns\log27)	0.050	0.000	3.343	0.009	38.032
Log (C:\alogluns\log28)	0.054	0.000	3.356	0.009	36.086
Log (C:\alogluns\log29)	0.049	0.000	3.369	0.010	40.147
Log (C:\alogluns\log30)	0.047	0.000	3.316	0.011	42.243
Log (C:\alogluns\log31)	0.048	0.000	3.402	0.009	34.588
Log (C:\alogluns\log32)	0.047	0.000	3.422	0.008	26.759
Log (C:\alogluns\log33)	0.052	0.000	3.403	0.007	21.479
Log (C:\alogluns\log34)	0.055	0.000	3.436	0.007	18.078
Log (C:\alogluns\log35)	0.057	0.000	3.396	0.006	14.662
Log (C:\alogluns\log36)	0.056	0.000	3.409	0.008	26.024
Log (C:\alogluns\log37)	0.049	0.000	3.435	0.009	30.374
Log (C:\alogluns\log38)	0.045	0.000	3.329	0.011	42.520
Log (C:\alogluns\log39)	0.047	0.000	3.342	0.010	43.556
Log (C:\alogluns\log40)	0.048	0.000	3.422	0.010	39.167
Log (C:\alogluns\log41)	0.050	0.000	3.356	0.008	31.986
Log (C:\alogluns\log42)	0.052	0.000	3.336	0.010	36.691
Log (C:\alogluns\log43)	0.050	0.000	3.316	0.010	40.314
Log (C:\alogluns\log44)	0.050	0.000	3.336	0.009	34.889
Log (C:\alogluns\log45)	0.048	0.000	3.362	0.008	29.268
Log (C:\alogluns\log46)	0.049	0.000	3.362	0.009	29.016
Log (C:\alogluns\log47)	0.052	0.000	3.409	0.008	30.881
Log (C:\alogluns\log48)	0.050	0.000	3.323	0.010	36.898

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	1.343	0.000	9.681
Available MBytes	19443.296	17840.000	30486.000
Free System Page Table Entries	33564371.430	33563944.000	33564460.000
Transition Pages RePurposed/sec	77.131	0.000	2611.057
Pool Nonpaged Bytes	139880186.125	127795200.000	142651392.000
Pool Paged Bytes	229387898.544	228675584.000	230961152.000

Database Page Fault Stalls/sec	0.000	0.000	0.000
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Test Log

11/3/2009 8:39:36 PM -- Jetstress testing begins ...
11/3/2009 8:39:36 PM -- Prepare testing begins ...
11/3/2009 8:40:25 PM -- Attaching databases ...
11/3/2009 8:40:25 PM -- Prepare testing ends.
11/3/2009 8:40:25 PM -- Dispatching transactions begins ...
11/3/2009 8:40:25 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0 GB)
11/3/2009 8:40:25 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8 MB)
11/3/2009 8:41:17 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
11/3/2009 8:41:17 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
11/3/2009 8:41:22 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
11/3/2009 8:41:22 PM -- Performance logging begins (interval: 15000 ms).
11/3/2009 8:41:22 PM -- Generating log files ...
11/4/2009 5:32:17 AM -- C:\alogluns\log1 (101.6% generated), C:\alogluns\log2 (100.2% generated), C:\alogluns\log3 (102.4% generated), C:\alogluns\log4 (102.0% generated), C:\alogluns\log5 (102.2% generated), C:\alogluns\log6 (103.0% generated), C:\alogluns\log7 (101.2% generated), C:\alogluns\log8 (102.6% generated), C:\alogluns\log9 (102.4% generated), C:\alogluns\log10 (101.2% generated), C:\alogluns\log11 (103.2% generated), C:\alogluns\log12 (101.8% generated), C:\alogluns\log13 (103.6% generated), C:\alogluns\log14 (101.4% generated), C:\alogluns\log15 (103.0% generated), C:\alogluns\log16 (101.2% generated), C:\alogluns\log17 (103.6% generated), C:\alogluns\log18 (102.0% generated), C:\alogluns\log19 (103.4% generated), C:\alogluns\log20 (103.0% generated), C:\alogluns\log21 (102.4% generated), C:\alogluns\log22 (104.0% generated), C:\alogluns\log23 (103.4% generated), C:\alogluns\log24 (102.4% generated), C:\alogluns\log25 (104.4% generated), C:\alogluns\log26 (102.4% generated), C:\alogluns\log27 (101.0% generated), C:\alogluns\log28 (101.4% generated), C:\alogluns\log29 (101.6% generated), C:\alogluns\log30 (100.2% generated), C:\alogluns\log31 (102.8% generated), C:\alogluns\log32 (103.4% generated), C:\alogluns\log33 (102.8% generated), C:\alogluns\log34 (103.8% generated), C:\alogluns\log35 (102.6% generated), C:\alogluns\log36 (103.0% generated), C:\alogluns\log37 (103.8% generated), C:\alogluns\log38 (100.6% generated), C:\alogluns\log39 (101.0% generated), C:\alogluns\log40 (103.4% generated), C:\alogluns\log41 (101.4% generated), C:\alogluns\log42 (100.8% generated), C:\alogluns\log43 (100.2% generated), C:\alogluns\log44 (100.8% generated), C:\alogluns\log45 (101.6% generated), C:\alogluns\log46 (101.6% generated), C:\alogluns\log47 (103.0% generated), and C:\alogluns\log48 (100.4% generated)
11/4/2009 5:32:17 AM -- Performance logging ends.
11/4/2009 5:32:17 AM -- JetInterop batch transaction stats: 12953, 12958, 13159, 13047, 13095, 13171, 13134, 13274, 12988, 13034, 13237, 13122, 13337, 13265, 13287, 13079, 13312, 13193, 13255, 13239, 13055, 13261, 13314, 13019, 13174, 13200, 13053, 13261, 13234, 13041, 13300, 13255, 13345, 13315, 13195, 13068, 13249, 13171, 13146, 13282, 13067, 13095, 12964, 13053, 13212, 13054, 13259, and 13127.
11/4/2009 5:32:18 AM -- Dispatching transactions ends.
11/4/2009 5:32:18 AM -- Shutting down databases ...
11/4/2009 5:32:27 AM -- Instance5836.1 (complete), Instance5836.2 (complete), Instance5836.3 (complete), Instance5836.4 (complete), Instance5836.5 (complete), Instance5836.6 (complete), Instance5836.7 (complete), Instance5836.8 (complete), Instance5836.9 (complete), Instance5836.10 (complete), Instance5836.11 (complete), Instance5836.12 (complete), Instance5836.13 (complete), Instance5836.14 (complete), Instance5836.15 (complete), Instance5836.16 (complete), Instance5836.17 (complete), Instance5836.18 (complete), Instance5836.19 (complete), Instance5836.20 (complete), Instance5836.21 (complete), Instance5836.22 (complete), Instance5836.23 (complete), Instance5836.24 (complete), Instance5836.25 (complete), Instance5836.26 (complete), Instance5836.27 (complete), Instance5836.28 (complete), Instance5836.29 (complete), Instance5836.30 (complete), Instance5836.31 (complete), Instance5836.32 (complete), Instance5836.33 (complete), Instance5836.34 (complete), Instance5836.35 (complete),

11/4/2009 5:34:14 AM -- Volume C:\alogluns\log30 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log31 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log31 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log32 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log32 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log33 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log33 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log34 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log34 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log35 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log35 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log36 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log36 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log37 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log37 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log38 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log38 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log39 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log39 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log40 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log40 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log41 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log41 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log42 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log42 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log43 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log43 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log44 has 0.0019 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log44 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log45 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log45 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log46 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log46 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log47 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log47 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log48 has 0.0020 for Avg. Disk sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log48 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
11/4/2009 5:34:15 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
11/4/2009 5:34:15 AM -- C:\ESRP HDP_500MB\Final\5000 users\Softrecovery Test\Performance_2009_11_3_20_41_17.xml has 2112 samples queried.
11/4/2009 5:34:15 AM -- C:\ESRP HDP_500MB\Final\5000 users\Softrecovery Test\Performance_2009_11_3_20_41_17.html is saved.
11/4/2009 6:43:03 AM -- Performance logging begins (interval: 4000 ms).
11/4/2009 6:43:03 AM -- Recovering databases ...
11/4/2009 8:06:04 AM -- Performance logging ends.
11/4/2009 8:06:04 AM -- Instance5836.1 (4981.2991312), Instance5836.2 (4904.1254365), Instance5836.3 (4948.4141204), Instance5836.4 (4948.4141204), Instance5836.5 (4803.0835888), Instance5836.6 (4883.7049056), Instance5836.7

(4832.7861792), Instance5836.8 (4866.2015934), Instance5836.9 (4909.1642688), Instance5836.10 (4872.3012325), Instance5836.11 (4911.8162858), Instance5836.12 (4903.8602348), Instance5836.13 (4857.1847356), Instance5836.14 (4807.8572194), Instance5836.15 (4887.9481328), Instance5836.16 (4813.6916568), Instance5836.17 (4977.5863074), Instance5836.18 (4972.8126768), Instance5836.19 (4975.4646938), Instance5836.20 (4974.403887), Instance5836.21 (4830.1341622), Instance5836.22 (4892.4565617), Instance5836.23 (4884.5005107), Instance5836.24 (4841.0074319), Instance5836.25 (4934.0932286), Instance5836.26 (4923.2199589), Instance5836.27 (4900.9430161), Instance5836.28 (4894.5781753), Instance5836.29 (4858.5107441), Instance5836.30 (4809.7136313), Instance5836.31 (4866.7319968), Instance5836.32 (4892.7217634), Instance5836.33 (4972.0170717), Instance5836.34 (4975.1994921), Instance5836.35 (4979.707921), Instance5836.36 (4966.7130377), Instance5836.37 (4883.4397039), Instance5836.38 (4756.1428879), Instance5836.39 (4795.1275378), Instance5836.40 (4846.3114659), Instance5836.41 (4896.4345872), Instance5836.42 (4900.9430161), Instance5836.43 (4863.5495764), Instance5836.44 (4896.1693855), Instance5836.45 (4875.7488546), Instance5836.46 (4853.7371135), Instance5836.47 (4884.5005107), and Instance5836.48 (4812.3656483)
 11/4/2009 8:06:06 AM -- C:\ESRP HDP_500MB\Final\5000 users\Softrecovery Test\SoftRecovery_2009_11_4_6_42_41.blg has 1220 samples.
 11/4/2009 8:06:06 AM -- Creating test report ...

Soft Recovery Test Performance Result: SUN141

Test Summary

Overall Test Result	Pass
Machine Name	SUN141
Test Description	
Test Start Time	11/3/2009 8:39:36 PM
Test End Time	11/4/2009 5:32:27 AM
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:\ESRP HDP_500MB\Final\5000 users\Softrecovery Test\Performance_2009_11_3_20_41_17.blg

Database Sizing and Throughput

Achieved I/O per Second	1164.301
Capacity Percentage	100%
Throughput Percentage	100%
Initial database size	2811912519680
Final database size	2827213340672
Database files (count)	48

Jetstress System Parameters

Thread count	2 (per storage group)
Log buffers	9000
Minimum database cache	1536.0 MB
Maximum database cache	12288.0 MB
Insert operations	40%

Delete operations	30%
Replace operations	5%
Read operations	25%
Lazy commits	55%

Disk Subsystem Performance

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Database (C:\asgluns\sg1)	0.009	0.004	13.296	10.549	(n/a)
Database (C:\asgluns\sg2)	0.009	0.004	13.477	10.606	(n/a)
Database (C:\asgluns\sg3)	0.009	0.004	13.378	10.648	(n/a)
Database (C:\asgluns\sg4)	0.009	0.004	13.449	10.585	(n/a)
Database (C:\asgluns\sg5)	0.009	0.004	13.431	10.655	(n/a)
Database (C:\asgluns\sg6)	0.009	0.004	13.427	10.664	(n/a)
Database (C:\asgluns\sg7)	0.009	0.004	13.449	10.617	(n/a)
Database (C:\asgluns\sg8)	0.009	0.004	13.748	10.928	(n/a)
Database (C:\asgluns\sg9)	0.009	0.004	13.355	10.660	(n/a)
Database (C:\asgluns\sg10)	0.009	0.004	13.484	10.657	(n/a)
Database (C:\asgluns\sg11)	0.009	0.004	13.587	10.804	(n/a)
Database (C:\asgluns\sg12)	0.009	0.004	13.558	10.806	(n/a)
Database (C:\asgluns\sg13)	0.009	0.004	13.714	10.897	(n/a)
Database (C:\asgluns\sg14)	0.009	0.004	13.780	10.881	(n/a)
Database (C:\asgluns\sg15)	0.009	0.004	13.714	10.859	(n/a)
Database (C:\asgluns\sg16)	0.009	0.004	13.396	10.549	(n/a)
Database (C:\asgluns\sg17)	0.009	0.004	13.687	10.884	(n/a)
Database (C:\asgluns\sg18)	0.009	0.004	13.610	10.702	(n/a)
Database	0.009	0.004	13.555	10.825	(n/a)

(C:\asgluns\sg19)					
Database (C:\asgluns\sg20)	0.009	0.004	13.569	10.795	(n/a)
Database (C:\asgluns\sg21)	0.009	0.004	13.313	10.528	(n/a)
Database (C:\asgluns\sg22)	0.009	0.004	13.759	10.963	(n/a)
Database (C:\asgluns\sg23)	0.009	0.004	13.805	11.011	(n/a)
Database (C:\asgluns\sg24)	0.009	0.004	13.257	10.536	(n/a)
Database (C:\asgluns\sg25)	0.009	0.004	13.354	10.719	(n/a)
Database (C:\asgluns\sg26)	0.009	0.004	13.580	10.742	(n/a)
Database (C:\asgluns\sg27)	0.009	0.004	13.363	10.582	(n/a)
Database (C:\asgluns\sg28)	0.009	0.004	13.756	10.730	(n/a)
Database (C:\asgluns\sg29)	0.009	0.004	13.692	10.839	(n/a)
Database (C:\asgluns\sg30)	0.009	0.004	13.509	10.642	(n/a)
Database (C:\asgluns\sg31)	0.009	0.004	13.641	10.819	(n/a)
Database (C:\asgluns\sg32)	0.009	0.004	13.549	10.772	(n/a)
Database (C:\asgluns\sg33)	0.009	0.004	13.687	10.839	(n/a)
Database (C:\asgluns\sg34)	0.009	0.004	13.599	10.813	(n/a)
Database (C:\asgluns\sg35)	0.009	0.004	13.566	10.812	(n/a)
Database (C:\asgluns\sg36)	0.009	0.004	13.377	10.649	(n/a)
Database (C:\asgluns\sg37)	0.009	0.004	13.509	10.781	(n/a)
Database (C:\asgluns\sg38)	0.009	0.004	13.462	10.568	(n/a)
Database (C:\asgluns\sg39)	0.009	0.004	13.485	10.603	(n/a)
Database (C:\asgluns\sg40)	0.009	0.004	13.654	10.847	(n/a)
Database (C:\asgluns\sg41)	0.009	0.004	13.466	10.686	(n/a)
Database (C:\asgluns\sg42)	0.009	0.004	13.509	10.686	(n/a)

Database (C:\asgluns\sg43)	0.009	0.004	13.439	10.570	(n/a)
Database (C:\asgluns\sg44)	0.009	0.004	13.488	10.696	(n/a)
Database (C:\asgluns\sg45)	0.009	0.004	13.517	10.676	(n/a)
Database (C:\asgluns\sg46)	0.009	0.004	13.435	10.641	(n/a)
Database (C:\asgluns\sg47)	0.009	0.004	13.594	10.854	(n/a)
Database (C:\asgluns\sg48)	0.009	0.004	13.518	10.584	(n/a)
Log (C:\alogluns\log1)	0.000	0.002	0.000	8.534	4099.837
Log (C:\alogluns\log2)	0.000	0.002	0.000	8.450	4099.387
Log (C:\alogluns\log3)	0.000	0.002	0.000	8.528	4117.221
Log (C:\alogluns\log4)	0.000	0.002	0.000	8.557	4075.139
Log (C:\alogluns\log5)	0.000	0.002	0.000	8.505	4068.234
Log (C:\alogluns\log6)	0.000	0.002	0.000	8.587	4117.326
Log (C:\alogluns\log7)	0.000	0.002	0.000	8.493	4085.655
Log (C:\alogluns\log8)	0.000	0.002	0.000	8.674	4033.987
Log (C:\alogluns\log9)	0.000	0.002	0.000	8.537	4120.169
Log (C:\alogluns\log10)	0.000	0.002	0.000	8.533	4049.027
Log (C:\alogluns\log11)	0.000	0.002	0.000	8.653	4108.270
Log (C:\alogluns\log12)	0.000	0.002	0.000	8.631	4053.390
Log (C:\alogluns\log13)	0.000	0.002	0.000	8.665	4097.644
Log (C:\alogluns\log14)	0.000	0.002	0.000	8.573	4050.511
Log (C:\alogluns\log15)	0.000	0.002	0.000	8.669	4129.950
Log (C:\alogluns\log16)	0.000	0.002	0.000	8.431	4105.176
Log (C:\alogluns\log17)	0.000	0.002	0.000	8.686	4123.319
Log (C:\alogluns\log18)	0.000	0.002	0.000	8.569	4053.631
Log (C:\alogluns\log19)	0.000	0.002	0.000	8.648	4061.827
Log (C:\alogluns\log20)	0.000	0.002	0.000	8.614	4060.061
Log (C:\alogluns\log21)	0.000	0.002	0.000	8.459	4175.699
Log (C:\alogluns\log22)	0.000	0.002	0.000	8.694	4060.947
Log (C:\alogluns\log23)	0.000	0.002	0.000	8.723	4075.443
Log (C:\alogluns\log24)	0.000	0.002	0.000	8.536	4108.170
Log (C:\alogluns\log25)	0.000	0.002	0.000	8.672	4124.622
Log (C:\alogluns\log26)	0.000	0.002	0.000	8.591	4063.293
Log (C:\alogluns\log27)	0.000	0.002	0.000	8.454	4023.301
Log (C:\alogluns\log28)	0.000	0.002	0.000	8.528	4056.318

Log (C:\alogluns\log29)	0.000	0.002	0.000	8.531	4102.073
Log (C:\alogluns\log30)	0.000	0.002	0.000	8.462	3976.547
Log (C:\alogluns\log31)	0.000	0.002	0.000	8.585	4169.253
Log (C:\alogluns\log32)	0.000	0.002	0.000	8.614	4110.125
Log (C:\alogluns\log33)	0.000	0.002	0.000	8.629	4095.752
Log (C:\alogluns\log34)	0.000	0.002	0.000	8.620	4089.996
Log (C:\alogluns\log35)	0.000	0.002	0.000	8.608	4100.487
Log (C:\alogluns\log36)	0.000	0.002	0.000	8.599	4091.063
Log (C:\alogluns\log37)	0.000	0.002	0.000	8.623	4156.996
Log (C:\alogluns\log38)	0.000	0.002	0.000	8.452	4079.916
Log (C:\alogluns\log39)	0.000	0.002	0.000	8.484	4046.299
Log (C:\alogluns\log40)	0.000	0.002	0.000	8.620	4102.287
Log (C:\alogluns\log41)	0.000	0.002	0.000	8.491	4129.365
Log (C:\alogluns\log42)	0.000	0.002	0.000	8.464	4097.607
Log (C:\alogluns\log43)	0.000	0.002	0.000	8.394	4069.114
Log (C:\alogluns\log44)	0.000	0.002	0.000	8.484	4034.348
Log (C:\alogluns\log45)	0.000	0.002	0.000	8.486	4102.125
Log (C:\alogluns\log46)	0.000	0.002	0.000	8.478	4114.677
Log (C:\alogluns\log47)	0.000	0.002	0.000	8.603	4059.999
Log (C:\alogluns\log48)	0.000	0.002	0.000	8.409	4013.148

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	1.484	0.459	7.609
Available MBytes	18852.632	17772.000	30425.000
Free System Page Table Entries	33563885.311	33563340.000	33564400.000
Transition Pages RePurposed/sec	18.116	0.000	1200.574
Pool Nonpaged Bytes	127781874.915	127778816.000	127799296.000
Pool Paged Bytes	227846573.372	226029568.000	235040768.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

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11/3/2009 8:39:36 PM -- Jetstress testing begins ...
11/3/2009 8:39:36 PM -- Prepare testing begins ...
11/3/2009 8:40:25 PM -- Attaching databases ...
11/3/2009 8:40:25 PM -- Prepare testing ends.
11/3/2009 8:40:25 PM -- Dispatching transactions begins ...
11/3/2009 8:40:25 PM -- Database cache settings: (minimum: 1.5 GB, maximum: 12.0
GB)
11/3/2009 8:40:25 PM -- Database flush thresholds: (start: 122.9 MB, stop: 245.8
MB)
11/3/2009 8:41:17 PM -- Database read latency thresholds: (average: 0.02
seconds/read, maximum: 0.05 seconds/read).

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11/3/2009 8:41:17 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

11/3/2009 8:41:22 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

11/3/2009 8:41:22 PM -- Performance logging begins (interval: 15000 ms).

11/3/2009 8:41:22 PM -- Generating log files ...

11/4/2009 5:32:17 AM -- C:\alogluns\log1 (101.6% generated), C:\alogluns\log2 (100.2% generated), C:\alogluns\log3 (102.4% generated), C:\alogluns\log4 (102.0% generated), C:\alogluns\log5 (102.2% generated), C:\alogluns\log6 (103.0% generated), C:\alogluns\log7 (101.2% generated), C:\alogluns\log8 (102.6% generated), C:\alogluns\log9 (102.4% generated), C:\alogluns\log10 (101.2% generated), C:\alogluns\log11 (103.2% generated), C:\alogluns\log12 (101.8% generated), C:\alogluns\log13 (103.6% generated), C:\alogluns\log14 (101.4% generated), C:\alogluns\log15 (103.0% generated), C:\alogluns\log16 (101.2% generated), C:\alogluns\log17 (103.6% generated), C:\alogluns\log18 (102.0% generated), C:\alogluns\log19 (103.4% generated), C:\alogluns\log20 (103.0% generated), C:\alogluns\log21 (102.4% generated), C:\alogluns\log22 (104.0% generated), C:\alogluns\log23 (103.4% generated), C:\alogluns\log24 (102.4% generated), C:\alogluns\log25 (104.4% generated), C:\alogluns\log26 (102.4% generated), C:\alogluns\log27 (101.0% generated), C:\alogluns\log28 (101.4% generated), C:\alogluns\log29 (101.6% generated), C:\alogluns\log30 (100.2% generated), C:\alogluns\log31 (102.8% generated), C:\alogluns\log32 (103.4% generated), C:\alogluns\log33 (102.8% generated), C:\alogluns\log34 (103.8% generated), C:\alogluns\log35 (102.6% generated), C:\alogluns\log36 (103.0% generated), C:\alogluns\log37 (103.8% generated), C:\alogluns\log38 (100.6% generated), C:\alogluns\log39 (101.0% generated), C:\alogluns\log40 (103.4% generated), C:\alogluns\log41 (101.4% generated), C:\alogluns\log42 (100.8% generated), C:\alogluns\log43 (100.2% generated), C:\alogluns\log44 (100.8% generated), C:\alogluns\log45 (101.6% generated), C:\alogluns\log46 (101.6% generated), C:\alogluns\log47 (103.0% generated), and C:\alogluns\log48 (100.4% generated)

11/4/2009 5:32:17 AM -- Performance logging ends.

11/4/2009 5:32:17 AM -- JetInterop batch transaction stats: 12953, 12958, 13159, 13047, 13095, 13171, 13134, 13274, 12988, 13034, 13237, 13122, 13337, 13265, 13287, 13079, 13312, 13193, 13255, 13239, 13055, 13261, 13314, 13019, 13174, 13200, 13053, 13261, 13234, 13041, 13300, 13255, 13345, 13315, 13195, 13068, 13249, 13171, 13146, 13282, 13067, 13095, 12964, 13053, 13212, 13054, 13259, and 13127.

11/4/2009 5:32:18 AM -- Dispatching down transactions ends.

11/4/2009 5:32:18 AM -- Shutting down databases ...

11/4/2009 5:32:27 AM -- Instance5836.1 (complete), Instance5836.2 (complete), Instance5836.3 (complete), Instance5836.4 (complete), Instance5836.5 (complete), Instance5836.6 (complete), Instance5836.7 (complete), Instance5836.8 (complete), Instance5836.9 (complete), Instance5836.10 (complete), Instance5836.11 (complete), Instance5836.12 (complete), Instance5836.13 (complete), Instance5836.14 (complete), Instance5836.15 (complete), Instance5836.16 (complete), Instance5836.17 (complete), Instance5836.18 (complete), Instance5836.19 (complete), Instance5836.20 (complete), Instance5836.21 (complete), Instance5836.22 (complete), Instance5836.23 (complete), Instance5836.24 (complete), Instance5836.25 (complete), Instance5836.26 (complete), Instance5836.27 (complete), Instance5836.28 (complete), Instance5836.29 (complete), Instance5836.30 (complete), Instance5836.31 (complete), Instance5836.32 (complete), Instance5836.33 (complete), Instance5836.34 (complete), Instance5836.35 (complete), Instance5836.36 (complete), Instance5836.37 (complete), Instance5836.38 (complete), Instance5836.39 (complete), Instance5836.40 (complete), Instance5836.41 (complete), Instance5836.42 (complete), Instance5836.43 (complete), Instance5836.44 (complete), Instance5836.45 (complete), Instance5836.46 (complete), Instance5836.47 (complete), and Instance5836.48 (complete)

11/4/2009 5:32:27 AM -- C:\ESRP HDP_500MB\Final\5000 users\Softrecovery Test\Performance_2009_11_3_20_41_17.blg has 2113 samples.

11/4/2009 5:32:27 AM -- Creating test report ...

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg1 has 0.0092 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg2 has 0.0087 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg3 has 0.0087 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg4 has 0.0088 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg5 has 0.0088 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg6 has 0.0088 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg7 has 0.0088 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg8 has 0.0088 for Avg. Disk sec/Read.

11/4/2009 5:34:11 AM -- Volume C:\asgluns\sg9 has 0.0086 for Avg. Disk sec/Read.


```

sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log36 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log37 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log37 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log38 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log38 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log39 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log39 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log40 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log40 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log41 has 0.0019 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log41 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log42 has 0.0019 for Avg. Disk
sec/write.
11/4/2009 5:34:14 AM -- Volume C:\alogluns\log42 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:14 AM -- volume C:\alogluns\log43 has 0.0019 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log43 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- volume C:\alogluns\log44 has 0.0019 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log44 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- volume C:\alogluns\log45 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log45 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- volume C:\alogluns\log46 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log46 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- volume C:\alogluns\log47 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log47 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- volume C:\alogluns\log48 has 0.0020 for Avg. Disk
sec/write.
11/4/2009 5:34:15 AM -- Volume C:\alogluns\log48 has 0.0000 for Avg. Disk sec/Read.
11/4/2009 5:34:15 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
11/4/2009 5:34:15 AM -- Test has 0 Database Page Fault Stalls/sec samples higher
than 0.
11/4/2009 5:34:15 AM -- C:\ESRP HDP_500MB\Final\5000 users\Softrecovery
Test\Performance_2009_11_3_20_41_17.xml has 2112 samples queried.

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