

Hitachi Adaptable Modular Storage 2100 11,200 User 1GB Mailbox Exchange 2007 Clustered Continuous Replication Storage Solution

Tested with: ESRP – Storage Version 2.1

Test Date: April 2009

April 2009



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Overview

This document provides information on a Hitachi Adaptable Modular Storage 2100 Clustered Continuous Replication (CCR) storage solution 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 details 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 11,200 users and four servers in a CCR configuration. This testing used the Hitachi Adaptable Modular Storage 2100 midrange storage system. These results help answer questions about the kind of performance capabilities to expect with a large-scale Exchange deployment on the Hitachi Adaptable Modular Storage 2100.

This document details a tested configuration capable of supporting 11,200 users with a 0.384 IOPS per user profile and user mailbox size of 1024MB. A Hitachi Adaptable Modular Storage 2100 with 120 300GB 15K RPM SAS disks, 8GB of cache and four 4Gbit/s Fibre Channel paths was used for these tests. Testing used four Sun Fire 4600 M2 servers with 32GB of RAM, four dual-core AMD Opteron CPUs, four Emulex 4Gb/s Fibre Channel adapters and Windows Server 2003 R2 Enterprise x64 with Service Pack 2.

The Hitachi Adaptable Modular Storage 2100 is a medium-sized, high-performance, highly reliable midrange storage system that can scale to 120 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 2100 is fully capable of being used as the core underlying storage platform for high-performance Exchange Server 2007 architectures.

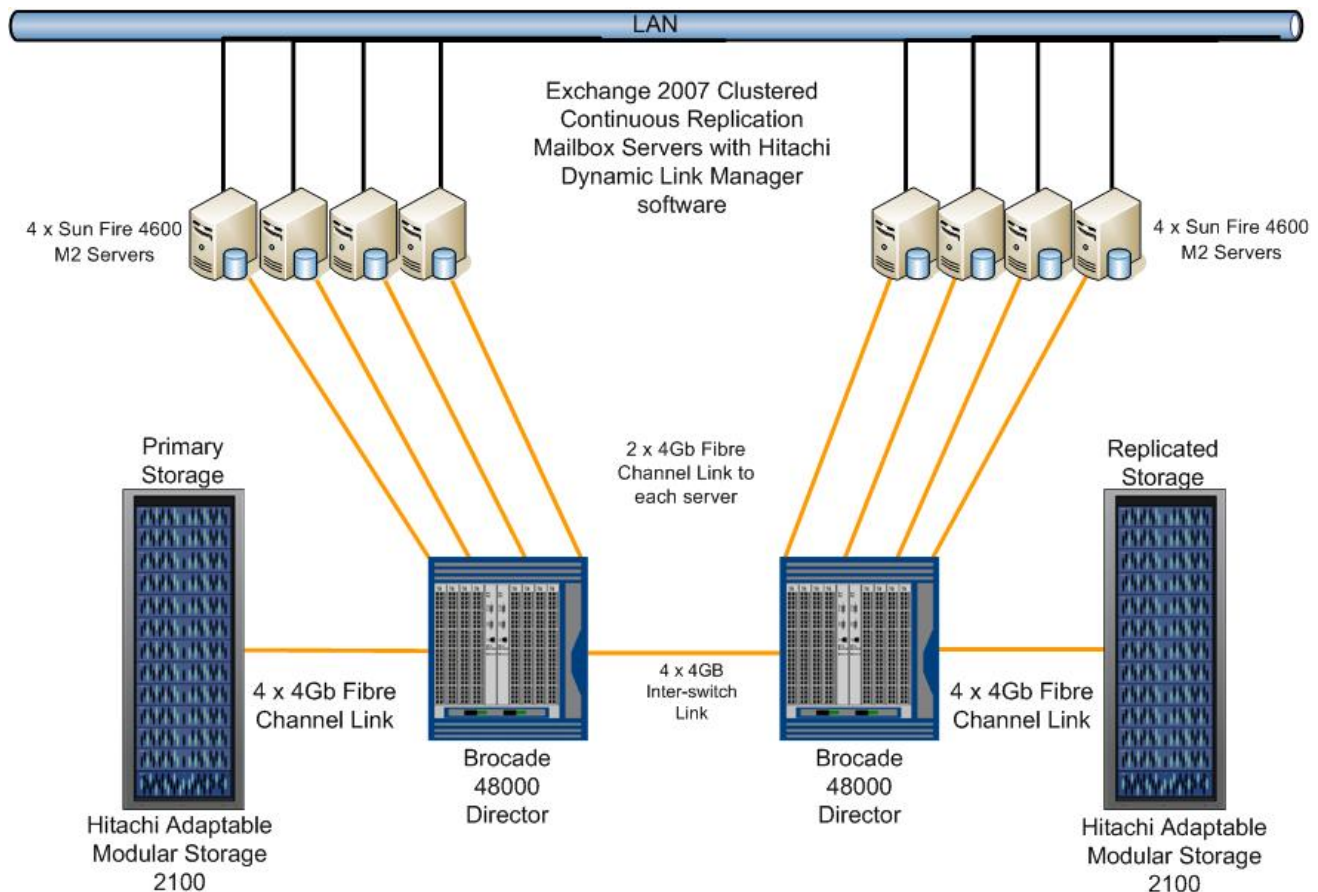
For more information about the Hitachi Adaptable Modular Storage 2000 family, see <http://www.hds.com/products/storage-systems/adaptable-modular-storage-2000-family/index.html?WT.ac=prodssams2000>.

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 Hitachi Adaptable Modular Storage 2100 to meet the needs of a large Exchange Server deployment.

For the targeted 11,200-user Exchange environment, a 2100 configured with 120 disks (the maximum) and four host servers were used for the primary storage. An identical set of servers using 120 disks on a separate 2100 was used for the replicated storage. Figure 1 illustrates the two systems that make up the multi-site CCR configuration.

Figure 1. Clustered Continuous Replication Configuration



This solution enables organizations to consolidate Exchange Server 2007 CCR deployments on two 2100 storage systems. Using identical hardware and software configurations ensures that primary and

replicated copies do not share storage paths, disk spindles or storage controllers. This helps ensure that performance and service levels related to storage are maintained regardless of which CCR server is hosting the active storage groups.

Table 1 illustrates how the 2100's disks were organized into RAID groups for use by either databases or logs in the primary storage. Each set of colored disks represents a RAID-10 (2D+2D) or RAID-1 group. Each RKA is a disk enclosure with 15 SAS disks. An identical configuration is deployed on the replicated storage for this solution.

Table 1. Adaptable Modular Storage 2100 RAID Groups Layout

<i>Drive Slot</i>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
RKA 7	28	29	29	30	30	31	31	32	32	33	33	34	34	35	35
RKA 6	22	22	23	23	23	23	24	24	25	25	26	26	27	27	28
RKA 5	18	19	19	19	19	20	20	20	20	21	21	21	21	22	22
RKA 4	15	15	15	15	16	16	16	16	17	17	17	17	18	18	18
RKA 3	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14
RKA 2	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11
RKA 1	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
RKA 0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3



	RAID-10 (2+2) for DBs
	RAID-1 (1+1) for Logs

Table 2 provides the detailed LU layout and RAID group allocation for the tested primary storage configuration for databases. An identical configuration is deployed on the replicated storage for this solution..

Table 2. Hitachi Adaptable Modular Storage 2100 LU Layout

<i>RAID Group</i>	<i>LU Numbers</i>	<i>RAID Group</i>	<i>LU Numbers</i>
0	0 - 5	12	72 - 77
1	6 - 11	13	78 - 83
2	12 - 17	14	84 - 89
3	18 - 23	15	90 - 95
4	24 - 29	16	96 - 101
5	30 - 35	17	102 - 107
6	36 - 41	18	108 - 113
7	42 - 47	19	114 - 119
8	48 - 53	20	120 - 125
9	54 - 59	21	126 - 131
10	60 - 65	22	132 - 137
11	66 - 71	23	138 - 143

<i>RAID Group</i>	<i>LU Numbers</i>
24	144 - 155
25	156 - 167
26	168 - 179
27	180 - 191
28	192 - 203
29	204 - 215
30	216 - 227
31	228 - 239
32	240 - 251
33	252 - 263
34	264 - 275
35	276 - 287

Table 3 outlines the port layout with LU assignments for the primary storage configuration. An identical configuration is deployed on the replicated storage for this solution.

Table 3. Adaptable Modular Storage 2100 Port Layout

<i>Host</i>	<i>Port</i>	<i>LU Number</i>					
SUN211	0A/1A	0	1	2	3	4	5
		6	7	8	9	10	11
		12	13	14	15	16	17
		18	19	20	21	22	23
		24	25	26	27	28	29
		30	31	32	33	34	35
		144	145	146	147	148	149
		150	151	152	153	154	155
		156	157	158	159	160	161
		162	163	164	165	166	167
		168	169	170	171	172	173
		174	175	176	177	178	179
SUN212	0B/1B	36	37	38	39	40	41
		42	43	44	45	46	47
		48	49	50	51	52	53
		54	55	56	57	58	59
		60	61	62	63	64	65
		66	67	68	69	70	71
		180	181	182	183	184	185
		186	187	188	189	190	191
		192	193	194	195	196	197
		198	199	200	201	202	203
		204	205	206	207	208	209
		210	211	212	213	214	215
SUN213	1A/0A	72	73	74	75	76	77
		78	79	80	81	82	83
		84	85	86	87	88	89
		90	91	92	93	94	95
		96	97	98	99	100	101
		102	103	104	105	106	107
		216	217	218	219	220	221
		222	223	224	225	226	227
		228	229	230	231	232	233
		234	235	236	237	238	239
		240	241	242	243	244	245
		246	247	248	249	250	251
SUN214	1B/0B	108	109	110	111	112	113
		114	115	116	117	118	119
		120	121	122	123	124	125
		126	127	128	129	130	131
		132	133	134	135	136	137

		138	139	140	141	142	143
		252	253	254	255	256	257
		258	259	260	261	262	263
		264	265	266	267	268	269
		270	271	272	273	274	275
		276	277	278	279	280	281
		282	283	284	285	286	287
Logs	Logs						
DBs	DBs						

Table 4 provides the detailed specifications for the primary storage configuration. An identical configuration is deployed on the replicated storage for this solution.

Table 4. Adaptable Modular Storage 2100 Configuration Details

<i>Host</i>	<i>RAID Group</i>	<i>Port</i>	<i>LU</i>	<i>Size (GB)</i>	<i>RAID Level</i>	<i>RAID Type</i>	<i>Disk Spec</i>	<i>Description</i>
SUN211	0	0A/1A	0 - 5	85	RAID-1+0	2+2	300GB 15K	Storage Groups 0 - 5
	1	0A/1A	6 - 11	85	RAID-1+0	2+2	300GB 15K	Storage Groups 6 - 11
	2	0A/1A	12 - 17	85	RAID-1+0	2+2	300GB 15K	Storage Groups 12 - 17
	3	0A/1A	18 - 23	85	RAID-1+0	2+2	300GB 15K	Storage Groups 18 -23
	4	0A/1A	24 - 29	85	RAID 1+0	2+2	300GB 15K	Storage Groups 24 - 29
	5	0A/1A	30 - 35	85	RAID-1+0	2+2	300GB 15K	Storage Groups 30 -35
SUN212	6	0B/1B	36 – 41	85	RAID-1+0	2+2	300GB 15K	Storage Groups 0 - 5
	7	0B/1B	42 – 47	85	RAID-1+0	2+2	300GB 15K	Storage Groups 6 - 11
	8	0B/1B	48 – 53	85	RAID-1+0	2+2	300GB 15K	Storage Groups 12 - 17
	9	0B/1B	54 – 59	85	RAID-1+0	2+2	300GB 15K	Storage Groups 18 -23
	10	0B/1B	60 - 65	85	RAID-1+0	2+2	300GB 15K	Storage Groups 24 - 29
	11	0B/1B	66 - 71	85	RAID-1+0	2+2	300GB 15K	Storage Groups 30 -35
SUN213	12	1A/0A	72 – 77	85	RAID-1+0	2+2	300GB 15K	Storage Groups 0 - 5
	13	1A/0A	78 – 83	85	RAID-1+0	2+2	300GB 15K	Storage Groups 6 - 11

	14	1A/0A	84 – 89	85	RAID-1+0	2+2	300GB 15K	Storage Groups 12 - 17
	15	1A/0A	90 - 95	85	RAID-1+0	2+2	300GB 15K	Storage Groups 18 -23
	16	1A/0A	96 – 101	85	RAID-1+0	2+2	300GB 15K	Storage Groups 24 - 29
	17	1A/0A	102- 107	85	RAID-1+0	2+2	300GB 15K	Storage Groups 30 -35
SUN214	18	1B/0B	108- 113	85	RAID-1+0	2+2	300GB 15K	Storage Groups 0 - 5
	19	1B/0B	114- 119	85	RAID-1+0	2+2	300GB 15K	Storage Groups 6 - 11
	20	1B/0B	120- 125	85	RAID-1+0	2+2	300GB 15K	Storage Groups 12 - 17
	21	1B/0B	126- 131	85	RAID-1+0	2+2	300GB 15K	Storage Groups 18 -23
	22	1B/0B	132- 137	85	RAID-1+0	2+2	300GB 15K	Storage Groups 24 - 29
	23	1B/0B	138- 143	85	RAID-1+0	2+2	300GB 15K	Storage Groups 30 -35
SUN211	24	0A/1A	144- 155	10	RAID-1	1+1	300GB 15K	Logs SG0 – SG11
	25	0A/1A	156- 167	10	RAID-1	1+1	300GB 15K	Logs SG12 – SG23
	26	0A/1A	168- 179	10	RAID-1	1+1	300GB 15K	Logs SG24 – SG35
SUN212	27	0B/1B	180- 191	10	RAID-1	1+1	300GB 15K	Logs SG0 – SG11
	28	0B/1B	192- 203	10	RAID-1	1+1	300GB 15K	Logs SG12 – SG23
	29	0B/1B	204- 215	10	RAID-1	1+1	300GB 15K	Logs SG24 – SG35
SUN213	30	1A/0A	216- 227	10	RAID-1	1+1	300GB 15K	Logs SG0 – SG11
	31	1A/0A	228- 239	10	RAID-1	1+1	300GB 15K	Logs SG12 – SG23
	32	1A/0A	240- 251	10	RAID-1	1+1	300GB 15K	Logs SG24 – SG35
SUN214	33	1B/0B	252- 263	10	RAID-1	1+1	300GB 15K	Logs SG0 – SG11
	34	1B/0B	264- 275	10	RAID-1	1+1	300GB 15K	Logs SG12 – SG23
	35	1B/0B	276- 287	10	RAID-1	1+1	300GB 15K	Logs SG24 – SG35

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 11,200 Exchange users with the following specifications:

- 4 Exchange Servers
- 2,800 users on a single Exchange Server
- 0.384 IOPS per user
- 1024 MB mailbox size
- 144 storage groups
- 1 database per storage group (144 total)
- Clustered continuous replication (CCR)

Tested Deployment

The following tables summarize the testing environment.

Table 5. Simulated Exchange Configuration

Number of Exchange mailboxes simulated	11,200
Number of hosts	4
Number of mailboxes/host	2,800
Number of storage groups/host	36
Number of mailbox stores/storage group	1
Number of mailboxes/mailbox store	77.8
Number of mailbox store LUs/storage group	6
Simulated profile: I/Os per second per mailbox (IOPS, include 20% headroom)	0.384
Database LU size	85GB
Log LU size	10GB
Total database size for performance testing	11,469GB
% storage capacity used by Exchange database**	93.70%

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

Table 6. Primary Storage Hardware

Storage type (SAN, DAS, iSCSI, NAS, iSCSI)	SAN
Storage connectivity (Fibre Channel, SAS, SATA, iSCSI)	Fibre Channel
Storage model and OS/firmware revision	1 Hitachi Adaptable Modular Storage 2100 Firmware: 0860/A-S WHQL listing: Hitachi Adaptable Modular Storage 2100
Storage cache	8GB
Number of storage controllers	2
Number of storage ports	4
Maximum bandwidth of storage connectivity to host	16Gb (4x4Gb/s HBA)
Switch type/model/firmware revision	Brocade 5320, Fabric OS v6.1.1c
HBA model and firmware	Emulex LPe11002-M4-H, FW 2.80A4
Number of HBAs/host	1 dual-ported HBA per host, 2 4Gb/s port used
Host server type	Sun Fire 4600M2 4 2.8 GHz dual-core AMD Opteron CPUs, 32GB memory
Total number of disks tested in solution	120
Maximum number of spindles can be hosted in the storage	120

Table 7. Primary Storage Software

HBA driver	STOR Miniport 9.1.7.16
HBA QueueTarget setting	1
HBA QueueDepth setting	254
Multipathing	Hitachi Dynamic Link Manager v6.0
Host OS	Microsoft Windows Server 2003 R2 Enterprise x64 Edition
ESE.dll file version	08.01.0240.005
Replication solution name/version	Exchange Server 2007 CCR Service Pack 1

Table 8. Primary Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	SAS Disk 300GB 15K D06A
Raw capacity per disk (GB)	300GB
Number of physical disks in test	96
Total raw storage capacity (GB)	12,240GB
Disk slice size (GB)	N/A
Number of slices per LU or number of disks per LUN	4 disks per LU
RAID level	RAID-1+0 at storage level
Total formatted capacity	12,240GB
Storage capacity utilization	42.50%
Database capacity utilization	39.82%

Table 9. Primary Storage Disk Configuration (Transaction Log Disks)

Disk type, speed and firmware revision	SAS 300GB 15K D06A
Raw capacity per disk (GB)	300GB
Number of spindles in test	24
Total raw storage capacity (GB)	7200GB
Disk slice size (GB)	N/A
Number of slices per LU or number of disks per LUN	2 disks per LU
RAID level	RAID-1 at storage level
Total formatted capacity	1440GB

Streaming Backup

N/A

Replication

The following tables summarize the replication environment.

Table 10. Replicated Configuration

Replication mechanism	Exchange Server 2007 CCR Service Pack 1
Number of links	2
Simulated link distance	N/A
Link type	IP
Link bandwidth	GigE (1Gbps)

Table 11. ReplicatedStorage Hardware

Storage type (SAN, DAS, iSCSI, NAS, iSCSI)	SAN
Storage connectivity (Fibre Channel, SAS, SATA, iSCSI)	Fibre Channel
Storage model and OS/firmware revision	1 Hitachi Adaptable Modular Storage 2100 Firmware: 0860/A-S WHQL listing: Hitachi Adaptable Modular Storage 2100
Storage cache	8GB
Number of storage controllers	2
Number of storage ports	4
Maximum bandwidth of storage connectivity to host	16Gb (4x4Gb/s HBA)
Switch type/model/firmware revision	Brocade 5320, Fabric OS v6.1.1c
HBA model and firmware	Emulex LPe11002-M4-H, FW 2.80A4
Number of HBAs/host	1 dual-ported HBA per host, 2 4Gb/s port used
Host server type	Sun Fire 4600M2 4 2.8 GHz dual-core AMD Opteron CPUs, 32GB memory
Total number of disks tested in solution	120
Maximum number of spindles can be hosted in the storage	120

Table 12. Replicated Storage Software

HBA driver	STOR Miniport 9.1.7.16
HBA QueueTarget setting	1
HBA QueueDepth setting	254
Multipathing	Hitachi Dynamic Link Manager v6.0
Host OS	Microsoft Windows Server 2003 R2 Enterprise x64 Edition
ESE.dll file version	08.01.0240.005
Replication solution name/version	Exchange Server 2007 CCR Service Pack 1

Table 13. Replicated Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	SAS Disk 300GB 15K D06A
Raw capacity per disk (GB)	300GB
Number of physical disks in test	96
Total raw storage capacity (GB)	12,240GB
Disk slice size (GB)	N/A
Number of slices per LU or number of disks per LUN	4 disks per LU
RAID level	RAID-1+0 at storage level
Total formatted capacity	12,240GB
Storage capacity utilization	42.50%
Database capacity utilization	39.82%

Table 14. Replicated Storage Disk Configuration (Transaction Log Disks)

Disk type, speed and firmware revision	SAS 300GB 15K D06A
Raw capacity per disk (GB)	300GB
Number of spindles in test	24
Total raw storage capacity (GB)	7200GB
Disk slice size (GB)	N/A
Number of slices per LU or number of disks per LUN	2 disks per LU
RAID level	RAID-1 at storage level
Total formatted capacity	1440GB

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 2100 running Exchange.

For more information about Exchange 2007 best practices for storage design, see <http://technet.microsoft.com/en-us/library/bb124518.aspx>

Core Storage

1. Use Microsoft's diskpar or diskpart to create track-aligned disk partitions. For the 2100, using an offset of 64KB is optimal.
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, isolate the Exchange database storage groups from the log groups. Create dedicated RAID groups for the databases and separate RAID groups for the logs.

4. Hitachi Data Systems recommends RAID-10 for the database RAID groups and RAID for the log RAID groups. Hitachi Data Systems does not recommend LU concatenation.
5. Size storage solutions for Exchange based primarily on 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. Spindle size is unrelated to performance with regards to IOPS or throughput rates. Spindle 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 spindles, coupled with the RAID level, determines the physical IOPS capacity of the RAID group and all of its LUs. If the disk has too few spindles, 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

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 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 15. Individual Server Metrics for Exchange Server (SUN211)

Database I/O	
<i>Database Disk Transfers/sec</i>	1676 IOPS
<i>Database Disk Reads/sec</i>	912 IOPS
<i>Database Disk Writes/sec</i>	764 IOPS
<i>Average Database Disk Read Latency (ms)</i>	10
<i>Average Database Disk Write Latency (ms)</i>	1
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	624 IOPS
<i>Average Log Disk Write Latency (ms)</i>	<1

Table 16. Individual Server Metrics for Exchange Server (SUN212)

Database I/O	
<i>Database Disk Transfers/sec</i>	1658 IOPS
<i>Database Disk Reads/sec</i>	908 IOPS
<i>Database Disk Writes/sec</i>	750 IOPS
<i>Average Database Disk Read Latency (ms)</i>	10
<i>Average Database Disk Write Latency (ms)</i>	2
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	608 IOPS
<i>Average Log Disk Write Latency (ms)</i>	<1

Table 17. Individual Server Metrics for Exchange Server (SUN213)

Database I/O	
<i>Database Disk Transfers/sec</i>	1635 IOPS
<i>Database Disk Reads/sec</i>	872 IOPS
<i>Database Disk Writes/sec</i>	763 IOPS
<i>Average Database Disk Read Latency (ms)</i>	10
<i>Average Database Disk Write Latency (ms)</i>	1
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	658 IOPS
<i>Average Log Disk Write Latency (ms)</i>	<1

Table 18. Individual Server Metrics for Exchange Server (SUN214)

Database I/O	
<i>Database Disk Transfers/sec</i>	1670 IOPS
<i>Database Disk Reads/sec</i>	912 IOPS
<i>Database Disk Writes/sec</i>	758 IOPS
<i>Average Database Disk Read Latency (ms)</i>	10
<i>Average Database Disk Write Latency (ms)</i>	1
Transaction Log I/O	
<i>Log Disk Writes/sec</i>	620 IOPS
<i>Average Log Disk Write Latency (ms)</i>	<1

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 19. Aggregate Server Performance

Database I/O	
<i>Database Disk Transfers/sec</i>	6,639 IOPS
<i>Database Disk Reads/sec</i>	3,604 IOPS
<i>Database Disk Writes/sec</i>	3,035 IOPS
<i>Average Database Disk Read Latency (ms)</i>	10
<i>Average Database Disk Write Latency (ms)</i>	1
Transaction Log I/O	
<i>Average Log Disk Writes/sec</i>	2,509 IOPS
<i>Average Log Disk Write Latency (ms)</i>	<1

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 table shows the average rate for a single database file.

Table 20. Database Read-only Performance for Exchange Server (SUN211)

<i>MB read/sec per storage group</i>	6.1
<i>MB read/sec total</i>	213.8

Table 21. Database Read-only Performance for Exchange Server (SUN212)

<i>MB read/sec per storage group</i>	6.1
<i>MB read/sec total</i>	212.1

Table 22. Database Read-only Performance for Exchange Server (SUN213)

<i>MB read/sec per storage group</i>	6.1
<i>MB read/sec total</i>	219.7

Table 23. Database Read-only Performance for Exchange Server (SUN214)

<i>MB read/sec per storage group</i>	6.2
<i>MB read/sec total</i>	221.8

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 24. Log Read-only Performance for Exchange Server (SUN211)

<i>Average time to play one log file (sec)</i>	2.86
--	------

Table 25. Log Read-only Performance for Exchange Server (SUN212)

<i>Average time to play one log file (sec)</i>	2.91
--	------

Table 26. Log Read-only Performance for Exchange Server (SUN213)

<i>Average time to play one log file (sec)</i>	2.84
--	------

Table 27. Log Read-only Performance for Exchange Server (SUN214)

<i>Average time to play one log file (sec)</i>	2.42
--	------

Conclusion

This document details a tested configuration capable of supporting 11,200 users in a CCR configuration with a 0.384 IOPS per user profile and user mailbox size of 1024 MB. A Hitachi Adaptable Modular Storage 2100 with 120 300GB 15K RPM SAS disks, 8GB of cache and four 4Gb/s Fibre Channel paths was used for these tests. Testing confirmed that the 2100 is capable of delivering the IOPS and capacity requirements needed to support 11,200 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 may affect performance and capacity requirements and each need 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 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

Performance Test Result: SUN211

Test Summary

Overall Test Result	Pass
Machine Name	SUN211
Test Description	
Test Start Time	4/15/2009 11:18:11 PM
Test End Time	4/16/2009 2:27:16 AM
Jetstress Version	08.02.0060.000
Ese Version	08.01.0240.005
Operating System	Microsoft Windows Server 2003 R2 Service Pack 2 (5.2.3790.131072)
Performance Log	C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Performance\Performance_2009_4_15_23_19_25.blg C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Performance\DBChecksum_2009_4_16_2_27_16.blg

Database Sizing and Throughput

Achieved I/O per Second	1675.716
Target I/O per Second	1075.2
Initial database size	3016332738560
Final database size	3026793332736
Database files (count)	36

Jetstress System Parameters

Thread count	2 (per-storage group)
Log buffers	9000
Minimum database cache	1152.0 MB
Maximum database cache	9216.0 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)	0.011	0.002	25.683	21.604	(n/a)
Database (C:\asgluns\sg2)	0.009	0.001	25.522	21.305	(n/a)
Database (C:\asgluns\sg3)	0.010	0.001	25.758	21.390	(n/a)
Database (C:\asgluns\sg4)	0.009	0.001	25.127	21.186	(n/a)
Database (C:\asgluns\sg5)	0.010	0.001	25.393	21.254	(n/a)
Database (C:\asgluns\sg6)	0.011	0.001	25.882	21.562	(n/a)
Database (C:\asgluns\sg7)	0.010	0.001	25.036	21.395	(n/a)
Database (C:\asgluns\sg8)	0.010	0.001	25.357	21.206	(n/a)
Database (C:\asgluns\sg9)	0.009	0.001	25.125	21.081	(n/a)
Database (C:\asgluns\sg10)	0.009	0.001	25.496	21.173	(n/a)
Database (C:\asgluns\sg11)	0.010	0.001	25.525	21.311	(n/a)
Database (C:\asgluns\sg12)	0.011	0.001	25.265	21.424	(n/a)
Database (C:\asgluns\sg13)	0.010	0.001	24.996	20.700	(n/a)
Database (C:\asgluns\sg14)	0.009	0.001	25.138	21.258	(n/a)
Database (C:\asgluns\sg15)	0.009	0.001	25.906	21.385	(n/a)
Database (C:\asgluns\sg16)	0.009	0.001	25.658	21.366	(n/a)
Database (C:\asgluns\sg17)	0.010	0.001	25.372	21.141	(n/a)
Database (C:\asgluns\sg18)	0.011	0.001	24.619	20.496	(n/a)
Database (C:\asgluns\sg19)	0.010	0.001	24.770	20.655	(n/a)
Database (C:\asgluns\sg20)	0.009	0.001	25.143	20.999	(n/a)
Database (C:\asgluns\sg21)	0.010	0.001	25.123	21.188	(n/a)

<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\sg22)	0.009	0.001	25.372	21.156	(n/a)
Database (C:\asgluns\sg23)	0.010	0.001	25.490	21.576	(n/a)
Database (C:\asgluns\sg24)	0.011	0.001	25.653	21.314	(n/a)
Database (C:\asgluns\sg25)	0.010	0.001	24.783	20.800	(n/a)
Database (C:\asgluns\sg26)	0.010	0.001	25.451	21.014	(n/a)
Database (C:\asgluns\sg27)	0.009	0.001	25.546	21.508	(n/a)
Database (C:\asgluns\sg28)	0.009	0.001	24.887	20.756	(n/a)
Database (C:\asgluns\sg29)	0.010	0.001	25.485	21.404	(n/a)
Database (C:\asgluns\sg30)	0.011	0.001	25.160	20.838	(n/a)
Database (C:\asgluns\sg31)	0.010	0.001	25.143	20.843	(n/a)
Database (C:\asgluns\sg32)	0.010	0.001	25.363	21.429	(n/a)
Database (C:\asgluns\sg33)	0.010	0.001	25.634	21.342	(n/a)
Database (C:\asgluns\sg34)	0.009	0.001	25.625	21.613	(n/a)
Database (C:\asgluns\sg35)	0.010	0.001	25.186	21.103	(n/a)
Database (C:\asgluns\sg36)	0.011	0.001	25.558	21.714	(n/a)
Log (C:\alogluns\log1)	0.000	0.000	0.000	17.692	4277.282
Log (C:\alogluns\log2)	0.000	0.000	0.000	17.415	4260.379
Log (C:\alogluns\log3)	0.000	0.000	0.000	17.472	4287.661
Log (C:\alogluns\log4)	0.000	0.000	0.000	17.422	4387.683
Log (C:\alogluns\log5)	0.000	0.000	0.000	17.311	4290.103
Log (C:\alogluns\log6)	0.000	0.000	0.000	17.623	4311.589
Log (C:\alogluns\log7)	0.000	0.000	0.000	17.463	4345.319
Log (C:\alogluns\log8)	0.000	0.000	0.000	17.227	4280.185
Log (C:\alogluns\log9)	0.000	0.000	0.000	17.210	4315.460
Log (C:\alogluns\log10)	0.000	0.000	0.000	17.151	4287.145
Log (C:\alogluns\log11)	0.000	0.000	0.000	17.235	4280.828
Log (C:\alogluns\log12)	0.000	0.000	0.000	17.537	4308.061

<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>
Log (C:\alogluns\log13)	0.000	0.000	0.000	16.895	4269.057
Log (C:\alogluns\log14)	0.000	0.000	0.000	17.424	4305.786
Log (C:\alogluns\log15)	0.000	0.000	0.000	17.268	4315.753
Log (C:\alogluns\log16)	0.000	0.000	0.000	17.187	4240.125
Log (C:\alogluns\log17)	0.000	0.000	0.000	17.105	4327.568
Log (C:\alogluns\log18)	0.000	0.000	0.000	17.125	4322.453
Log (C:\alogluns\log19)	0.000	0.000	0.000	16.994	4278.550
Log (C:\alogluns\log20)	0.000	0.000	0.000	17.177	4311.612
Log (C:\alogluns\log21)	0.000	0.000	0.000	17.633	4382.513
Log (C:\alogluns\log22)	0.000	0.000	0.000	17.478	4255.978
Log (C:\alogluns\log23)	0.000	0.000	0.000	17.610	4276.995
Log (C:\alogluns\log24)	0.000	0.000	0.000	17.338	4231.443
Log (C:\alogluns\log25)	0.000	0.000	0.000	17.095	4347.137
Log (C:\alogluns\log26)	0.000	0.000	0.000	17.035	4282.685
Log (C:\alogluns\log27)	0.000	0.000	0.000	17.503	4281.089
Log (C:\alogluns\log28)	0.000	0.000	0.000	16.894	4354.500
Log (C:\alogluns\log29)	0.000	0.000	0.000	17.404	4322.452
Log (C:\alogluns\log30)	0.000	0.000	0.000	16.951	4294.832
Log (C:\alogluns\log31)	0.000	0.000	0.000	17.244	4270.652
Log (C:\alogluns\log32)	0.000	0.000	0.000	17.754	4252.703
Log (C:\alogluns\log33)	0.000	0.000	0.000	17.394	4244.411
Log (C:\alogluns\log34)	0.000	0.000	0.000	17.247	4249.070
Log (C:\alogluns\log35)	0.000	0.000	0.000	17.285	4269.529
Log (C:\alogluns\log36)	0.000	0.000	0.000	17.663	4291.424

Host System Performance

<i>Counter</i>	<i>Average</i>	<i>Minimum</i>	<i>Maximum</i>
% Processor Time	1.547	0.819	3.015
Available MBytes	21108.278	21079.000	21999.000
Free System Page Table Entries	16727633.000	16727633.000	16727633.000
Transition Pages RePurposed/sec	12.835	0.000	671.773
Pool Nonpaged Bytes	177419445.712	177041408.000	178429952.000
Pool Paged Bytes	121341648.434	121073664.000	123727872.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

4/15/2009 11: 18: 11 PM -- Jetstress testing begins ...

4/15/2009 11:18:11 PM -- Prepare testing begins ...
 4/15/2009 11:18:48 PM -- Attaching databases ...
 4/15/2009 11:18:48 PM -- Prepare testing ends.
 4/15/2009 11:18:48 PM -- Dispatching transactions begins ...
 4/15/2009 11:18:48 PM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
 4/15/2009 11:18:48 PM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)
 4/15/2009 11:19:25 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
 4/15/2009 11:19:25 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
 4/15/2009 11:19:28 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
 4/15/2009 11:19:28 PM -- Performance logging begins (interval: 15000 ms).
 4/15/2009 11:19:28 PM -- Attaining prerequisites:
 4/15/2009 11:59:10 PM -- \MSEExchange Database(JetstressWin)\Database Cache Size, Last: 8701428000.0 (lower bound: 8697308000.0, upper bound: none)
 4/16/2009 1:59:12 AM -- Performance logging ends.
 4/16/2009 2:27:05 AM -- JetInterop batch transaction stats: 9160, 9042, 9173, 9061, 9068, 9103, 8927, 9151, 8864, 9124, 9149, 9098, 8960, 9140, 9116, 9013, 9106, 8985, 8857, 9108, 8956, 9037, 9085, 9070, 8901, 8972, 9143, 8982, 9141, 8897, 9009, 9162, 9002, 9165, 9028, and 9051.
 4/16/2009 2:27:06 AM -- Dispatching transactions ends.
 4/16/2009 2:27:06 AM -- Shutting down databases ...
 4/16/2009 2:27:16 AM -- Instance988.1 (complete), Instance988.2 (complete), Instance988.3 (complete), Instance988.4 (complete), Instance988.5 (complete), Instance988.6 (complete), Instance988.7 (complete), Instance988.8 (complete), Instance988.9 (complete), Instance988.10 (complete), Instance988.11 (complete), Instance988.12 (complete), Instance988.13 (complete), Instance988.14 (complete), Instance988.15 (complete), Instance988.16 (complete), Instance988.17 (complete), Instance988.18 (complete), Instance988.19 (complete), Instance988.20 (complete), Instance988.21 (complete), Instance988.22 (complete), Instance988.23 (complete), Instance988.24 (complete), Instance988.25 (complete), Instance988.26 (complete), Instance988.27 (complete), Instance988.28 (complete), Instance988.29 (complete), Instance988.30 (complete), Instance988.31 (complete), Instance988.32 (complete), Instance988.33 (complete), Instance988.34 (complete), Instance988.35 (complete), and Instance988.36 (complete)
 4/16/2009 2:27:17 AM -- Performance logging begins (interval: 30000 ms).
 4/16/2009 2:27:17 AM -- Verifying database checksums ...
 4/16/2009 6:17:20 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), and C:\asgluns\sg36 (100% processed)
 4/16/2009 6:17:21 AM -- Performance logging ends.
 4/16/2009 6:17:21 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Performance\DBChecksum_2009_4_16_2_27_16.blg has 459 samples.
 4/16/2009 6:20:16 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Performance\DBChecksum_2009_4_16_2_27_16.html is saved.
 4/16/2009 6:20:16 AM -- Verifying log checksums ...
 4/16/2009 6:20:28 AM -- C:\alogluns\log1 (2 logs passed), C:\alogluns\log2 (2

logs passed), C:\al ogl uns\log3 (2 logs passed), C:\al ogl uns\log4 (2 logs passed), C:\al ogl uns\log5 (2 logs passed), C:\al ogl uns\log6 (2 logs passed), C:\al ogl uns\log7 (2 logs passed), C:\al ogl uns\log8 (2 logs passed), C:\al ogl uns\log9 (2 logs passed), C:\al ogl uns\log10 (2 logs passed), C:\al ogl uns\log11 (2 logs passed), C:\al ogl uns\log12 (2 logs passed), C:\al ogl uns\log13 (2 logs passed), C:\al ogl uns\log14 (2 logs passed), C:\al ogl uns\log15 (2 logs passed), C:\al ogl uns\log16 (2 logs passed), C:\al ogl uns\log17 (2 logs passed), C:\al ogl uns\log18 (2 logs passed), C:\al ogl uns\log19 (2 logs passed), C:\al ogl uns\log20 (2 logs passed), C:\al ogl uns\log21 (2 logs passed), C:\al ogl uns\log22 (2 logs passed), C:\al ogl uns\log23 (2 logs passed), C:\al ogl uns\log24 (2 logs passed), C:\al ogl uns\log25 (2 logs passed), C:\al ogl uns\log26 (2 logs passed), C:\al ogl uns\log27 (2 logs passed), C:\al ogl uns\log28 (2 logs passed), C:\al ogl uns\log29 (2 logs passed), C:\al ogl uns\log30 (2 logs passed), C:\al ogl uns\log31 (2 logs passed), C:\al ogl uns\log32 (2 logs passed), C:\al ogl uns\log33 (2 logs passed), C:\al ogl uns\log34 (2 logs passed), C:\al ogl uns\log35 (2 logs passed), and C:\al ogl uns\log36 (2 logs passed)

4/16/2009 6:20:28 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Performance\Performance_2009_4_15_23_19_25.bl g has 637 samples.

4/16/2009 6:20:28 AM -- Creating test report ...

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg1 has 0.0107 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg2 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg3 has 0.0096 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg4 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg5 has 0.0102 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg6 has 0.0110 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg7 has 0.0103 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg8 has 0.0096 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg9 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg10 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg11 has 0.0100 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg12 has 0.0108 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg13 has 0.0104 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg14 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg15 has 0.0094 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg16 has 0.0093 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg17 has 0.0099 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg18 has 0.0106 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg19 has 0.0102 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg20 has 0.0095 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg21 has 0.0096 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg22 has 0.0093 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg23 has 0.0099 for Avg. Disk sec/Read.

4/16/2009 6:21:04 AM -- Volume C:\asgl uns\sg24 has 0.0112 for Avg. Disk

sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og28 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og29 has 0. 0003 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og29 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og30 has 0. 0002 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og30 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og31 has 0. 0003 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og31 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og32 has 0. 0002 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og32 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og33 has 0. 0003 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og33 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og34 has 0. 0002 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og34 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og35 has 0. 0003 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og35 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og36 has 0. 0002 for Avg. Di sk
 sec/Wri te.
 4/16/2009 6: 21: 05 AM -- Vol ume C: \al ogl uns\l og36 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/16/2009 6: 21: 05 AM -- Test has 0 Maxi mum Database Page Faul t Stall s/sec.
 4/16/2009 6: 21: 05 AM -- Test has 0 Database Page Faul t Stall s/sec sampl es
 higher than 0.
 4/16/2009 6: 21: 05 AM -- C: \ESRP Testi ng\AMS2100 Resul ts_1GB_Heavy\11200
 users\Performance\Performance_2009_4_15_23_19_25. xml has 478 sampl es queri ed.

Performance Test Database Checksums Result: SUN211

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
C:\asgluns\sg1\Jetstress1.edb	10264658	0	0	0	80192 MBytes / 13802 seconds
C:\asgluns\sg2\Jetstress1.edb	10264402	0	0	0	80190 MBytes / 13723 seconds
C:\asgluns\sg3\Jetstress1.edb	10263634	0	0	0	80184 MBytes / 13727 seconds
C:\asgluns\sg4\Jetstress1.edb	10263122	0	0	0	80180 MBytes / 13617 seconds
C:\asgluns\sg5\Jetstress1.edb	10263122	0	0	0	80180 MBytes / 13724 seconds
C:\asgluns\sg6\Jetstress1.edb	10263122	0	0	0	80180 MBytes / 13574 seconds
C:\asgluns\sg7\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 13230 seconds
C:\asgluns\sg8\Jetstress1.edb	10264914	0	0	0	80194 MBytes / 13056 seconds
C:\asgluns\sg9\Jetstress1.edb	10262610	0	0	0	80176 MBytes / 12904 seconds
C:\asgluns\sg10\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 12852 seconds
C:\asgluns\sg11\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 12692 seconds
C:\asgluns\sg12\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 12681 seconds
C:\asgluns\sg13\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 12423 seconds
C:\asgluns\sg14\Jetstress1.edb	10264658	0	0	0	80192 MBytes / 12476 seconds
C:\asgluns\sg15\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 12178 seconds
C:\asgluns\sg16\Jetstress1.edb	10262610	0	0	0	80176 MBytes / 12194 seconds
C:\asgluns\sg17\Jetstress1.edb	10263378	0	0	0	80182 MBytes / 12069 seconds
C:\asgluns\sg18\Jetstress1.edb	10263378	0	0	0	80182 MBytes / 12095 seconds
C:\asgluns\sg19\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 11657 seconds
C:\asgluns\sg20\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 11079 seconds
C:\asgluns\sg21\Jetstress1.edb	10263378	0	0	0	80182 MBytes / 11397 seconds

<i>Database</i>	<i>Seen pages</i>	<i>Bad pages</i>	<i>Correctable pages</i>	<i>Wrong page no pages</i>	<i>File length / seconds taken</i>
C:\asgluns\sg22\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 11019 seconds
C:\asgluns\sg23\Jetstress1.edb	10264146	0	0	0	80188 MBytes / 11331 seconds
C:\asgluns\sg24\Jetstress1.edb	10263122	0	0	0	80180 MBytes / 11000 seconds
C:\asgluns\sg25\Jetstress1.edb	10263378	0	0	0	80182 MBytes / 9782 seconds
C:\asgluns\sg26\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 10508 seconds
C:\asgluns\sg27\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 9669 seconds
C:\asgluns\sg28\Jetstress1.edb	10262354	0	0	0	80174 MBytes / 10367 seconds
C:\asgluns\sg29\Jetstress1.edb	10262866	0	0	0	80178 MBytes / 9688 seconds
C:\asgluns\sg30\Jetstress1.edb	10264146	0	0	0	80188 MBytes / 10400 seconds
C:\asgluns\sg31\Jetstress1.edb	10261842	0	0	0	80170 MBytes / 9681 seconds
C:\asgluns\sg32\Jetstress1.edb	10263122	0	0	0	80180 MBytes / 10389 seconds
C:\asgluns\sg33\Jetstress1.edb	10263634	0	0	0	80184 MBytes / 9695 seconds
C:\asgluns\sg34\Jetstress1.edb	10262610	0	0	0	80176 MBytes / 10397 seconds
C:\asgluns\sg35\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 9712 seconds
C:\asgluns\sg36\Jetstress1.edb	10263890	0	0	0	80186 MBytes / 10441 seconds
(Sum)	369481608	0	0	0	2886575 MBytes / 13802 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	0.659	0.002	91.704	0.000
C:\asgluns\sg2	0.655	0.002	90.994	0.000
C:\asgluns\sg3	0.472	0.000	92.400	0.000
C:\asgluns\sg4	0.490	0.002	94.245	0.000
C:\asgluns\sg5	0.355	0.000	93.020	0.000
C:\asgluns\sg6	0.305	0.001	93.935	0.000
C:\asgluns\sg7	0.267	0.002	96.772	0.000
C:\asgluns\sg8	0.224	0.001	97.843	0.000
C:\asgluns\sg9	0.193	0.001	99.376	0.000
C:\asgluns\sg10	0.185	0.000	99.350	0.000
C:\asgluns\sg11	0.172	0.000	100.905	0.000
C:\asgluns\sg12	0.170	0.000	100.850	0.000
C:\asgluns\sg13	0.160	0.000	103.324	0.000
C:\asgluns\sg14	0.161	0.000	102.748	0.000
C:\asgluns\sg15	0.156	0.000	105.344	0.000
C:\asgluns\sg16	0.157	0.000	104.922	0.000
C:\asgluns\sg17	0.154	0.000	106.106	0.000
C:\asgluns\sg18	0.153	0.000	105.930	0.000
C:\asgluns\sg19	0.149	0.000	109.903	0.000
C:\asgluns\sg20	0.141	0.000	115.575	0.000
C:\asgluns\sg21	0.146	0.000	112.610	0.000
C:\asgluns\sg22	0.140	0.000	116.213	0.000
C:\asgluns\sg23	0.145	0.000	112.978	0.000
C:\asgluns\sg24	0.139	0.000	116.277	0.000
C:\asgluns\sg25	0.121	0.000	130.749	0.000
C:\asgluns\sg26	0.129	0.000	121.747	0.000
C:\asgluns\sg27	0.119	0.000	132.739	0.000
C:\asgluns\sg28	0.127	0.000	123.836	0.000
C:\asgluns\sg29	0.119	0.000	132.527	0.000
C:\asgluns\sg30	0.128	0.000	123.489	0.000
C:\asgluns\sg31	0.119	0.000	132.724	0.000
C:\asgluns\sg32	0.127	0.000	123.649	0.000
C:\asgluns\sg33	0.119	0.000	132.542	0.000
C:\asgluns\sg34	0.127	0.000	123.694	0.000
C:\asgluns\sg35	0.119	0.000	132.396	0.000
C:\asgluns\sg36	0.128	0.000	123.060	0.000

Memory System Performance of Checksum

Counter	Average	Minimum	Maximum
% Processor Time	5.092	3.592	5.772
Available MBytes	30691.758	30678.000	30729.000
Free System Page Table Entries	16726863.000	16726863.000	16726863.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	178552287.651	178401280.000	178597888.000
Pool Paged Bytes	122183840.627	120852480.000	123150336.000

Test Log

4/15/2009 11: 18: 11 PM -- Jetstress testing begins ...
4/15/2009 11: 18: 11 PM -- Prepare testing begins ...
4/15/2009 11: 18: 48 PM -- Attaching databases ...
4/15/2009 11: 18: 48 PM -- Prepare testing ends.
4/15/2009 11: 18: 48 PM -- Dispatching transactions begins ...
4/15/2009 11: 18: 48 PM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
4/15/2009 11: 18: 48 PM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)
4/15/2009 11: 19: 25 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
4/15/2009 11: 19: 25 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
4/15/2009 11: 19: 28 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
4/15/2009 11: 19: 28 PM -- Performance logging begins (interval: 15000 ms).
4/15/2009 11: 19: 28 PM -- Attaining prerequisites:
4/15/2009 11: 59: 10 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 8701428000.0 (lower bound: 8697308000.0, upper bound: none)
4/16/2009 1: 59: 12 AM -- Performance logging ends.
4/16/2009 2: 27: 05 AM -- JetInterop batch transaction stats: 9160, 9042, 9173, 9061, 9068, 9103, 8927, 9151, 8864, 9124, 9149, 9098, 8960, 9140, 9116, 9013, 9106, 8985, 8857, 9108, 8956, 9037, 9085, 9070, 8901, 8972, 9143, 8982, 9141, 8897, 9009, 9162, 9002, 9165, 9028, and 9051.
4/16/2009 2: 27: 06 AM -- Dispatching transactions ends.
4/16/2009 2: 27: 06 AM -- Shutting down databases ...
4/16/2009 2: 27: 16 AM -- Instance988.1 (complete), Instance988.2 (complete), Instance988.3 (complete), Instance988.4 (complete), Instance988.5 (complete), Instance988.6 (complete), Instance988.7 (complete), Instance988.8 (complete), Instance988.9 (complete), Instance988.10 (complete), Instance988.11 (complete), Instance988.12 (complete), Instance988.13 (complete), Instance988.14 (complete), Instance988.15 (complete), Instance988.16 (complete), Instance988.17 (complete), Instance988.18 (complete), Instance988.19 (complete), Instance988.20 (complete), Instance988.21 (complete), Instance988.22 (complete), Instance988.23 (complete), Instance988.24 (complete), Instance988.25 (complete), Instance988.26 (complete), Instance988.27 (complete), Instance988.28 (complete), Instance988.29 (complete), Instance988.30 (complete), Instance988.31 (complete), Instance988.32 (complete), Instance988.33 (complete), Instance988.34 (complete), Instance988.35 (complete), and Instance988.36 (complete)
4/16/2009 2: 27: 17 AM -- Performance logging begins (interval: 30000 ms).
4/16/2009 2: 27: 17 AM -- Verifying database checksums ...
4/16/2009 6: 17: 20 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:\asgl\uns\sg11 (100% processed), C:\asgl\uns\sg12 (100% processed),
 C:\asgl\uns\sg13 (100% processed), C:\asgl\uns\sg14 (100% processed),
 C:\asgl\uns\sg15 (100% processed), C:\asgl\uns\sg16 (100% processed),
 C:\asgl\uns\sg17 (100% processed), C:\asgl\uns\sg18 (100% processed),
 C:\asgl\uns\sg19 (100% processed), C:\asgl\uns\sg20 (100% processed),
 C:\asgl\uns\sg21 (100% processed), C:\asgl\uns\sg22 (100% processed),
 C:\asgl\uns\sg23 (100% processed), C:\asgl\uns\sg24 (100% processed),
 C:\asgl\uns\sg25 (100% processed), C:\asgl\uns\sg26 (100% processed),
 C:\asgl\uns\sg27 (100% processed), C:\asgl\uns\sg28 (100% processed),
 C:\asgl\uns\sg29 (100% processed), C:\asgl\uns\sg30 (100% processed),
 C:\asgl\uns\sg31 (100% processed), C:\asgl\uns\sg32 (100% processed),
 C:\asgl\uns\sg33 (100% processed), C:\asgl\uns\sg34 (100% processed),
 C:\asgl\uns\sg35 (100% processed), and C:\asgl\uns\sg36 (100% processed)
 4/16/2009 6:17:21 AM -- Performance Logging ends.
 4/16/2009 6:17:21 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200
 users\Performance\DBChecksum_2009_4_16_2_27_16.blg has 459 samples.

Stress Test Database Performance Result: SUN211

Test Summary

Overall Test Result	Pass
Machine Name	SUN211
Test Description	
Test Start Time	4/17/2009 3:07:47 AM
Test End Time	4/19/2009 8:10:53 PM
Jetstress Version	08.02.0060.000
Ese Version	08.01.0240.005
Operating System	Microsoft Windows Server 2003 R2 Service Pack 2 (5.2.3790.131072)
Performance Log	C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\Stress_2009_4_17_3_9_2.blg C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\DBChecksum_2009_4_19_20_10_53.blg

Database Sizing and Throughput

Achieved I/O per Second	1651.975
Target I/O per Second	1075.2
Initial database size	3041379024896
Final database size	3214322761728
Database files (count)	36

Jetstress System Parameters

Thread count	2 (per-storage group)
Log buffers	9000
Minimum database cache	1152.0 MB
Maximum database cache	9216.0 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)	0.010	0.001	25.625	20.400	(n/a)
Database (C:\asgluns\sg2)	0.009	0.001	25.363	20.220	(n/a)
Database (C:\asgluns\sg3)	0.009	0.001	25.688	20.416	(n/a)
Database (C:\asgluns\sg4)	0.009	0.001	25.525	20.225	(n/a)
Database (C:\asgluns\sg5)	0.010	0.001	25.667	20.393	(n/a)
Database (C:\asgluns\sg6)	0.011	0.001	25.590	20.204	(n/a)
Database (C:\asgluns\sg7)	0.010	0.001	25.566	20.322	(n/a)
Database (C:\asgluns\sg8)	0.009	0.001	25.614	20.471	(n/a)
Database (C:\asgluns\sg9)	0.009	0.001	25.601	20.317	(n/a)
Database (C:\asgluns\sg10)	0.009	0.001	25.443	20.245	(n/a)

<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\sg11)	0.010	0.001	25.429	20.245	(n/a)
Database (C:\asgluns\sg12)	0.011	0.001	25.553	20.216	(n/a)
Database (C:\asgluns\sg13)	0.010	0.001	25.652	20.338	(n/a)
Database (C:\asgluns\sg14)	0.010	0.001	25.655	20.300	(n/a)
Database (C:\asgluns\sg15)	0.009	0.001	25.603	20.402	(n/a)
Database (C:\asgluns\sg16)	0.009	0.001	25.550	20.347	(n/a)
Database (C:\asgluns\sg17)	0.010	0.001	25.464	20.185	(n/a)
Database (C:\asgluns\sg18)	0.011	0.001	25.742	20.389	(n/a)
Database (C:\asgluns\sg19)	0.010	0.001	25.523	20.279	(n/a)
Database (C:\asgluns\sg20)	0.010	0.001	25.767	20.513	(n/a)
Database (C:\asgluns\sg21)	0.009	0.001	25.583	20.247	(n/a)
Database (C:\asgluns\sg22)	0.009	0.001	25.531	20.196	(n/a)
Database (C:\asgluns\sg23)	0.010	0.001	25.642	20.376	(n/a)
Database (C:\asgluns\sg24)	0.011	0.001	25.698	20.474	(n/a)
Database (C:\asgluns\sg25)	0.010	0.001	25.626	20.267	(n/a)
Database (C:\asgluns\sg26)	0.010	0.001	25.533	20.307	(n/a)
Database (C:\asgluns\sg27)	0.009	0.001	25.566	20.465	(n/a)
Database (C:\asgluns\sg28)	0.009	0.001	25.439	20.162	(n/a)
Database (C:\asgluns\sg29)	0.010	0.001	25.599	20.264	(n/a)
Database (C:\asgluns\sg30)	0.011	0.001	25.702	20.424	(n/a)
Database (C:\asgluns\sg31)	0.010	0.001	25.661	20.381	(n/a)
Database (C:\asgluns\sg32)	0.010	0.001	25.415	20.126	(n/a)

<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\sg33)	0.009	0.001	25.768	20.472	(n/a)
Database (C:\asgluns\sg34)	0.009	0.001	25.442	20.199	(n/a)
Database (C:\asgluns\sg35)	0.010	0.001	25.529	20.278	(n/a)
Database (C:\asgluns\sg36)	0.011	0.001	25.439	20.122	(n/a)
Log (C:\alogluns\log1)	0.000	0.000	0.000	16.728	4164.010
Log (C:\alogluns\log2)	0.000	0.000	0.000	16.660	4180.132
Log (C:\alogluns\log3)	0.000	0.000	0.000	16.652	4171.610
Log (C:\alogluns\log4)	0.000	0.000	0.000	16.649	4143.146
Log (C:\alogluns\log5)	0.000	0.000	0.000	16.694	4152.291
Log (C:\alogluns\log6)	0.000	0.000	0.000	16.601	4159.487
Log (C:\alogluns\log7)	0.000	0.000	0.000	16.631	4152.446
Log (C:\alogluns\log8)	0.000	0.000	0.000	16.797	4166.130
Log (C:\alogluns\log9)	0.000	0.000	0.000	16.546	4177.245
Log (C:\alogluns\log10)	0.000	0.000	0.000	16.588	4178.610
Log (C:\alogluns\log11)	0.000	0.000	0.000	16.599	4158.986
Log (C:\alogluns\log12)	0.000	0.000	0.000	16.694	4150.697
Log (C:\alogluns\log13)	0.000	0.000	0.000	16.621	4157.784
Log (C:\alogluns\log14)	0.000	0.000	0.000	16.634	4139.711
Log (C:\alogluns\log15)	0.000	0.000	0.000	16.768	4197.877
Log (C:\alogluns\log16)	0.000	0.000	0.000	16.602	4170.391
Log (C:\alogluns\log17)	0.000	0.000	0.000	16.587	4144.022
Log (C:\alogluns\log18)	0.000	0.000	0.000	16.746	4163.181
Log (C:\alogluns\log19)	0.000	0.000	0.000	16.670	4166.265
Log (C:\alogluns\log20)	0.000	0.000	0.000	16.778	4162.917
Log (C:\alogluns\log21)	0.000	0.000	0.000	16.629	4183.944
Log (C:\alogluns\log22)	0.000	0.000	0.000	16.545	4181.936
Log (C:\alogluns\log23)	0.000	0.000	0.000	16.652	4161.155
Log (C:\alogluns\log24)	0.000	0.000	0.000	16.785	4164.218
Log (C:\alogluns\log25)	0.000	0.000	0.000	16.645	4182.149
Log (C:\alogluns\log26)	0.000	0.000	0.000	16.678	4194.452
Log (C:\alogluns\log27)	0.000	0.000	0.000	16.784	4198.181
Log (C:\alogluns\log28)	0.000	0.000	0.000	16.511	4170.841
Log (C:\alogluns\log29)	0.000	0.000	0.000	16.577	4166.214
Log (C:\alogluns\log30)	0.000	0.000	0.000	16.826	4159.880

Logical Disk	Avg. Disk sec/Read	Avg. Disk sec/Write	Disk Reads/sec	Disk Writes/sec	Avg. Disk Bytes/Write
Log (C:\alogluns\log31)	0.000	0.000	0.000	16.695	4161.900
Log (C:\alogluns\log32)	0.000	0.000	0.000	16.528	4170.731
Log (C:\alogluns\log33)	0.000	0.000	0.000	16.697	4182.530
Log (C:\alogluns\log34)	0.000	0.000	0.000	16.618	4179.069
Log (C:\alogluns\log35)	0.000	0.000	0.000	16.592	4185.041
Log (C:\alogluns\log36)	0.000	0.000	0.000	16.602	4162.900

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	1.579	0.845	2.469
Available MBytes	21058.906	21038.000	21971.000
Free System Page Table Entries	16727528.000	16727528.000	16727528.000
Transition Pages RePurposed/sec	0.475	0.000	639.437
Pool Nonpaged Bytes	177441915.279	176197632.000	178237440.000
Pool Paged Bytes	118658890.288	118636544.000	118718464.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

4/17/2009 3:07:47 AM -- Jetstress testing begins ...
4/17/2009 3:07:47 AM -- Prepare testing begins ...
4/17/2009 3:08:23 AM -- Attaching databases ...
4/17/2009 3:08:23 AM -- Prepare testing ends.
4/17/2009 3:08:23 AM -- Dispatching transactions begins ...
4/17/2009 3:08:23 AM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
4/17/2009 3:08:23 AM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)
4/17/2009 3:09:02 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.1 seconds/read).
4/17/2009 3:09:02 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.1 seconds/write).
4/17/2009 3:09:04 AM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
4/17/2009 3:09:04 AM -- Performance logging begins (interval: 15000 ms).
4/17/2009 3:09:04 AM -- Attaining prerequisites:
4/17/2009 3:49:59 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 8701338000.0 (lower bound: 8697308000.0, upper bound: none)
4/18/2009 3:50:00 AM -- Performance logging ends.
4/19/2009 8:10:42 PM -- JetInterop batch transaction stats: 178805, 179212, 179255, 178822, 179589, 178783, 179217, 179485, 178408, 178119, 178191, 178423, 178891, 178616, 178691, 178976, 178971, 179147, 178850, 179389, 179090, 179084, 178988, 179155, 178808, 178681, 179736, 178854, 178304, 178709, 179361, 178734, 178908, 178989, 178733, and 178499.
4/19/2009 8:10:42 PM -- Dispatching transactions ends.
4/19/2009 8:10:42 PM -- Shutting down databases ...
4/19/2009 8:10:53 PM -- Instance3392.1 (complete), Instance3392.2 (complete), Instance3392.3 (complete), Instance3392.4 (complete), Instance3392.5 (complete), Instance3392.6 (complete), Instance3392.7 (complete), Instance3392.8 (complete), Instance3392.9 (complete), Instance3392.10 (complete), Instance3392.11 (complete), Instance3392.12 (complete), Instance3392.13 (complete), Instance3392.14 (complete), Instance3392.15

(complete), Instance3392.16 (complete), Instance3392.17 (complete), Instance3392.18 (complete), Instance3392.19 (complete), Instance3392.20 (complete), Instance3392.21 (complete), Instance3392.22 (complete), Instance3392.23 (complete), Instance3392.24 (complete), Instance3392.25 (complete), Instance3392.26 (complete), Instance3392.27 (complete), Instance3392.28 (complete), Instance3392.29 (complete), Instance3392.30 (complete), Instance3392.31 (complete), Instance3392.32 (complete), Instance3392.33 (complete), Instance3392.34 (complete), Instance3392.35 (complete), and Instance3392.36 (complete)

4/19/2009 8:10:54 PM -- Performance logging begins (interval: 30000 ms).

4/19/2009 8:10:54 PM -- Verifying database checksums ...

4/20/2009 12:13:50 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), and C:\asgluns\sg36 (100% processed)

4/20/2009 12:13:51 AM -- Performance logging ends.

4/20/2009 12:13:51 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\DBChecksum_2009_4_19_20_10_53.blg has 485 samples.

4/20/2009 12:17:46 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\DBChecksum_2009_4_19_20_10_53.html is saved.

4/20/2009 12:17:46 AM -- Verifying log checksums ...

4/20/2009 12:17:59 AM -- 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 (3 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 (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 (2 logs passed), C:\alogluns\log34 (2 logs passed), C:\alogluns\log35 (2 logs passed), and C:\alogluns\log36 (2 logs passed)

4/20/2009 12:17:59 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\Stress_2009_4_17_3_9_2.blg has 5911 samples.

4/20/2009 12:17:59 AM -- Creating test report ...

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg1 has 0.0103 for Avg. Disk sec/Read.

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg2 has 0.0095 for Avg. Disk sec/Read.

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg3 has 0.0094 for Avg. Disk sec/Read.

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg4 has 0.0094 for Avg. Disk sec/Read.

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg5 has 0.0099 for Avg. Disk sec/Read.

4/20/2009 12:24:02 AM -- Volume C:\asgluns\sg6 has 0.0108 for Avg. Disk

sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg7 has 0.0103 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg8 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg9 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg10 has 0.0093 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg11 has 0.0099 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg12 has 0.0107 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg13 has 0.0102 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg14 has 0.0095 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg15 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg16 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg17 has 0.0098 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg18 has 0.0107 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg19 has 0.0104 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg20 has 0.0096 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg21 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg22 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg23 has 0.0098 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 02 AM -- Vol ume C: \asgl uns\sg24 has 0.0107 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg25 has 0.0103 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg26 has 0.0096 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg27 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg28 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg29 has 0.0099 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg30 has 0.0107 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg31 has 0.0103 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg32 has 0.0095 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg33 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg34 has 0.0094 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg35 has 0.0099 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \asgl uns\sg36 has 0.0107 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \al ogl uns\l og1 has 0.0003 for Avg. Di sk
 sec/Wri te.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \al ogl uns\l og1 has 0.0000 for Avg. Di sk
 sec/Read.
 4/20/2009 12: 24: 03 AM -- Vol ume C: \al ogl uns\l og2 has 0.0002 for Avg. Di sk
 sec/Wri te.

4/20/2009 12:24:03 AM -- Volume C:\alogluns\log36 has 0.0002 for Avg. Disk sec/Write.
 4/20/2009 12:24:03 AM -- Volume C:\alogluns\log36 has 0.0000 for Avg. Disk sec/Read.
 4/20/2009 12:24:03 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 4/20/2009 12:24:03 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 4/20/2009 12:24:03 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Stress\Stress_2009_4_17_3_9_2.xml has 5747 samples queried.

Stress Test Database Checksums Result: SUN211

Checksum Statistics - All

Database	Seen pages	Bad pages	Correctable pages	Wrong page no pages	File length / seconds taken
C:\asgluns\sg1\Jetstress1.edb	10901330	0	0	0	85166 MBytes / 14576 seconds
C:\asgluns\sg2\Jetstress1.edb	10903378	0	0	0	85182 MBytes / 14521 seconds
C:\asgluns\sg3\Jetstress1.edb	10895442	0	0	0	85120 MBytes / 14497 seconds
C:\asgluns\sg4\Jetstress1.edb	10893906	0	0	0	85108 MBytes / 14406 seconds
C:\asgluns\sg5\Jetstress1.edb	10902866	0	0	0	85178 MBytes / 14468 seconds
C:\asgluns\sg6\Jetstress1.edb	10897234	0	0	0	85134 MBytes / 14344 seconds
C:\asgluns\sg7\Jetstress1.edb	10900562	0	0	0	85160 MBytes / 14271 seconds
C:\asgluns\sg8\Jetstress1.edb	10905682	0	0	0	85200 MBytes / 14046 seconds
C:\asgluns\sg9\Jetstress1.edb	10895698	0	0	0	85122 MBytes / 14065 seconds
C:\asgluns\sg10\Jetstress1.edb	10896978	0	0	0	85132 MBytes / 13971 seconds
C:\asgluns\sg11\Jetstress1.edb	10900306	0	0	0	85158 MBytes / 14007 seconds
C:\asgluns\sg12\Jetstress1.edb	10901330	0	0	0	85166 MBytes / 13963 seconds
C:\asgluns\sg13\Jetstress1.edb	10895698	0	0	0	85122 MBytes / 13885 seconds
C:\asgluns\sg14\Jetstress1.edb	10899794	0	0	0	85154 MBytes / 13686 seconds
C:\asgluns\sg15\Jetstress1.edb	10896978	0	0	0	85132 MBytes / 13573 seconds
C:\asgluns\sg16\Jetstress1.edb	10895954	0	0	0	85124 MBytes / 13488 seconds
C:\asgluns\sg17\Jetstress1.edb	10898002	0	0	0	85140 MBytes / 13525 seconds

<i>Database</i>	<i>Seen pages</i>	<i>Bad pages</i>	<i>Correctable pages</i>	<i>Wrong page no pages</i>	<i>File length / seconds taken</i>
C:\asgluns\sg18\Jetstress1.edb	10899794	0	0	0	85154 MBytes / 13404 seconds
C:\asgluns\sg19\Jetstress1.edb	10900050	0	0	0	85156 MBytes / 13184 seconds
C:\asgluns\sg20\Jetstress1.edb	10897746	0	0	0	85138 MBytes / 12490 seconds
C:\asgluns\sg21\Jetstress1.edb	10902354	0	0	0	85174 MBytes / 13178 seconds
C:\asgluns\sg22\Jetstress1.edb	10896466	0	0	0	85128 MBytes / 12432 seconds
C:\asgluns\sg23\Jetstress1.edb	10901586	0	0	0	85168 MBytes / 12970 seconds
C:\asgluns\sg24\Jetstress1.edb	10901842	0	0	0	85170 MBytes / 12294 seconds
C:\asgluns\sg25\Jetstress1.edb	10896210	0	0	0	85126 MBytes / 11515 seconds
C:\asgluns\sg26\Jetstress1.edb	10899026	0	0	0	85148 MBytes / 11945 seconds
C:\asgluns\sg27\Jetstress1.edb	10902098	0	0	0	85172 MBytes / 11457 seconds
C:\asgluns\sg28\Jetstress1.edb	10900050	0	0	0	85156 MBytes / 11953 seconds
C:\asgluns\sg29\Jetstress1.edb	10898770	0	0	0	85146 MBytes / 11471 seconds
C:\asgluns\sg30\Jetstress1.edb	10899538	0	0	0	85152 MBytes / 11946 seconds
C:\asgluns\sg31\Jetstress1.edb	10898258	0	0	0	85142 MBytes / 11476 seconds
C:\asgluns\sg32\Jetstress1.edb	10900562	0	0	0	85160 MBytes / 11896 seconds
C:\asgluns\sg33\Jetstress1.edb	10897746	0	0	0	85138 MBytes / 11394 seconds
C:\asgluns\sg34\Jetstress1.edb	10900818	0	0	0	85162 MBytes / 11858 seconds
C:\asgluns\sg35\Jetstress1.edb	10901586	0	0	0	85168 MBytes / 11393 seconds
C:\asgluns\sg36\Jetstress1.edb	10897746	0	0	0	85138 MBytes / 11904 seconds
(Sum)	392373384	0	0	0	3065417 MBytes / 14576 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	0.314	0.000	93.293	0.000

<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\sg2	0.361	0.001	92.777	0.000
C:\asgluns\sg3	0.232	0.000	93.081	0.000
C:\asgluns\sg4	0.251	0.000	93.830	0.000
C:\asgluns\sg5	0.198	0.000	93.899	0.000
C:\asgluns\sg6	0.199	0.000	94.680	0.000
C:\asgluns\sg7	0.194	0.000	95.032	0.000
C:\asgluns\sg8	0.187	0.000	96.485	0.000
C:\asgluns\sg9	0.180	0.000	96.808	0.000
C:\asgluns\sg10	0.180	0.000	96.850	0.000
C:\asgluns\sg11	0.174	0.000	97.187	0.000
C:\asgluns\sg12	0.177	0.001	97.295	0.000
C:\asgluns\sg13	0.168	0.000	97.944	0.000
C:\asgluns\sg14	0.166	0.000	99.419	0.000
C:\asgluns\sg15	0.162	0.000	100.187	0.000
C:\asgluns\sg16	0.163	0.000	100.717	0.000
C:\asgluns\sg17	0.161	0.000	100.650	0.000
C:\asgluns\sg18	0.160	0.000	101.554	0.000
C:\asgluns\sg19	0.157	0.000	103.064	0.000
C:\asgluns\sg20	0.147	0.000	108.800	0.000
C:\asgluns\sg21	0.157	0.000	103.155	0.000
C:\asgluns\sg22	0.147	0.000	109.182	0.000
C:\asgluns\sg23	0.154	0.001	104.815	0.000
C:\asgluns\sg24	0.143	0.001	110.709	0.000
C:\asgluns\sg25	0.133	0.001	118.245	0.000
C:\asgluns\sg26	0.138	0.000	114.007	0.000
C:\asgluns\sg27	0.132	0.000	118.852	0.000
C:\asgluns\sg28	0.142	0.000	113.918	0.000
C:\asgluns\sg29	0.133	0.000	118.731	0.000
C:\asgluns\sg30	0.139	0.002	114.107	0.000
C:\asgluns\sg31	0.137	0.000	118.949	0.000
C:\asgluns\sg32	0.141	0.006	114.782	0.000
C:\asgluns\sg33	0.135	0.000	119.892	0.000
C:\asgluns\sg34	0.139	0.000	115.107	0.000
C:\asgluns\sg35	0.135	0.000	119.808	0.000
C:\asgluns\sg36	0.139	0.000	114.664	0.000

Memory System Performance of Checksum

Counter	Average	Minimum	Maximum
% Processor Time	5.524	3.351	6.110
Available MBytes	30618.604	30611.000	30652.000
Free System Page Table Entries	16726771.423	16725848.000	16726828.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	172686819.497	172572672.000	172720128.000
Pool Paged Bytes	127972299.216	122384384.000	133189632.000

Test Log

4/17/2009 3:07:47 AM -- Jetstress testing begins ...
4/17/2009 3:07:47 AM -- Prepare testing begins ...
4/17/2009 3:08:23 AM -- Attaching databases ...
4/17/2009 3:08:23 AM -- Prepare testing ends.
4/17/2009 3:08:23 AM -- Dispatching transactions begins ...
4/17/2009 3:08:23 AM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
4/17/2009 3:08:23 AM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)
4/17/2009 3:09:02 AM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.1 seconds/read).
4/17/2009 3:09:02 AM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.1 seconds/write).
4/17/2009 3:09:04 AM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
4/17/2009 3:09:04 AM -- Performance logging begins (interval: 15000 ms).
4/17/2009 3:09:04 AM -- Attaining prerequisites:
4/17/2009 3:49:59 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 8701338000.0 (lower bound: 8697308000.0, upper bound: none)
4/18/2009 3:50:00 AM -- Performance logging ends.
4/19/2009 8:10:42 PM -- JetInterop batch transaction stats: 178805, 179212, 179255, 178822, 179589, 178783, 179217, 179485, 178408, 178119, 178191, 178423, 178891, 178616, 178691, 178976, 178971, 179147, 178850, 179389, 179090, 179084, 178988, 179155, 178808, 178681, 179736, 178854, 178304, 178709, 179361, 178734, 178908, 178989, 178733, and 178499.
4/19/2009 8:10:42 PM -- Dispatching transactions ends.
4/19/2009 8:10:42 PM -- Shutting down databases ...
4/19/2009 8:10:53 PM -- Instance3392.1 (complete), Instance3392.2 (complete), Instance3392.3 (complete), Instance3392.4 (complete), Instance3392.5 (complete), Instance3392.6 (complete), Instance3392.7 (complete), Instance3392.8 (complete), Instance3392.9 (complete), Instance3392.10 (complete), Instance3392.11 (complete), Instance3392.12 (complete), Instance3392.13 (complete), Instance3392.14 (complete), Instance3392.15 (complete), Instance3392.16 (complete), Instance3392.17 (complete), Instance3392.18 (complete), Instance3392.19 (complete), Instance3392.20 (complete), Instance3392.21 (complete), Instance3392.22 (complete), Instance3392.23 (complete), Instance3392.24 (complete), Instance3392.25 (complete), Instance3392.26 (complete), Instance3392.27 (complete), Instance3392.28 (complete), Instance3392.29 (complete), Instance3392.30 (complete), Instance3392.31 (complete), Instance3392.32 (complete), Instance3392.33 (complete), Instance3392.34 (complete), Instance3392.35 (complete), and Instance3392.36 (complete)
4/19/2009 8:10:54 PM -- Performance logging begins (interval: 30000 ms).
4/19/2009 8:10:54 PM -- Verifying database checksums ...
4/20/2009 12:13:50 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:\asgl uns\sg9 (100% processed), C:\asgl uns\sg10 (100% processed),
 C:\asgl uns\sg11 (100% processed), C:\asgl uns\sg12 (100% processed),
 C:\asgl uns\sg13 (100% processed), C:\asgl uns\sg14 (100% processed),
 C:\asgl uns\sg15 (100% processed), C:\asgl uns\sg16 (100% processed),
 C:\asgl uns\sg17 (100% processed), C:\asgl uns\sg18 (100% processed),
 C:\asgl uns\sg19 (100% processed), C:\asgl uns\sg20 (100% processed),
 C:\asgl uns\sg21 (100% processed), C:\asgl uns\sg22 (100% processed),
 C:\asgl uns\sg23 (100% processed), C:\asgl uns\sg24 (100% processed),
 C:\asgl uns\sg25 (100% processed), C:\asgl uns\sg26 (100% processed),
 C:\asgl uns\sg27 (100% processed), C:\asgl uns\sg28 (100% processed),
 C:\asgl uns\sg29 (100% processed), C:\asgl uns\sg30 (100% processed),
 C:\asgl uns\sg31 (100% processed), C:\asgl uns\sg32 (100% processed),
 C:\asgl uns\sg33 (100% processed), C:\asgl uns\sg34 (100% processed),
 C:\asgl uns\sg35 (100% processed), and C:\asgl uns\sg36 (100% processed)
 4/20/2009 12: 13: 51 AM -- Performance Logging ends.
 4/20/2009 12: 13: 51 AM -- C:\ESRP Testi ng\AMS2100 Resul ts_1GB_Heavy\11200
 users\Stress\DBChecksum_2009_4_19_20_10_53.bl g has 485 sampl es.

Streaming Backup Test Result: SUN211

Streaming Backup Statistics - All

<i>Database Instance</i>	<i>Database Size (MBytes)</i>	<i>Elapsed Backup Time</i>	<i>MBytes Transferred/sec</i>
Instance3420.1	85164.65	04:04:15	5.81
Instance3420.2	85180.65	04:00:53	5.89
Instance3420.3	85118.65	04:01:11	5.88
Instance3420.4	85106.65	03:58:25	5.95
Instance3420.5	85176.65	04:04:11	5.81
Instance3420.6	85132.65	04:01:04	5.89
Instance3420.7	85158.65	04:03:13	5.84
Instance3420.8	85198.65	04:01:40	5.88
Instance3420.9	85120.65	04:01:05	5.88
Instance3420.10	85130.65	03:59:15	5.93
Instance3420.11	85156.65	04:03:31	5.83
Instance3420.12	85164.65	04:00:29	5.90
Instance3420.13	85120.65	04:01:07	5.88
Instance3420.14	85152.65	03:59:39	5.92
Instance3420.15	85130.65	03:58:51	5.94
Instance3420.16	85122.65	03:58:06	5.96
Instance3420.17	85138.65	04:01:24	5.88
Instance3420.18	85152.65	04:02:02	5.86
Instance3420.19	85154.65	04:02:24	5.85
Instance3420.20	85136.65	03:54:32	6.05
Instance3420.21	85172.65	04:00:48	5.89
Instance3420.22	85126.65	03:52:03	6.11
Instance3420.23	85166.65	04:03:07	5.84
Instance3420.24	85168.65	03:53:33	6.08
Instance3420.25	85124.65	03:34:36	6.61

<i>Database Instance</i>	<i>Database Size (MBytes)</i>	<i>Elapsed Backup Time</i>	<i>MBytes Transferred/sec</i>
Instance3420.26	85146.65	03:41:44	6.40
Instance3420.27	85170.65	03:31:56	6.70
Instance3420.28	85154.65	03:38:38	6.49
Instance3420.29	85144.65	03:35:04	6.60
Instance3420.30	85150.65	03:42:49	6.37
Instance3420.31	85140.65	03:34:49	6.61
Instance3420.32	85158.65	03:41:01	6.42
Instance3420.33	85136.65	03:31:52	6.70
Instance3420.34	85160.65	03:37:12	6.53
Instance3420.35	85166.65	03:35:19	6.59
Instance3420.36	85136.65	03:41:38	6.40

Jetstress System Parameters

<i>Thread count</i>	2 (per-storage group)
<i>Log buffers</i>	9000
<i>Minimum database cache</i>	1152.0 MB
<i>Maximum database cache</i>	9216.0 MB
<i>Insert operations</i>	40%
<i>Delete operations</i>	30%
<i>Replace operations</i>	5%
<i>Read operations</i>	25%
<i>Lazy commits</i>	55%

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)	0.022	0.000	46.383	0.000	(n/a)
Database (C:\asgluns\sg2)	0.024	0.000	46.590	0.003	(n/a)
Database (C:\asgluns\sg3)	0.022	0.000	46.545	0.003	(n/a)
Database (C:\asgluns\sg4)	0.021	0.000	46.552	0.003	(n/a)
Database (C:\asgluns\sg5)	0.022	0.000	46.407	0.000	(n/a)
Database (C:\asgluns\sg6)	0.023	0.000	46.574	0.003	(n/a)

<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\sg7)	0.022	0.000	46.598	0.002	(n/a)
Database (C:\asgluns\sg8)	0.026	0.000	46.618	0.003	(n/a)
Database (C:\asgluns\sg9)	0.022	0.000	46.572	0.003	(n/a)
Database (C:\asgluns\sg10)	0.022	0.000	46.582	0.003	(n/a)
Database (C:\asgluns\sg11)	0.022	0.000	46.594	0.002	(n/a)
Database (C:\asgluns\sg12)	0.022	0.000	46.597	0.003	(n/a)
Database (C:\asgluns\sg13)	0.022	0.000	46.572	0.003	(n/a)
Database (C:\asgluns\sg14)	0.023	0.000	46.573	0.003	(n/a)
Database (C:\asgluns\sg15)	0.021	0.000	46.575	0.003	(n/a)
Database (C:\asgluns\sg16)	0.021	0.000	46.568	0.003	(n/a)
Database (C:\asgluns\sg17)	0.022	0.000	46.584	0.003	(n/a)
Database (C:\asgluns\sg18)	0.026	0.000	46.579	0.003	(n/a)
Database (C:\asgluns\sg19)	0.022	0.000	46.577	0.002	(n/a)
Database (C:\asgluns\sg20)	0.021	0.000	46.583	0.003	(n/a)
Database (C:\asgluns\sg21)	0.022	0.000	46.590	0.003	(n/a)
Database (C:\asgluns\sg22)	0.020	0.000	46.565	0.003	(n/a)
Database (C:\asgluns\sg23)	0.022	0.000	46.584	0.003	(n/a)
Database (C:\asgluns\sg24)	0.021	0.000	46.598	0.003	(n/a)
Database (C:\asgluns\sg25)	0.017	0.000	46.569	0.003	(n/a)
Database (C:\asgluns\sg26)	0.018	0.000	46.581	0.003	(n/a)
Database (C:\asgluns\sg27)	0.016	0.000	46.594	0.003	(n/a)
Database (C:\asgluns\sg28)	0.017	0.000	46.584	0.003	(n/a)

<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\sg29)	0.017	0.000	46.581	0.003	(n/a)
Database (C:\asgluns\sg30)	0.018	0.000	46.600	0.003	(n/a)
Database (C:\asgluns\sg31)	0.017	0.000	46.567	0.003	(n/a)
Database (C:\asgluns\sg32)	0.018	0.000	46.572	0.003	(n/a)
Database (C:\asgluns\sg33)	0.016	0.000	46.563	0.003	(n/a)
Database (C:\asgluns\sg34)	0.017	0.000	46.572	0.003	(n/a)
Database (C:\asgluns\sg35)	0.017	0.000	46.575	0.003	(n/a)
Database (C:\asgluns\sg36)	0.018	0.000	46.562	0.003	(n/a)
Log (C:\alogluns\log1)	0.000	0.000	0.000	0.000	0.000
Log (C:\alogluns\log2)	0.000	0.000	0.000	0.002	22.475
Log (C:\alogluns\log3)	0.000	0.000	0.000	0.002	20.982
Log (C:\alogluns\log4)	0.000	0.000	0.000	0.002	22.475
Log (C:\alogluns\log5)	0.000	0.000	0.000	0.000	0.000
Log (C:\alogluns\log6)	0.000	0.000	0.000	0.002	21.023
Log (C:\alogluns\log7)	0.000	0.000	0.000	0.002	11.940
Log (C:\alogluns\log8)	0.000	0.000	0.000	0.002	21.702
Log (C:\alogluns\log9)	0.000	0.000	0.000	0.002	21.023
Log (C:\alogluns\log10)	0.000	0.000	0.000	0.002	20.368
Log (C:\alogluns\log11)	0.000	0.000	0.000	0.001	5.150
Log (C:\alogluns\log12)	0.000	0.000	0.000	0.002	22.179
Log (C:\alogluns\log13)	0.000	0.000	0.000	0.002	21.351
Log (C:\alogluns\log14)	0.000	0.000	0.000	0.002	21.023
Log (C:\alogluns\log15)	0.000	0.000	0.000	0.002	14.398
Log (C:\alogluns\log16)	0.000	0.000	0.000	0.002	21.023
Log (C:\alogluns\log17)	0.000	0.000	0.000	0.002	22.179
Log (C:\alogluns\log18)	0.000	0.000	0.000	0.002	13.169
Log (C:\alogluns\log19)	0.000	0.000	0.000	0.002	5.970
Log (C:\alogluns\log20)	0.000	0.000	0.000	0.002	22.179
Log (C:\alogluns\log21)	0.000	0.000	0.000	0.002	14.398
Log (C:\alogluns\log22)	0.000	0.000	0.000	0.002	21.023
Log (C:\alogluns\log23)	0.000	0.000	0.000	0.002	12.595

<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>
Log (C:\alogluns\log24)	0.000	0.000	0.000	0.002	23.018
Log (C:\alogluns\log25)	0.000	0.000	0.000	0.002	12.744
Log (C:\alogluns\log26)	0.000	0.000	0.000	0.002	20.368
Log (C:\alogluns\log27)	0.000	0.000	0.000	0.002	22.179
Log (C:\alogluns\log28)	0.000	0.000	0.000	0.002	20.859
Log (C:\alogluns\log29)	0.000	0.000	0.000	0.002	21.105
Log (C:\alogluns\log30)	0.000	0.000	0.000	0.002	14.398
Log (C:\alogluns\log31)	0.000	0.000	0.000	0.002	14.291
Log (C:\alogluns\log32)	0.000	0.000	0.000	0.002	21.597
Log (C:\alogluns\log33)	0.000	0.000	0.000	0.002	22.475
Log (C:\alogluns\log34)	0.000	0.000	0.000	0.002	20.024
Log (C:\alogluns\log35)	0.000	0.000	0.000	0.002	14.398
Log (C:\alogluns\log36)	0.000	0.000	0.000	0.002	21.023

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.605	0.651	7.089
Available MBytes	30571.916	30568.000	30573.000
Free System Page Table Entries	16727429.940	16727401.000	16727430.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	172173164.813	172048384.000	173903872.000
Pool Paged Bytes	125600324.337	122511360.000	127389696.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

4/20/2009 12: 53: 24 AM -- Jetstress testing begins ...
4/20/2009 12: 53: 24 AM -- Prepare testing begins ...
4/20/2009 12: 54: 00 AM -- Attaching databases ...
4/20/2009 12: 54: 00 AM -- Prepare testing ends.
4/20/2009 12: 54: 38 AM -- Performance logging begins (interval: 30000 ms).
4/20/2009 12: 54: 38 AM -- Streaming backup databases ...
4/20/2009 4: 58: 54 AM -- Performance logging ends.
4/20/2009 4: 58: 54 AM -- Instance3420.1 (100% processed), Instance3420.2 (100% processed), Instance3420.3 (100% processed), Instance3420.4 (100% processed), Instance3420.5 (100% processed), Instance3420.6 (100% processed), Instance3420.7 (100% processed), Instance3420.8 (100% processed), Instance3420.9 (100% processed), Instance3420.10 (100% processed), Instance3420.11 (100% processed), Instance3420.12 (100% processed), Instance3420.13 (100% processed), Instance3420.14 (100% processed), Instance3420.15 (100% processed), Instance3420.16 (100% processed), Instance3420.17 (100% processed), Instance3420.18 (100% processed), Instance3420.19 (100% processed), Instance3420.20 (100% processed), Instance3420.21 (100% processed), Instance3420.22 (100% processed), Instance3420.23 (100% processed), Instance3420.24 (100% processed), Instance3420.25 (100% processed), Instance3420.26 (100% processed), Instance3420.27 (100% processed), Instance3420.28 (100% processed), Instance3420.29 (100% processed), Instance3420.30 (100% processed), Instance3420.31 (100% processed), Instance3420.32 (100% processed), Instance3420.33 (100% processed), Instance3420.34 (100% processed), Instance3420.35 (100% processed), and Instance3420.36 (100% processed)
4/20/2009 4: 58: 55 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Streaming Backup\StreamingBackup_2009_4_20_0_54_0.blg has 487 samples.
4/20/2009 4: 58: 55 AM -- Creating test report ...

Soft Recovery Test Result: SUN211

Soft Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2696.1	510	1478.25
Instance2696.2	517	1456.75
Instance2696.3	504	1454
Instance2696.4	511	1425.25
Instance2696.5	525	1482.5
Instance2696.6	510	1485
Instance2696.7	517	1491.5

<i>Database Instance</i>	<i>Log files replayed</i>	<i>Elapsed seconds</i>
Instance2696.8	514	1463.75
Instance2696.9	515	1470
Instance2696.10	507	1427.25
Instance2696.11	507	1475.75
Instance2696.12	517	1487.25
Instance2696.13	521	1484.5
Instance2696.14	516	1446.75
Instance2696.15	500	1429.75
Instance2696.16	513	1441.25
Instance2696.17	508	1451.75
Instance2696.18	512	1470
Instance2696.19	514	1490
Instance2696.20	510	1456.5
Instance2696.21	514	1473.25
Instance2696.22	505	1434
Instance2696.23	517	1468.5
Instance2696.24	507	1490.25
Instance2696.25	505	1475.75
Instance2696.26	514	1457.25
Instance2696.27	513	1461
Instance2696.28	526	1466.25
Instance2696.29	522	1487.25
Instance2696.30	514	1486.25
Instance2696.31	515	1489.25
Instance2696.32	513	1453.25
Instance2696.33	502	1449
Instance2696.34	512	1449
Instance2696.35	506	1470
Instance2696.36	522	1490.25

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)	0.184	0.021	180.178	3.589	(n/a)
Database (C:\asgluns\sg2)	0.109	0.009	180.428	3.638	(n/a)

<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\sg3)	0.104	0.008	177.481	3.562	(n/a)
Database (C:\asgluns\sg4)	0.095	0.009	182.582	3.631	(n/a)
Database (C:\asgluns\sg5)	0.128	0.021	183.676	3.693	(n/a)
Database (C:\asgluns\sg6)	0.199	0.018	177.623	3.596	(n/a)
Database (C:\asgluns\sg7)	0.161	0.015	181.286	3.604	(n/a)
Database (C:\asgluns\sg8)	0.114	0.009	181.581	3.622	(n/a)
Database (C:\asgluns\sg9)	0.105	0.009	179.780	3.621	(n/a)
Database (C:\asgluns\sg10)	0.102	0.010	179.068	3.602	(n/a)
Database (C:\asgluns\sg11)	0.127	0.011	180.493	3.585	(n/a)
Database (C:\asgluns\sg12)	0.198	0.021	181.456	3.641	(n/a)
Database (C:\asgluns\sg13)	0.157	0.015	183.992	3.663	(n/a)
Database (C:\asgluns\sg14)	0.109	0.008	181.560	3.643	(n/a)
Database (C:\asgluns\sg15)	0.100	0.009	179.177	3.552	(n/a)
Database (C:\asgluns\sg16)	0.106	0.009	178.334	3.617	(n/a)
Database (C:\asgluns\sg17)	0.136	0.012	180.833	3.597	(n/a)
Database (C:\asgluns\sg18)	0.200	0.014	177.996	3.599	(n/a)
Database (C:\asgluns\sg19)	0.167	0.017	181.962	3.598	(n/a)
Database (C:\asgluns\sg20)	0.148	0.012	178.787	3.603	(n/a)
Database (C:\asgluns\sg21)	0.105	0.009	181.487	3.613	(n/a)
Database (C:\asgluns\sg22)	0.106	0.008	179.246	3.588	(n/a)
Database (C:\asgluns\sg23)	0.117	0.010	182.241	3.639	(n/a)
Database (C:\asgluns\sg24)	0.210	0.019	177.438	3.554	(n/a)

<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\sg25)	0.188	0.016	177.318	3.558	(n/a)
Database (C:\asgluns\sg26)	0.115	0.009	183.611	3.618	(n/a)
Database (C:\asgluns\sg27)	0.130	0.009	179.771	3.620	(n/a)
Database (C:\asgluns\sg28)	0.105	0.007	181.694	3.700	(n/a)
Database (C:\asgluns\sg29)	0.148	0.013	183.007	3.663	(n/a)
Database (C:\asgluns\sg30)	0.207	0.018	178.012	3.620	(n/a)
Database (C:\asgluns\sg31)	0.193	0.018	180.704	3.598	(n/a)
Database (C:\asgluns\sg32)	0.127	0.010	180.220	3.610	(n/a)
Database (C:\asgluns\sg33)	0.117	0.008	179.951	3.533	(n/a)
Database (C:\asgluns\sg34)	0.105	0.009	180.947	3.649	(n/a)
Database (C:\asgluns\sg35)	0.137	0.011	181.438	3.571	(n/a)
Database (C:\asgluns\sg36)	0.206	0.016	182.461	3.622	(n/a)
Log (C:\alogluns\log1)	0.012	0.005	11.317	1.116	4251.369
Log (C:\alogluns\log2)	0.011	0.004	11.489	1.122	4228.219
Log (C:\alogluns\log3)	0.012	0.005	11.183	1.104	4196.828
Log (C:\alogluns\log4)	0.010	0.005	11.443	1.104	4119.043
Log (C:\alogluns\log5)	0.012	0.004	11.619	1.145	4242.046
Log (C:\alogluns\log6)	0.012	0.004	11.283	1.118	4238.439
Log (C:\alogluns\log7)	0.013	0.005	11.425	1.096	4236.832
Log (C:\alogluns\log8)	0.011	0.004	11.408	1.131	4146.477
Log (C:\alogluns\log9)	0.013	0.004	11.412	1.116	4261.720
Log (C:\alogluns\log10)	0.011	0.004	11.366	1.109	4156.507
Log (C:\alogluns\log11)	0.013	0.005	11.285	1.109	4216.979
Log (C:\alogluns\log12)	0.012	0.004	11.498	1.120	4194.536
Log (C:\alogluns\log13)	0.012	0.004	11.523	1.149	4233.477
Log (C:\alogluns\log14)	0.012	0.004	11.567	1.121	4157.103
Log (C:\alogluns\log15)	0.012	0.005	11.204	1.122	4152.312
Log (C:\alogluns\log16)	0.010	0.005	11.465	1.104	4104.622
Log (C:\alogluns\log17)	0.012	0.005	11.354	1.103	4172.062

<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>
Log (C:\alogluns\log18)	0.011	0.004	11.352	1.110	4217.803
Log (C:\alogluns\log19)	0.014	0.004	11.390	1.107	4161.571
Log (C:\alogluns\log20)	0.011	0.005	11.345	1.116	4167.956
Log (C:\alogluns\log21)	0.013	0.005	11.387	1.107	4273.430
Log (C:\alogluns\log22)	0.011	0.004	11.326	1.087	4131.053
Log (C:\alogluns\log23)	0.013	0.004	11.499	1.140	4203.562
Log (C:\alogluns\log24)	0.012	0.004	11.218	1.075	4188.380
Log (C:\alogluns\log25)	0.014	0.005	11.153	1.108	4242.201
Log (C:\alogluns\log26)	0.012	0.005	11.422	1.128	4212.922
Log (C:\alogluns\log27)	0.012	0.004	11.416	1.132	4221.068
Log (C:\alogluns\log28)	0.012	0.004	11.686	1.150	4188.268
Log (C:\alogluns\log29)	0.013	0.005	11.553	1.131	4193.668
Log (C:\alogluns\log30)	0.013	0.005	11.409	1.135	4216.163
Log (C:\alogluns\log31)	0.013	0.005	11.422	1.104	4249.106
Log (C:\alogluns\log32)	0.011	0.005	11.379	1.128	4187.263
Log (C:\alogluns\log33)	0.014	0.005	11.152	1.103	4203.032
Log (C:\alogluns\log34)	0.011	0.004	11.473	1.110	4165.409
Log (C:\alogluns\log35)	0.014	0.004	11.248	1.120	4189.830
Log (C:\alogluns\log36)	0.013	0.004	11.515	1.095	4254.257

Host System Performance

<i>Counter</i>	<i>Average</i>	<i>Minimum</i>	<i>Maximum</i>
% Processor Time	13.305	0.000	62.122
Available MBytes	22333.877	21049.000	30408.000
Free System Page Table Entries	16727528.000	16727528.000	16727528.000
Transition Pages RePurposed/sec	111.425	0.000	6631.766
Pool Nonpaged Bytes	179572161.123	176250880.000	182181888.000
Pool Paged Bytes	118100111.719	115163136.000	118226944.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

4/16/2009 8:38:22 PM -- Jetstress testing begins ...
4/16/2009 8:38:22 PM -- Prepare testing begins ...
4/16/2009 8:38:58 PM -- Attaching databases ...
4/16/2009 8:38:58 PM -- Prepare testing ends.
4/16/2009 8:38:58 PM -- Dispatching transactions begins ...
4/16/2009 8:38:59 PM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
4/16/2009 8:38:59 PM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)

4/16/2009 8:39:37 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).

4/16/2009 8:39:37 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).

4/16/2009 8:39:39 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.

4/16/2009 8:39:39 PM -- Performance logging begins (interval: 15000 ms).

4/16/2009 8:39:39 PM -- Generating log files ...

4/17/2009 1:15:57 AM -- C:\alogluns\log1 (102.2% generated), C:\alogluns\log2 (103.6% generated), C:\alogluns\log3 (101.0% generated), C:\alogluns\log4 (102.4% generated), C:\alogluns\log5 (105.2% generated), C:\alogluns\log6 (102.2% generated), C:\alogluns\log7 (103.6% generated), C:\alogluns\log8 (103.0% generated), C:\alogluns\log9 (103.2% generated), C:\alogluns\log10 (101.6% generated), C:\alogluns\log11 (101.6% generated), C:\alogluns\log12 (103.6% generated), C:\alogluns\log13 (104.4% generated), C:\alogluns\log14 (103.4% generated), C:\alogluns\log15 (100.2% generated), C:\alogluns\log16 (102.8% generated), C:\alogluns\log17 (101.8% generated), C:\alogluns\log18 (102.6% generated), C:\alogluns\log19 (103.0% generated), C:\alogluns\log20 (102.2% generated), C:\alogluns\log21 (103.0% generated), C:\alogluns\log22 (101.0% generated), C:\alogluns\log23 (103.6% generated), C:\alogluns\log24 (101.6% generated), C:\alogluns\log25 (101.2% generated), C:\alogluns\log26 (103.0% generated), C:\alogluns\log27 (102.8% generated), C:\alogluns\log28 (105.4% generated), C:\alogluns\log29 (104.6% generated), C:\alogluns\log30 (103.0% generated), C:\alogluns\log31 (103.2% generated), C:\alogluns\log32 (102.8% generated), C:\alogluns\log33 (100.6% generated), C:\alogluns\log34 (102.6% generated), C:\alogluns\log35 (101.4% generated), and C:\alogluns\log36 (104.6% generated)

4/17/2009 1:15:58 AM -- Performance logging ends.

4/17/2009 1:15:58 AM -- JetInterop batch transaction stats: 12991, 13026, 12924, 13119, 13236, 13099, 13314, 13212, 13132, 12905, 13024, 13165, 13226, 13042, 12900, 13044, 13060, 12997, 13064, 13099, 13129, 12893, 13180, 13069, 12871, 13209, 13069, 13218, 13242, 12966, 13095, 13205, 13075, 12984, 13221, and 13288.

4/17/2009 1:15:59 AM -- Dispatching transactions ends.

4/17/2009 1:15:59 AM -- Shutting down databases ...

4/17/2009 1:16:09 AM -- Instance2696.1 (complete), Instance2696.2 (complete), Instance2696.3 (complete), Instance2696.4 (complete), Instance2696.5 (complete), Instance2696.6 (complete), Instance2696.7 (complete), Instance2696.8 (complete), Instance2696.9 (complete), Instance2696.10 (complete), Instance2696.11 (complete), Instance2696.12 (complete), Instance2696.13 (complete), Instance2696.14 (complete), Instance2696.15 (complete), Instance2696.16 (complete), Instance2696.17 (complete), Instance2696.18 (complete), Instance2696.19 (complete), Instance2696.20 (complete), Instance2696.21 (complete), Instance2696.22 (complete), Instance2696.23 (complete), Instance2696.24 (complete), Instance2696.25 (complete), Instance2696.26 (complete), Instance2696.27 (complete), Instance2696.28 (complete), Instance2696.29 (complete), Instance2696.30 (complete), Instance2696.31 (complete), Instance2696.32 (complete), Instance2696.33 (complete), Instance2696.34 (complete), Instance2696.35 (complete), and Instance2696.36 (complete)

4/17/2009 1:16:09 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\Performance_2009_4_16_20_39_37.blg has 1102 samples.

4/17/2009 1:16:09 AM -- Creating test report ...

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg1 has 0.0104 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg2 has 0.0094 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg3 has 0.0094 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg4 has 0.0093 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg5 has 0.0096 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg6 has 0.0105 for Avg. Disk sec/Read.

4/17/2009 1:17:01 AM -- Volume C:\asgluns\sg7 has 0.0104 for Avg. Disk sec/Read.

4/17/2009 1: 17: 01 AM -- Vol ume C: \asgl uns\sg8 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 01 AM -- Vol ume C: \asgl uns\sg9 has 0. 0093 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 01 AM -- Vol ume C: \asgl uns\sg10 has 0. 0093 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 01 AM -- Vol ume C: \asgl uns\sg11 has 0. 0096 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg12 has 0. 0107 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg13 has 0. 0103 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg14 has 0. 0096 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg15 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg16 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg17 has 0. 0098 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg18 has 0. 0106 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg19 has 0. 0102 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg20 has 0. 0095 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg21 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg22 has 0. 0095 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg23 has 0. 0098 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg24 has 0. 0108 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg25 has 0. 0102 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg26 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg27 has 0. 0093 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg28 has 0. 0092 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg29 has 0. 0097 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg30 has 0. 0109 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg31 has 0. 0102 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg32 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg33 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg34 has 0. 0094 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg35 has 0. 0098 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \asgl uns\sg36 has 0. 0107 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \al ogl uns\l og1 has 0. 0003 for Avg. Di sk
 sec/Wri te.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \al ogl uns\l og1 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \al ogl uns\l og2 has 0. 0002 for Avg. Di sk
 sec/Wri te.
 4/17/2009 1: 17: 02 AM -- Vol ume C: \al ogl uns\l og2 has 0. 0000 for Avg. Di sk
 sec/Read.
 4/17/2009 1: 17: 03 AM -- Vol ume C: \al ogl uns\l og3 has 0. 0003 for Avg. Di sk

sec/Read.
 4/17/2009 1:17:03 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 4/17/2009 1:17:03 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
 4/17/2009 1:17:03 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\Performance_2009_4_16_20_39_37.xml has 1101 samples queried.
 4/17/2009 1:17:05 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\Performance_2009_4_16_20_39_37.html is saved.
 4/17/2009 2:00:58 AM -- Performance Logging begins (interval: 4000 ms).
 4/17/2009 2:00:58 AM -- Recovering databases ...
 4/17/2009 2:25:51 AM -- Performance Logging ends.
 4/17/2009 2:25:51 AM -- Instance2696.1 (1478.25), Instance2696.2 (1456.75), Instance2696.3 (1454), Instance2696.4 (1425.25), Instance2696.5 (1482.5), Instance2696.6 (1485), Instance2696.7 (1491.5), Instance2696.8 (1463.75), Instance2696.9 (1470), Instance2696.10 (1427.25), Instance2696.11 (1475.75), Instance2696.12 (1487.25), Instance2696.13 (1484.5), Instance2696.14 (1446.75), Instance2696.15 (1429.75), Instance2696.16 (1441.25), Instance2696.17 (1451.75), Instance2696.18 (1470), Instance2696.19 (1490), Instance2696.20 (1456.5), Instance2696.21 (1473.25), Instance2696.22 (1434), Instance2696.23 (1468.5), Instance2696.24 (1490.25), Instance2696.25 (1475.75), Instance2696.26 (1457.25), Instance2696.27 (1461), Instance2696.28 (1466.25), Instance2696.29 (1487.25), Instance2696.30 (1486.25), Instance2696.31 (1489.25), Instance2696.32 (1453.25), Instance2696.33 (1449), Instance2696.34 (1449), Instance2696.35 (1470), and Instance2696.36 (1490.25)
 4/17/2009 2:25:52 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\SoftRecovery_2009_4_17_2_0_33.blg has 342 samples.
 4/17/2009 2:25:52 AM -- Creating test report ...

Soft Recovery Test Performance Result: SUN211

Test Summary

Overall Test Result	Fail
Machine Name	SUN211
Test Description	
Test Start Time	4/16/2009 8:38:22 PM
Test End Time	4/17/2009 1:16:09 AM
Jetstress Version	08.02.0060.000
Ese Version	08.01.0240.005
Operating System	Microsoft Windows Server 2003 R2 Service Pack 2 (5.2.3790.131072)
Performance Log	C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\Performance_2009_4_16_20_39_37.blg

Test Issues

Fail C:\asgluns\sg30 has 9 maximum database read latency errors.

Database Sizing and Throughput

Achieved I/O per Second	1654.619
Capacity Percentage	100%

Throughput Percentage	100%
Initial database size	3026793332736
Final database size	3041454522368
Database files (count)	36

Jetstress System Parameters

Thread count	2 (per-storage group)
Log buffers	9000
Minimum database cache	1152.0 MB
Maximum database cache	9216.0 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)	0.010	0.001	25.353	20.386	(n/a)
Database (C:\asgluns\sg2)	0.009	0.001	25.259	20.468	(n/a)
Database (C:\asgluns\sg3)	0.009	0.001	25.233	20.171	(n/a)
Database (C:\asgluns\sg4)	0.009	0.001	25.582	20.658	(n/a)
Database (C:\asgluns\sg5)	0.010	0.001	25.808	20.921	(n/a)
Database (C:\asgluns\sg6)	0.011	0.001	25.376	20.283	(n/a)
Database (C:\asgluns\sg7)	0.010	0.001	25.911	20.753	(n/a)
Database (C:\asgluns\sg8)	0.009	0.001	25.666	20.491	(n/a)
Database (C:\asgluns\sg9)	0.009	0.001	25.256	20.440	(n/a)
Database (C:\asgluns\sg10)	0.009	0.001	25.080	20.265	(n/a)
Database (C:\asgluns\sg11)	0.010	0.001	25.278	20.405	(n/a)

<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\sg12)	0.011	0.001	25.609	20.576	(n/a)
Database (C:\asgluns\sg13)	0.010	0.001	25.748	20.795	(n/a)
Database (C:\asgluns\sg14)	0.010	0.001	25.413	20.487	(n/a)
Database (C:\asgluns\sg15)	0.009	0.001	25.178	20.143	(n/a)
Database (C:\asgluns\sg16)	0.009	0.001	25.175	20.470	(n/a)
Database (C:\asgluns\sg17)	0.010	0.001	25.392	20.519	(n/a)
Database (C:\asgluns\sg18)	0.011	0.001	25.195	20.296	(n/a)
Database (C:\asgluns\sg19)	0.010	0.001	25.439	20.623	(n/a)
Database (C:\asgluns\sg20)	0.010	0.001	25.339	20.315	(n/a)
Database (C:\asgluns\sg21)	0.009	0.001	25.561	20.612	(n/a)
Database (C:\asgluns\sg22)	0.010	0.001	25.321	20.216	(n/a)
Database (C:\asgluns\sg23)	0.010	0.001	25.725	20.780	(n/a)
Database (C:\asgluns\sg24)	0.011	0.001	25.485	20.303	(n/a)
Database (C:\asgluns\sg25)	0.010	0.001	24.968	19.914	(n/a)
Database (C:\asgluns\sg26)	0.009	0.001	25.911	20.956	(n/a)
Database (C:\asgluns\sg27)	0.009	0.001	25.364	20.657	(n/a)
Database (C:\asgluns\sg28)	0.009	0.001	25.498	20.773	(n/a)
Database (C:\asgluns\sg29)	0.010	0.001	25.629	20.873	(n/a)
Database (C:\asgluns\sg30)	0.011	0.001	25.173	20.232	(n/a)
Database (C:\asgluns\sg31)	0.010	0.001	25.293	20.510	(n/a)
Database (C:\asgluns\sg32)	0.009	0.001	25.565	20.546	(n/a)
Database (C:\asgluns\sg33)	0.009	0.001	25.505	20.448	(n/a)

<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\sg34)	0.009	0.001	25.109	20.403	(n/a)
Database (C:\asgluns\sg35)	0.010	0.001	25.903	20.650	(n/a)
Database (C:\asgluns\sg36)	0.011	0.001	26.009	20.974	(n/a)
Log (C:\alogluns\log1)	0.000	0.000	0.000	16.856	4241.473
Log (C:\alogluns\log2)	0.000	0.000	0.000	17.109	4250.979
Log (C:\alogluns\log3)	0.000	0.000	0.000	16.610	4199.518
Log (C:\alogluns\log4)	0.000	0.000	0.000	17.056	4140.614
Log (C:\alogluns\log5)	0.000	0.000	0.000	17.193	4316.414
Log (C:\alogluns\log6)	0.000	0.000	0.000	16.847	4199.517
Log (C:\alogluns\log7)	0.000	0.000	0.000	17.085	4185.132
Log (C:\alogluns\log8)	0.000	0.000	0.000	16.965	4223.689
Log (C:\alogluns\log9)	0.000	0.000	0.000	16.891	4218.724
Log (C:\alogluns\log10)	0.000	0.000	0.000	16.718	4213.485
Log (C:\alogluns\log11)	0.000	0.000	0.000	16.813	4227.752
Log (C:\alogluns\log12)	0.000	0.000	0.000	17.127	4218.986
Log (C:\alogluns\log13)	0.000	0.000	0.000	17.178	4197.998
Log (C:\alogluns\log14)	0.000	0.000	0.000	16.995	4184.978
Log (C:\alogluns\log15)	0.000	0.000	0.000	16.586	4217.325
Log (C:\alogluns\log16)	0.000	0.000	0.000	16.833	4200.286
Log (C:\alogluns\log17)	0.000	0.000	0.000	16.897	4182.612
Log (C:\alogluns\log18)	0.000	0.000	0.000	16.797	4247.223
Log (C:\alogluns\log19)	0.000	0.000	0.000	17.021	4205.796
Log (C:\alogluns\log20)	0.000	0.000	0.000	16.870	4249.710
Log (C:\alogluns\log21)	0.000	0.000	0.000	17.013	4206.649
Log (C:\alogluns\log22)	0.000	0.000	0.000	16.676	4225.060
Log (C:\alogluns\log23)	0.000	0.000	0.000	17.103	4211.473
Log (C:\alogluns\log24)	0.000	0.000	0.000	16.831	4209.100
Log (C:\alogluns\log25)	0.000	0.000	0.000	16.635	4223.985
Log (C:\alogluns\log26)	0.000	0.000	0.000	17.163	4214.128
Log (C:\alogluns\log27)	0.000	0.000	0.000	16.913	4245.274
Log (C:\alogluns\log28)	0.000	0.000	0.000	17.192	4284.085
Log (C:\alogluns\log29)	0.000	0.000	0.000	17.196	4179.486
Log (C:\alogluns\log30)	0.000	0.000	0.000	16.819	4280.928
Log (C:\alogluns\log31)	0.000	0.000	0.000	16.959	4265.971

<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>
Log (C:\alogluns\log32)	0.000	0.000	0.000	16.908	4231.327
Log (C:\alogluns\log33)	0.000	0.000	0.000	16.647	4204.765
Log (C:\alogluns\log34)	0.000	0.000	0.000	16.847	4266.590
Log (C:\alogluns\log35)	0.000	0.000	0.000	16.877	4186.405
Log (C:\alogluns\log36)	0.000	0.000	0.000	17.307	4207.822

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.751	0.000	14.627
Available MBytes	22166.807	21065.000	30428.000
Free System Page Table Entries	16727528.000	16727528.000	16727528.000
Transition Pages RePurposed/sec	7.028	0.000	748.021
Pool Nonpaged Bytes	177152379.122	176451584.000	177938432.000
Pool Paged Bytes	117447443.978	114556928.000	124063744.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

4/16/2009 8:38:22 PM -- Jetstress testing begins ...
4/16/2009 8:38:22 PM -- Prepare testing begins ...
4/16/2009 8:38:58 PM -- Attaching databases ...
4/16/2009 8:38:58 PM -- Prepare testing ends.
4/16/2009 8:38:58 PM -- Dispatching transactions begins ...
4/16/2009 8:38:59 PM -- Database cache settings: (minimum: 1.1 GB, maximum: 9.0 GB)
4/16/2009 8:38:59 PM -- Database flush thresholds: (start: 92.2 MB, stop: 184.3 MB)
4/16/2009 8:39:37 PM -- Database read latency thresholds: (average: 0.02 seconds/read, maximum: 0.05 seconds/read).
4/16/2009 8:39:37 PM -- Log write latency thresholds: (average: 0.01 seconds/write, maximum: 0.05 seconds/write).
4/16/2009 8:39:39 PM -- Operation mix: Sessions 2, Inserts 40%, Deletes 30%, Replaces 5%, Reads 25%, Lazy Commits 55%.
4/16/2009 8:39:39 PM -- Performance logging begins (interval: 15000 ms).
4/16/2009 8:39:39 PM -- Generating log files ...
4/17/2009 1:15:57 AM -- C:\al ogl uns\log1 (102.2% generated), C:\al ogl uns\log2 (103.6% generated), C:\al ogl uns\log3 (101.0% generated), C:\al ogl uns\log4 (102.4% generated), C:\al ogl uns\log5 (105.2% generated), C:\al ogl uns\log6 (102.2% generated), C:\al ogl uns\log7 (103.6% generated), C:\al ogl uns\log8 (103.0% generated), C:\al ogl uns\log9 (103.2% generated), C:\al ogl uns\log10 (101.6% generated), C:\al ogl uns\log11 (101.6% generated), C:\al ogl uns\log12 (103.6% generated), C:\al ogl uns\log13 (104.4% generated), C:\al ogl uns\log14 (103.4% generated), C:\al ogl uns\log15 (100.2% generated), C:\al ogl uns\log16 (102.8% generated), C:\al ogl uns\log17 (101.8% generated), C:\al ogl uns\log18 (102.6% generated), C:\al ogl uns\log19 (103.0% generated), C:\al ogl uns\log20 (102.2% generated), C:\al ogl uns\log21 (103.0% generated), C:\al ogl uns\log22 (101.0% generated), C:\al ogl uns\log23 (103.6% generated), C:\al ogl uns\log24 (101.6% generated), C:\al ogl uns\log25 (101.2% generated), C:\al ogl uns\log26 (103.0% generated), C:\al ogl uns\log27 (102.8% generated), C:\al ogl uns\log28 (105.4% generated), C:\al ogl uns\log29 (104.6% generated), C:\al ogl uns\log30 (103.0% generated), C:\al ogl uns\log31 (103.2% generated), C:\al ogl uns\log32 (102.8% generated), C:\al ogl uns\log33 (100.6% generated), C:\al ogl uns\log34 (102.6% generated), C:\al ogl uns\log35 (101.4% generated), and C:\al ogl uns\log36 (104.6% generated)
4/17/2009 1:15:58 AM -- Performance logging ends.
4/17/2009 1:15:58 AM -- JetInterop batch transaction stats: 12991, 13026, 12924, 13119, 13236, 13099, 13314, 13212, 13132, 12905, 13024, 13165, 13226, 13042, 12900, 13044, 13060, 12997, 13064, 13099, 13129, 12893, 13180, 13069, 12871, 13209, 13069, 13218, 13242, 12966, 13095, 13205, 13075, 12984, 13221, and 13288.
4/17/2009 1:15:59 AM -- Dispatching transactions ends.
4/17/2009 1:15:59 AM -- Shutting down databases ...
4/17/2009 1:16:09 AM -- Instance2696.1 (complete), Instance2696.2 (complete), Instance2696.3 (complete), Instance2696.4 (complete), Instance2696.5 (complete), Instance2696.6 (complete), Instance2696.7 (complete),

Instance2696.8 (complete), Instance2696.9 (complete), Instance2696.10 (complete), Instance2696.11 (complete), Instance2696.12 (complete), Instance2696.13 (complete), Instance2696.14 (complete), Instance2696.15 (complete), Instance2696.16 (complete), Instance2696.17 (complete), Instance2696.18 (complete), Instance2696.19 (complete), Instance2696.20 (complete), Instance2696.21 (complete), Instance2696.22 (complete), Instance2696.23 (complete), Instance2696.24 (complete), Instance2696.25 (complete), Instance2696.26 (complete), Instance2696.27 (complete), Instance2696.28 (complete), Instance2696.29 (complete), Instance2696.30 (complete), Instance2696.31 (complete), Instance2696.32 (complete), Instance2696.33 (complete), Instance2696.34 (complete), Instance2696.35 (complete), and Instance2696.36 (complete)
4/17/2009 1:16:09 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200 users\Soft Recovery\Performance_2009_4_16_20_39_37.blg has 1102 samples.
4/17/2009 1:16:09 AM -- Creating test report ...
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg1 has 0.0104 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg2 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg3 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg4 has 0.0093 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg5 has 0.0096 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg6 has 0.0105 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg7 has 0.0104 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg8 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg9 has 0.0093 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg10 has 0.0093 for Avg. Disk sec/Read.
4/17/2009 1:17:01 AM -- Volume C:\asgl uns\sg11 has 0.0096 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg12 has 0.0107 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg13 has 0.0103 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg14 has 0.0096 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg15 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg16 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg17 has 0.0098 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg18 has 0.0106 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg19 has 0.0102 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg20 has 0.0095 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg21 has 0.0094 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg22 has 0.0095 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg23 has 0.0098 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg24 has 0.0108 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg25 has 0.0102 for Avg. Disk sec/Read.
4/17/2009 1:17:02 AM -- Volume C:\asgl uns\sg26 has 0.0094 for Avg. Disk sec/Read.

4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log29 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log30 has 0.0002 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log30 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log31 has 0.0003 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log31 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log32 has 0.0002 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log32 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log33 has 0.0003 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log33 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log34 has 0.0002 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log34 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log35 has 0.0003 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log35 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log36 has 0.0002 for Avg. Disk
sec/Wri te.
4/17/2009 1:17:03 AM -- Volume C:\al ogl uns\log36 has 0.0000 for Avg. Disk
sec/Read.
4/17/2009 1:17:03 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
4/17/2009 1:17:03 AM -- Test has 0 Database Page Fault Stalls/sec samples
higher than 0.
4/17/2009 1:17:03 AM -- C:\ESRP Testing\AMS2100 Results_1GB_Heavy\11200
users\Soft Recovery\Performance_2009_4_16_20_39_37.xml has 1101 samples
queried.



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