Dell Compellent Storage Center (SC8000)

50,000 Mailbox Exchange 2010 Resiliency Storage Solution - Virtualized with VMWare ESXi 5.0

Dell Compellent Technical Solutions

Dell Compellent Storage Center SC8000 50,000 Mailbox Exchange 2010 Resiliency Storage Solution –
Virtualized with VMWare ESXi 5.0

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Introduction

Simulated Environment

The solution presented in this document is designed to simulate a very large number of mailboxes hosted with VMWare ESXi 5.0 hypervisor on highly redundant hardware with virtual servers. Application level redundancy (Exchange DAG) is augmented with redundant storage to create a highly available and fault tolerant solution.

The Mailbox Resiliency features of Exchange 2010 have greatly enhanced the availability of Exchange 2010, while also improving I/O performance. The solution presented here is a Mailbox Resiliency solution utilizing 2 Database Availability Groups (DAGs) and 2 copies of every database. The tested environment simulates all users in these DAGs running on a single Storage Center of the 2 Storage Center configurations, as in a failover event. The number of users simulated was 50,000 across 12 virtual servers on 6 physical hosts, (6 servers per DAG), with 4,166 users per server (4168 on 4 of 12 servers). The mailbox size was 2GB per user. Each server has 6 databases, with one copy local and the second copy replicated to a second server on a second Storage Center. This provides redundancy through hardware and software.

The replication mechanism is the native Exchange 2010 DAG log shipping engine. This is a very efficient and reliable replication mechanism and is the recommended method for providing highly-available and redundant Exchange solutions.

Solution Description

The storage hardware tested was a Dell Compellent Storage Center (SC8000) v6.1. This is a redundant controller pair, with redundant front-end and back-end connections. The front-end connections were fiber-channel based, over redundant fabrics, with 2 ports per VMWare 5.0 ESX host, and 4 ports per controller.

Each ESX server hosts 2 virtual machines (VMs) running Windows Server 2008 R2 and Exchange 2010 Jetstress. 2 x 14TB volumes and 2 x 800GB volumes are mapped to the ESX hosts to be used as VMFS datastores. The 14TB volumes are for databases and the 800GB volumes are for transaction logs. Each ESX server has a single 500GB datastore for the 2 server's boot drive.

The disk connectivity is SAS 6Gbps. The spindle count is 177 disks for database, and 22 for logs, in each Storage Center. There are 2 Storage Centers, with independent disks, for complete isolation of database copies providing complete mailbox resiliency.

For information about compatibility please use the following link:

http://windowsservercatalog.com/item.aspx?idItem=448940bb-906b-e1b6-540d-bbb381bcda22&bCatID=1282.

Dell Compellent Storage Center SC8000 50,000 Mailbox Exchange 2010 Resiliency Storage Solution – Virtualized with VMWare ESXi 5.0
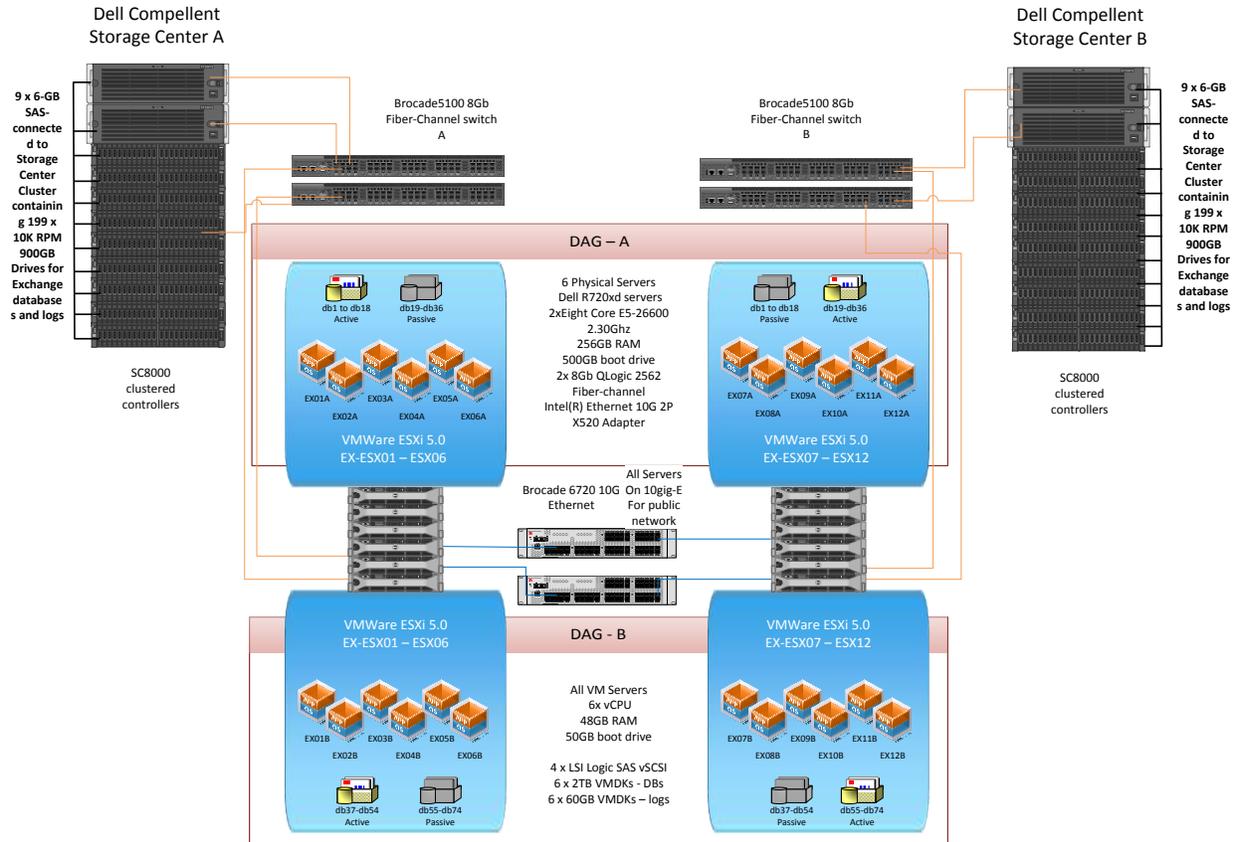
Figure 1 – Highly Available Data Center Design

The solution is designed around a highly available data center model (Figure 1). There are 2 disk arrays, for complete redundancy. The Exchange configuration is 2 DAGs (DAG-A, DAG-B), with half the servers and databases in each DAG. The LAN ports are in a dedicated replication VLAN, for traffic isolation. There are 2 networks for redundancy.
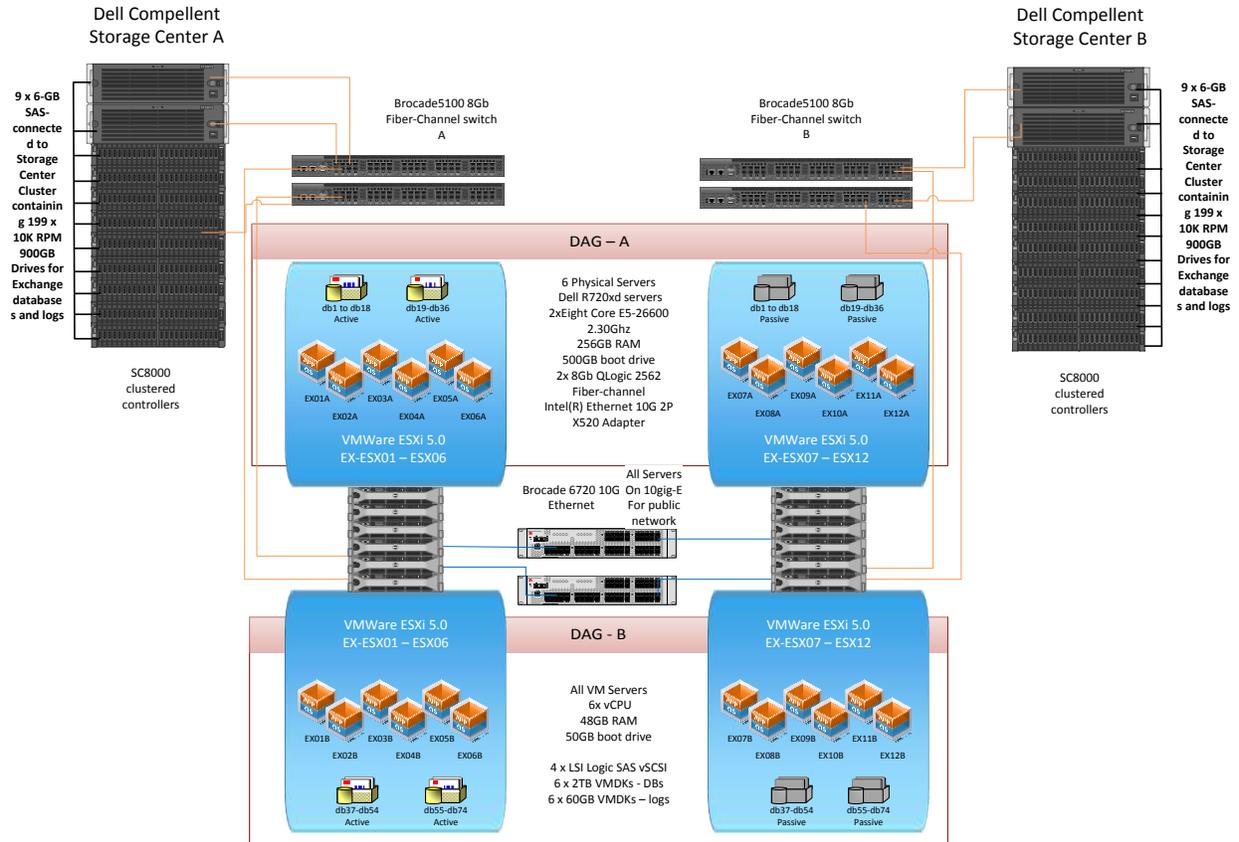
Figure 2 – Tested configuration with Storage Center A with Full user Load and Storage Center B offline

The tested configuration was a single Storage Center array (Figure 2), running with the full user load. This is to clearly show a single array can handle the user load in an array failure scenario. Under normal operating conditions the preferred activation scenario would be to run half of the mailbox databases active on each Storage Center array, while either array could handle the entire workload at any given time.

The ability to handle the entire workload on a single Storage Center array means no IO performance degradation will occur if an array or any volume(s) were to fail. All mailbox servers would have volumes mapped to both arrays, with 1 copy of each database on each array.

The Dell Compellent Storage Center (SC8000) Solution

A Modular Hardware Design
The hardware design consists of Dell 12G server-based clustered controllers providing automatic failover. Dell Compellent can seamlessly connect to any open-systems server without the need for server side agents. Organizations can mix and match Fiber Channel and iSCSI server connectivity, and disk enclosures support any external interface and disks based on Solid State, Fiber Channel, and/or Serial ATA.

Next-generation SC8000 controllers combine the benefits of proven Dell™ Fluid Data™ architecture with resilient Dell hardware design to provide efficiency, quality and durability. Compared with previous generations of Compellent controllers, the SC8000 offers increased density, exceptional processing power, greater memory, and faster PCIe Gen3 I/O bus — making the SC8000 the scalability and performance platform choice for the future.

Powerful Suite of Software
Storage Center offers a powerful suite of enterprise capabilities to manage data differently. Building on Dell Compellent's Dynamic Block Architecture, Storage Center software intelligently optimizes data movement and access at the block-level to maximize utilization, automate tiered storage, simplify replication and speed data recovery.

Intuitive, Unified Interface
A centralized management interface streamlines administration and speeds common storage management tasks. The interface features a point-and-click wizard-based setup and management, comprehensive Phone Home capabilities, automatic notification when user-defined capacity thresholds are reached, and advanced storage consumption and chargeback reporting.

Dell Compellent's Enterprise Manager further simplifies storage management by providing comprehensive monitoring of all local and remote Storage Center environments.

Enterprise Manager allows you to gain better insight into your Storage Center deployments and reduces planning and configuration time for remote replications.

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

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

Targeted Customer Profile

This solution is targeted for users large and small. Capacity can be dynamically scaled from 1TB to hundreds of terabytes. This provides excellent growth potential with no downtime required for upgrades.

- A Storage Center solution can be sized for any size organization
- Unlimited number of hosts can be attached, via Fiber-Channel and iSCSI
- User IO profile (.12 IOPS per user).
- User mailbox size (2 GB quota)
- Backup strategy - VSS backup using SAN based snapshots, use Mailbox Resiliency as primary data protection mechanism.
- Using SAN based snapshots, and boot from SAN, a complete server can be restored in minutes.
- The tested RAID type was RAID 5 for database VMFS Datastore volumes and RAID10 for log Datastore volumes, while a mix of RAID10, RAID5, and RAID6 can be blended, with fully automated tiered storage providing the most efficient and best performing storage where needed.

Volume sizing

- The volume size tested was 14TB VMFS Datastore volumes carved into 6 x 2TB virtual disks for databases per VM server. VMWare VMFS virtual disks of this size are actually 2TB minus 1024 bytes. VMFS Datastore volumes for Logs were 800GB volumes, carved into 6 x 60GB virtual disks. Volumes on Dell Compellent storage can be grown dynamically, without affecting service. As database sizes approach volume sizes, any volume can be automatically increased on demand. This simplifies sizing, as capacity can be added as needed.
- Using Dell Compellent Dynamic Capacity and hot upgrades additional disk capacity can be added as needed. If more spindles are required to accommodate growth they can simply be cabled and added to the disk pool to grow volume space. Since volumes are not tied to spindle boundaries adding spindles will increase performance and capacity as the system grows.
- The testing environment was configured for 73% storage utilization. If the storage requirement grows beyond the design specified, additional spindles will provide additional capacity for any volume to be expanded.

Tested Deployment

The following tables summarize the testing environment.

Simulated Exchange Configuration

Number of Exchange mailboxes simulated	50,000
Number of Database Availability Groups (DAGs)	1
Number of servers/DAG	12
Number of active mailboxes/server	4166.6666
Number of databases/host	6
Number of copies/database	2
Number of mailboxes/database	694
Simulated profile: I/O's per second per mailbox (IOPS, include 20% headroom)	.12
Database LUN size	2 TB
Log LUN size	60 GB
Total database size for performance testing	106.233 TB
% storage capacity used by Exchange database**	73.77%

Note: Database size and capacity utilized may not match on a thin-provisioned system, as only used pages will consume space. Pages that are allocated, but contain blank data, may not use disk.

Primary Storage Hardware

Storage Connectivity (Fiber Channel, SAS, SATA, iSCSI)	SAS
Storage model and OS/firmware revision	Dell Compellent Storage Center (SC8000) v6.1 http://windowsservercatalog.com/item.aspx?idItem=448940bb-906b-e1b6-540d-bbb381bcda22&bCatID=1282
Storage cache	16 GB
Number of storage controllers	2
Number of storage ports	8 active ports per controller
Maximum bandwidth of storage connectivity to host	64 Gb/sec (8x8Gb GB HBA)
Switch type/model/firmware revision	Brocade 510 rev 7.0.0b
HBA model and firmware	QLogic QMH2564 (Driver FW 5.04.04, Flash FW 4.04.02)
Number of HBA's/host	1 Dual-port QLogic 2562 8Gb HBA
Host server type	2x Eight Core Xeon E5-26600 2.20Ghz 256GB RAM
Total number of disks tested in solution	177 Active for DB, 22 active for log, 6 hot spares = 205 total spindles
Maximum number of spindles can be hosted in the storage	960

Primary Storage Software

HBA driver	ISP2532-based 8Gb Fibre Channel to PCI Express HBA

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HBA Queue Depth Setting	65535
Multi-Pathing	VMWare ESXi 5.0 Round-Robin(In-Box DSM)
Host OS	VMWare ESXi 5.0
Guest OS	Windows Server 2008 R2 SP1
ESE.dll file version	14.02.0283.000
Replication solution name/version	Microsoft Exchange Server 2010 DAG replication

Primary Storage Disk Configuration (Mailbox Store Disks)

Disk type, speed and firmware revision	SAS 10k 900GB, XRC0
Raw capacity per disk (GB)	838.36 GB
Number of physical disks in test	177
Total raw storage capacity (GB)	144.91 TB
Raid level	RAID5
Total formatted capacity	116 TB
Storage capacity utilization	85.71 %
Database capacity utilization	73.77 %

Storage Disk Configuration (Transaction Log Disks)

Disk type, speed and firmware revision	SAS 10k 900GB, XRC0
Raw capacity per disk (GB)	838.36 GB
Number of Spindles in test	22
total raw storage capacity (GB)	18.01 TB
Raid level	RAID10
Total formatted capacity	4.32 TB

Best Practices

Exchange Server 2010 has changed dramatically from previous versions. For a list of what has changed see the following: http://technet.microsoft.com/en-us/library/dd298136.aspx

The best practices have also changed, based on the changes in behavior in Exchange 2010. A big part of the change is the shift away from Single Instance Storage. This allows greater control over disk IO, as a mailbox is more self-contained within the database, changing reads and writes to or from a mailbox to be much more sequential. This greatly improves throughput.

The increase in database size is offset by inline page compression, so that database sizes in Exchange 2010 are similar to Exchange 2007 sizes. This does have an impact on processor and memory load. Because processor performance has increased dramatically, and servers support much larger memory models, sizing requirements for servers have changed to reflect this. For server sizing please refer to the Microsoft Mailbox Role Calculator.

For general sizing and requirements please visit the following link:

http://technet.microsoft.com/en-us/library/aa996719.aspx

One of the Microsoft best practices states that transaction logs and databases be separated from each other and dedicated to their own set of spindles. Dell Compellent virtualizes at the disk level within Storage Center, accelerating data access by spreading read/write operations across all disk drives in the SAN so multiple requests are processed in parallel. Dell Compellent virtualization allows the creation of high performance, highly efficient virtual volumes in just seconds without allocating drives to specific servers, without complicated capacity planning and without manual performance tuning. By managing disk drives as a single resource, Dell Compellent provides increased storage performance, availability and utilization.

Dell Compellent's storage virtualization is optimized to take advantage of all available spindles as part of a single disk folder, but is flexible enough to be configured allowing storage configurations where specific spindles are dedicated to a particular volume.

Another best practice in past versions of Exchange Server has been to align Exchange IO with disk page boundaries. With Windows Server 2008 this is no longer required, as Windows 2008 automatically aligns to a 1024k page boundary.

The volume on which transaction logs are stored is critical to a well performing Exchange environment. Since all transactions are first written to a transaction log before being committed to the information store database, it is important that this volume has the lowest possible write latency. Transaction logs should be placed on volumes with faster rotational speeds. For optimal transaction log performance, consider using drives with a rotational speed of 10,000 RPM or greater. RAID 10 is also recommended for these volumes. Exchange 2010 no longer requires log files to be stored on a volume separate from the database volumes; The Dell Compellent Storage Center can be flexibly designed for separate disk folders or as a single disk folder configuration.

For issues related to performance and event monitoring please see the following: http://technet.microsoft.com/en-us/library/ee332313.aspx

For more information on Exchange best practices when implemented with Dell Compellent Storage Center, visit the Dell Compellent Knowledge Center at http://kc.compellent.com/.

Best Practices – VMWare EXSi 5.0

There are a number of best practices when running Exchange 2010 on VMWare. Below are the specific settings that were followed to achieve optimal results with Dell Compellent Storage Center SC8000:

1. Change **VMFS3.MaxHeapSizeMB** to maximum of **256** to accommodate the large amount of VMFS disk mounted on the ESXi hosts.
2. In VSphere client, choose the ESXi host, Configuration Tab, Software, Advanced Settings to set this as below to **256.**
3. **If this is not done, <u>Disk IO errors will occur</u> if the host exceeds the VMFS3MaxHeapSizeMB. For the disk configuration described in this document, <u>this setting is required.</u>**
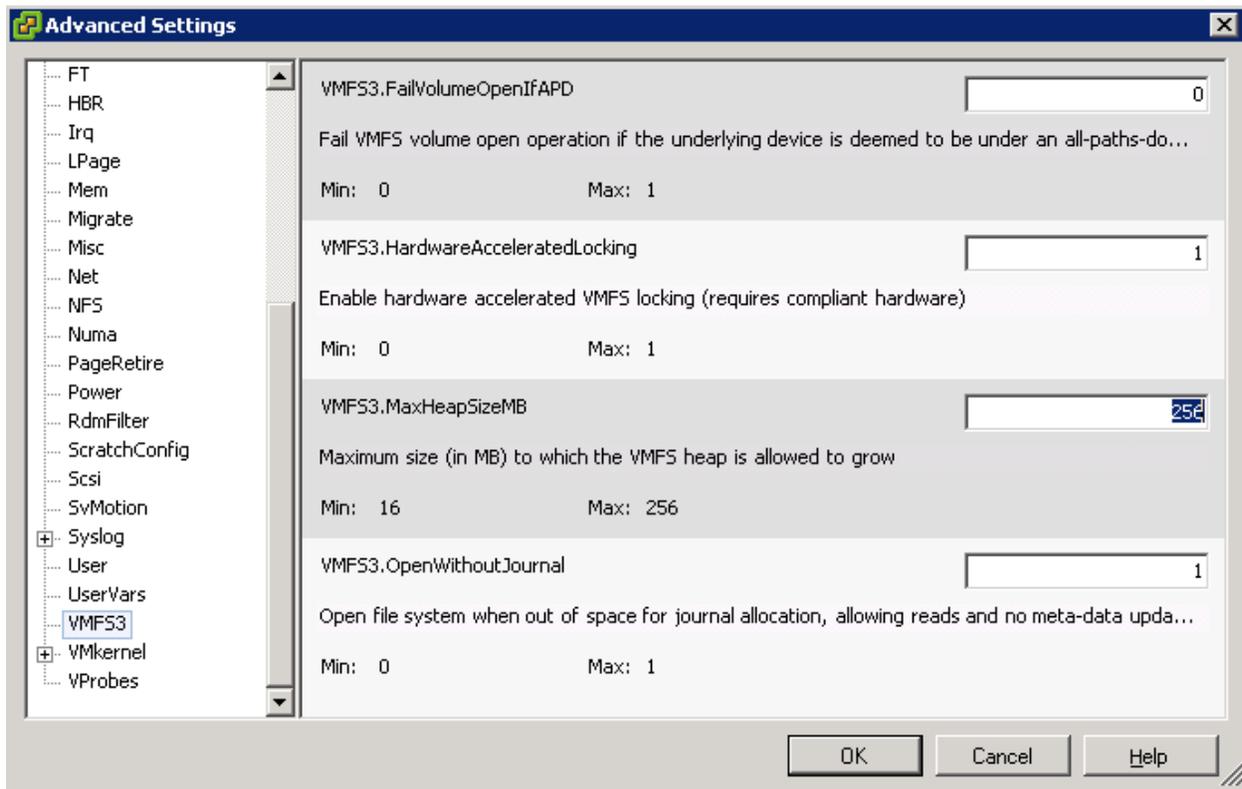
Modifying ESXi Storage Driver Queue Depth and Timeouts

In addition to setting the queue depth in the driver module, the disk timeouts must also be set within the same command. These timeouts need to be set in order for the ESXi host to survive a Storage Center controller failover properly.

Please refer to the latest VMware documentation for instructions on how to configure these settings:

• VMware document: "vSphere Troubleshooting"

o Section Title: "Adjust Queue Depth for a QLogic and Emulex HBAs"

Before executing these commands, please refer to the latest documentation from VMware for any last minute additions or changes.

For each of these adapters, the method to set the driver queue depth and timeouts uses the following general steps:

1. Find the appropriate driver name for the module that is loaded:

      a. For QLogic: esxcli system module list |grep qla

      b. For Emulex: esxcli system module list |grep lpfc

            i. Depending on the HBA model, the output could be similar to:

                  1. QLogic: qla2xxx

                  2. Emulex: lpfc820

The steps below contain *example* module names. Actual module names should be acquired from the step above.

2. Set the driver queue depth and timeouts using the esxcli command:

      a. For QLogic: esxcli system module parameters set -m qla2xxx -p "ql2xmaxqdepth=255 ql2xloginretrycount=60 qlport_down_retry=60"

      b. For Emulex: esxcli system module parameters set -m lpfc820 -p "lpfc_devloss_tmo=60 lpfc_hba_queue_depth=255"

3. Reboot the ESXi host for these changes to take effect.

4. To verify the settings, use the following command:

      a. esxcli system module parameters list -m=module

Similarly, for the software iSCSI Initiator:

1. Example of setting the queue depth to 255:
      a. esxcli system module parameters set -m iscsi_vmk -p iscsivmk_LunQDepth=255
2. Reboot the ESXi host for the change to take effect.

3. To verify the settings, use the following command:
   a. esxcli system module parameters list -m iscsi_vmk

Multipathing

When virtualizing Exchange 2010, storage multipathing is important for both fault tolerance and load distribution. For all ESXi hosts in the environment, it is recommended that the default path policy be set to *Round Robin*. Instructions for setting Round Robin as the default pathing policy can be found in the Dell Storage Center Best Practices for vSphere 5.x document (link below).

Spreading load between vSCSI adapters

Since Exchange 2010 requires many disk devices for isolation and distribution of I/O, it is recommended that the virtual disks be evenly distributed between vSCSI adapters. Remember that each vSCSI adapter can only handle 15 virtual disks across four adapters, thus limiting the total number of virtual disks to sixty.

For complete best practices for VMWare 5.0 and Compellent Storage Center, please see the whitepaper on www.dellstorage.com:

Dell Compellent Storage Center Best Practices with vSphere 5.x

For overall best practices guidance related to Exchange 2010 on VMWare, see the VMWare Best Practices Guide:

http://www.vmware.com/files/pdf/Exchange_2010_on_VMware_-_Best_Practices_Guide.pdf

Using Dell Compellent Storage Center Data Progression

Industry studies show that as much of 80% of Exchange data is inactive. This means that a lot of fast, higher-cost storage is being unnecessarily utilized.

Storage Center's Data Progression is a complete hardware and software architecture that delivers fully automated tiered storage. This patented technology cuts administrative time and reduces overall storage costs by dynamically classifying and moving data at the block-level between tiers of storage based on frequency of access. This complete Automated Tiered Storage solution does not require time consuming data classification and the repetitive manual transfer of data between tiers.

Each volume is configured by default with a recommended storage profile that manages the RAID configuration and provides optimal operation and performance for Exchange on the Dell Compellent Storage Center. With this configuration all data written to each volume is written at RAID10 providing the best possible I/O performance for Exchange database and log operations.

Snapshots, known as Replays on the Dell Compellent Storage Center, are an integral part of the Data Progression solution. As data grows and usage patterns change, Data Progression can automatically move inactive blocks of data to a lower tier of storage (both disk class and RAID level) on-the-fly. With the recommended storage profile, active data is always written at RAID10, while any replays are initially stored at Tier 1 on RAID-5. This data eventually makes its way down the RAID levels and tiers.

The following chart is an example of how Data Progression moves data to the most appropriate tier:
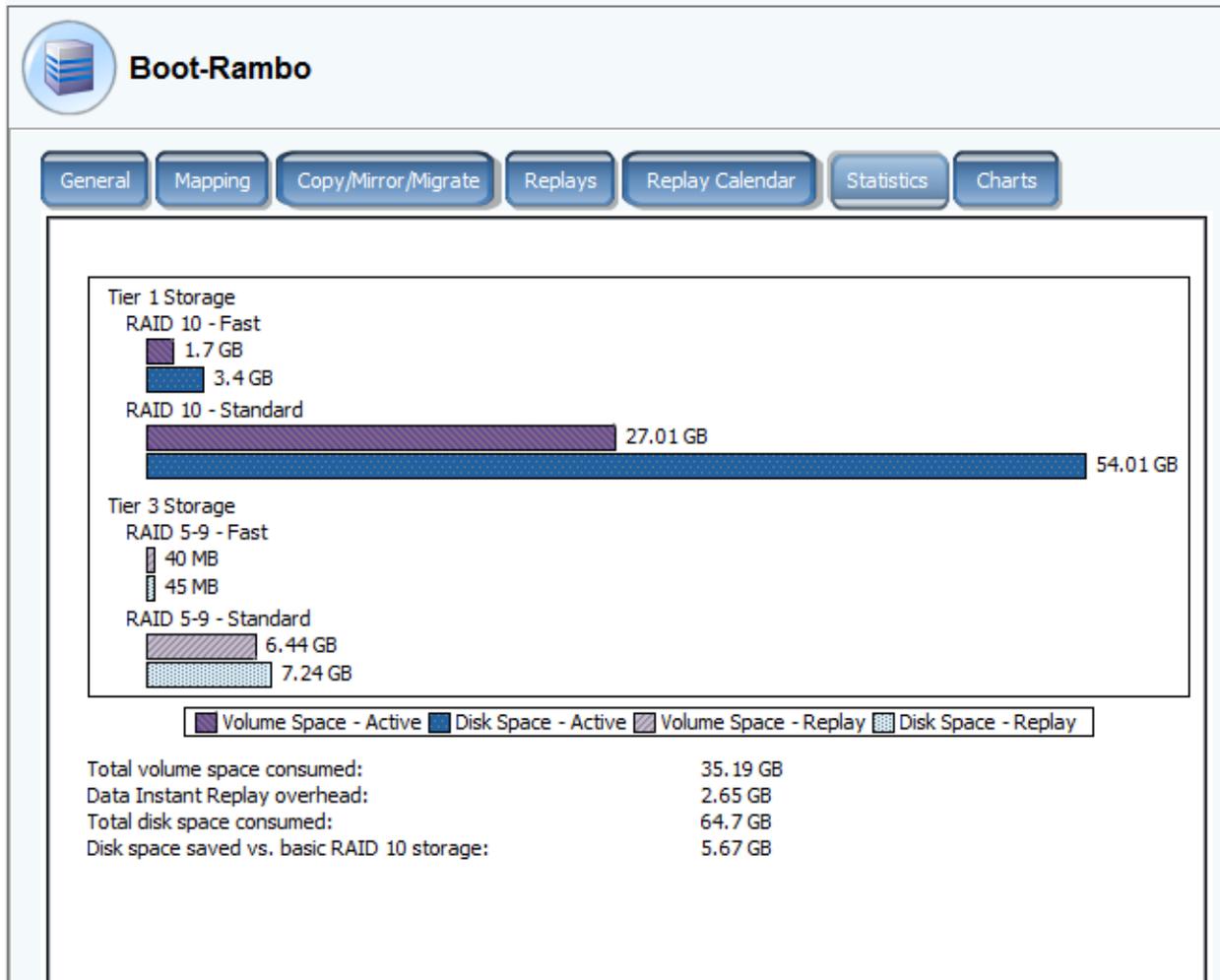
Core Storage

1. Dell Compellent storage by its nature does not need disk sector alignment to perform properly.
   Dell Compellent virtualizes all disk reads and writes, and applies them across system managed
   data pages, so by nature isolates disk IOs from sector boundaries. The page to sector alignment
   for all volumes and data pages is handled automatically by the system.

2. The Dell Compellent method of IO and disk capacity aggregation provides maximum IO to all
   hosted applications. All the IOPS for all of the assigned drives can be applied to all applications
   hosted on a Storage Center. If IOPS need to be dedicated to an application, such as Exchange,
   a dedicated disk pool can be created for each IO type, such as database or log files. As
   Exchange 2010 IO is mostly sequential, using a smaller number of database files will greatly
   improve the performance. This is due to the fact that the more sequential streams you have,
   the more random it looks. Minimizing the number of file streams while meeting business
   requirements will provide a more responsive solution. Isolating the log files can also provide a
   performance benefit in an IO constrained system. Using Dell Compellent Dynamic Storage, a
   small system can start with all volumes sharing spindles, and volumes can dynamically be
   moved to dedicated spindles and load increases.

3. Dell Compellent Storage Center is a true thin provisioned system. This means that volumes will truly only consume space when and where data is written. The volume sizes should be created to reflect the maximum size they will achieve. The volumes will only consume the space actually used by data, so the storage can be sized to host the actual storage requirement, rather than the volume sizes allocated. This allows the volumes to be sized properly to meet growth while requiring the minimum number of disks to meet the storage and IOP requirement.

4. Dell Compellent's Fluid Data architecture uses an IOP and storage aggregation model. This means that the IOPS and storage capacity of all available disks will be available to the entire disk pool. This provides a huge performance boost to all applications and all LUNs, as the combined IO performance of all spindles will apply to all configured storage. If dedicated spindles are desired, a disk pool can be created that will dedicate those spindles to the LUNs created in that pool. All disks in a disk pool will have multiple RAID types applied to them. This is done by virtualizing the RAID pools on the disks. For example, a write could come in on RAID 10, and would be mirrored at the block level, across a pair of disks. In essence each write could hit a different pair of disks, dramatically improving performance. The next write could be a RAID5 block, with the blocks striped across all the disks available to the pool. In this method a disk pool will balance the IO across all the available spindles.

5. Latency and IO load can be measured real-time, or logged historically for reporting purposes. This means if a volume is performing poorly, its IO can be reported over time, and compared to IO load on the server, for any length of time you wish to store. If you need to report on the last month of IO history, a report can be generated showing the IO graphically or as a summary chart. This provides the ability to trend and determine when IO performance changed. Volumes can also be summarized as a group, to determine if IO load is shifting, increasing, or disk performance is changing. Reporting can be done at any level, including at the disk device level. This allows reporting on the latency at the Server, LUN, or disk level to provide more accurate performance monitoring and diagnostics.

6. Because Storage Center manages block placement, defragmentation is not required. Dell Compellent Data Progression computes block placement and optimizes block placement based on access patterns. Because block placement is relative to other stored blocks Exchange On-line defragmentation is accounted for.

7. Dell Compellent Fluid Data also allows disks to be added to a pool to increase performance dynamically. This allows for accurate sizing on day one and disks to be added as performance requirements increase. If after one year IO requirements double, additional disks could simply be added (without any downtime), and RAID stripes rebalanced.

8. The most common cause of performance issues is low spindle count. To achieve a given IO level requires a spindle count equal to or greater than the IOP target. If the IO load exceeds the capabilities of the spindles poor performance will result. Dell Compellent, along with a business partner, will work with customers to determine the correct spindle count. As IO load grows the spindle count must increase to maintain performance. Using Dell Compellent Enterprise Manager, current IO loads can be tracked, and thresholds can be set for alerting, to warn of IO usage approaching or exceeding acceptable performance levels. Because IO patterns can be very diverse, creating a baseline and using historical reporting will be a key strategy for

planning for and managing growth. With an accurate growth plan, disk can be added before it
is needed, and performance as well as capacity can be increased with down time.

Backup Strategy

1. The Dell Compellent Storage Center has an integrated snapshot facility that provides basic
    volume based snapshots. In order to provide VSS integration with a graphical management
    interface, Dell Compellent Replay Manager for Microsoft Servers should be implemented. This
    provides a full interface for scheduling database backups. Using Replay Manger Exchange
    Servers can be restored in less than a minute to any available restore point. It also provides
    detailed reporting on snapshots. Because Dell Compellent Storage Center has the ability to
    manage thousands of snapshots, a fine grained backup strategy can be defined to greatly
    reduce reliance on tape for historical data recovery. Combined with a lagged database copy,
    data can be recovered very quickly with minimal administrative effort.

2. Since Dell Compellent Replays take do not require page pre-allocation or disk allocation disk
    space requirements are much smaller for snapshots. Backup verification can also be passed to a
    secondary server to isolate the impact of backups on the production Exchange environment. By
    automating the creation and verification process using a secondary server, more frequent
    database backups and more frequent database scans can be implemented reducing exposure.

3. Replay restore points can also be replicated and tested in a remote environment without
    breaking replication. This allows Disaster Recovery testing of a production restore point
    without pausing replication, reducing exposure even further.

Additional Information

For more information on Dell Compellent Storage Center and other Dell Compellent solutions, visit our
website at http://www.dellstorage.com/compellent.

Test Results Summary

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

Reliability

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

The following list provides an overview: (click on the underlined word will show the html report after the reliability tests run)

- No errors were reported in either the application or system log
- No errors were reported during the database and log checksum process
- No errors were reported during either the backup or restore process

Storage Performance Results

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

Individual Server Metrics:

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

Server I/O – DAG-A

Database I/O	EX01A	EX02A	EX03A	EX04A	EX05A	EX06A
Database Disks Transfers/sec	699.679	706.097	705.677	720.876	707.612	712.891
Database Disks Reads/sec	484.419	487.671	487.419	498.119	489.813	493.276
Database Disks Writes/sec	215.26	218.426	218.258	222.757	217.799	219.615
Average Database Disk Read Latency (ms)	18.959	18.876	18.920	18.366	18.661	18.525
Average Database Disk Write Latency (ms)	11.416	11.653	11.447	11.491	11.402	11.353
Transaction Log I/O	EX01A	EX02A	EX03A	EX04A	EX05A	EX06A
Log Disks Writes/sec	146.997	148.664	148.787	151.17	148.57	149.535
Average Log Disk Write Latency (ms)	7.501	7.498	7.493	7.532	7.525	7.525

Server I/O – DAG-B

Database I/O	EX01B	EX02B	EX03B	EX04B	EX05B	EX06B
Database Disks Transfers/sec	735.838	744.392	747.116	752.563	747.15	749.522
Database Disks Reads/sec	507.125	512.831	515.452	519.368	515.59	517.163
Database Disks Writes/sec	228.713	231.561	231.664	233.195	231.56	232.359
Average Database Disk Read Latency (ms)	18.095	17.876	17.684	17.517	17.674	17.560
Average Database Disk Write Latency (ms)	11.022	11.072	11.044	10.917	10.918	11.080
Transaction Log I/O	EX01B	EX02B	EX03B	EX04B	EX05B	EX06B
Log Disks Writes/sec	155.511	157.19	157.25	158.232	157.287	157.487
Average Log Disk Write Latency (ms)	7.208	7.191	7.196	7.208	7.207	7.235

Aggregate Performance across all servers/DAGs Metrics

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

Database I/O	
Database Disks Transfers/sec	8729.413
Database Disks Reads/sec	6028.246
Database Disks Writes/sec	2701.167
Average Database Disk Read Latency (ms)	18.226
Average Database Disk Write Latency (ms)	11.234
Transaction Log I/O	
Log Disks Writes/sec	1836.68
Average Log Disk Write Latency (ms)	7.360

Database Backup/Recovery Performance

There are two tests reports in this section. The first one is to measure the sequential read rate of the database files, and the second is to measure the recovery/replay performance (playing transaction logs in to the database).

Database Read-only Performance

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

MB read/sec per database	44.83
MB read/sec total per server	225.32

Transaction Log Recovery/Replay Performance

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

Average time to play one Log file (sec)	2.438

Conclusion

The testing shows the scalability and performance of the Dell Compellent Storage Center SC8000 in a
VMWare ESXi 5.0 virtualized server environment using VMFS virtualized storage.

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

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

Appendix A: Performance Testing

Server 1 – EX01A

Test Summary

Overall Test Result	Pass
Machine Name	EX01A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:21 PM
Test End Time	9/19/2012 8:41:58 PM
Collection Start Time	9/19/2012 5:18:22 PM
Collection End Time	9/19/2012 7:18:12 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	592.784
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9021813030912
Final Database Size (bytes)	9024237338624
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	TRUE
Number of Copies per Database	2

Database Configuration

Instance1744.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1744.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1744.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1744.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1744.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1744.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	17.976	10.999	61.825	37.994	34619.913	35081.490	0.000	6.606	0.000	26.361	0.000	5453.964
Instance1744.2	17.939	10.947	61.106	37.508	34609.441	35089.614	0.000	6.568	0.000	26.145	0.000	5507.614
Instance1744.3	18.246	10.910	60.412	37.035	34648.199	35147.249	0.000	6.552	0.000	25.888	0.000	5481.297
Instance1744.4	18.570	10.230	61.936	38.083	34378.288	35111.650	0.000	6.595	0.000	26.522	0.000	5497.175
Instance1744.5	17.871	9.804	61.467	37.926	34705.707	35099.197	0.000	6.605	0.000	26.237	0.000	5504.805
Instance1744.6	17.939	9.337	60.403	37.087	34566.038	35080.422	0.000	6.596	0.000	25.842	0.000	5450.012

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1744.1	23.700	261869.871
Instance1744.2	23.335	261869.255
Instance1744.3	23.034	261847.406
Instance1744.4	22.922	261877.387
Instance1744.5	23.340	261839.452
Instance1744.6	23.371	261844.305

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance1744.1	0.592	210641.923
Instance1744.2	0.592	208323.350
Instance1744.3	0.584	208745.918
Instance1744.4	0.599	215619.205
Instance1744.5	0.593	209605.738
Instance1744.6	0.580	209243.645

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	17.976	10.999	85.525	37.994	97593.659	35081.490	15.602	6.606	0.592	26.361	210641.923	5453.964
Instance1744.2	17.939	10.947	84.441	37.508	97412.635	35089.614	16.031	6.568	0.592	26.145	208323.350	5507.614
Instance1744.3	18.246	10.910	83.446	37.035	97362.407	35147.249	15.656	6.552	0.584	25.888	208745.918	5481.297
Instance1744.4	18.570	10.230	84.858	38.083	95830.662	35111.650	16.250	6.595	0.599	26.522	215619.205	5497.175
Instance1744.5	17.871	9.804	84.807	37.926	97216.415	35099.197	16.546	6.605	0.593	26.237	209605.738	5504.805
Instance1744.6	17.939	9.337	83.774	37.087	97970.894	35080.422	16.155	6.596	0.580	25.842	209243.645	5450.012

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.974	2.010	3.983
Available MBytes	44622.699	44616.000	44734.000
Free System Page Table Entries	33555607.969	33555604.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	33720760.384	33689600.000	33763328.000
Pool Paged Bytes	132181451.624	130318336.000	133472256.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/17/2012 11:22:39 AM -- Jetstress testing begins …
9/17/2012 11:22:40 AM -- Prepare testing begins …
9/17/2012 11:22:47 AM -- Attaching databases …
9/17/2012 11:22:47 AM -- Prepare testing ends.
9/17/2012 11:22:47 AM -- Dispatching transactions begins …
9/17/2012 11:22:47 AM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/17/2012 11:22:47 AM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/17/2012 11:22:54 AM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/17/2012 11:22:54 AM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/17/2012 11:23:06 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/17/2012 11:23:06 AM -- Performance logging begins (interval: 15000 ms).
9/17/2012 11:23:06 AM -- Attaining prerequisites:
9/17/2012 11:25:28 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456841000.0 (lower bound: 1449551000.0, upper bound: none)
9/17/2012 11:49:24 AM -- Performance logging ends.
9/17/2012 11:49:26 AM -- JetInterop batch transaction stats: 9235, 8990, 9039, 8868, 9222 and 9178.
9/17/2012 11:49:26 AM -- Dispatching transactions ends.
9/17/2012 11:49:26 AM -- Shutting down databases …
9/17/2012 11:49:31 AM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)
9/17/2012 11:49:31 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.blg has 103 samples.
9/17/2012 11:49:31 AM -- Creating test report …
9/17/2012 11:49:33 AM -- Instance1744.1 has 9.9 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.1 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.1 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 9.5 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 9.8 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 9.4 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.6 has 9.2 for I/O Database Reads Average Latency.

9/17/2012 11:49:33 AM -- Instance1744.6 has 1.9 for I/O Log Writes Average Latency.

9/17/2012 11:49:33 AM -- Instance1744.6 has 1.9 for I/O Log Reads Average Latency.

9/17/2012 11:49:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 11:49:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 11:49:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.xml has 94 samples queried.

9/17/2012 11:49:36 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.html is saved.

9/17/2012 11:49:37 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 11:49:37 AM -- Verifying database checksums …

9/17/2012 11:49:41 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 11:49:42 AM -- Verifying log checksums …

9/17/2012 11:49:42 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_11_49_42.evt is saved.

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_11_49_42.evt is saved.

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_11_49_42.xml is saved.

9/17/2012 11:49:42 AM -- Jetstress testing ends.

9/17/2012 2:45:10 PM -- Jetstress testing begins …

9/17/2012 2:45:10 PM -- Prepare testing begins …

9/17/2012 2:45:17 PM -- Attaching databases …

9/17/2012 2:45:17 PM -- Prepare testing ends.

9/17/2012 2:45:17 PM -- Dispatching transactions begins …

9/17/2012 2:45:17 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:17 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:35 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:35 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:35 PM -- Attaining prerequisites:

9/17/2012 2:49:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454653000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:23 PM -- Performance logging ends.

9/18/2012 10:14:23 AM -- JetInterop batch transaction stats: 139283, 139129, 139672, 139183, 139528 and 138643.

9/18/2012 10:14:23 AM -- Dispatching transactions ends.

9/18/2012 10:14:23 AM -- Shutting down databases …

9/18/2012 10:14:38 AM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)

9/18/2012 10:14:38 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.blg has 494 samples.

9/18/2012 10:14:38 AM -- Creating test report …

9/18/2012 10:14:51 AM -- Instance1744.1 has 24.1 for I/O Database Reads Average Latency.

9/18/2012 10:14:51 AM -- Instance1744.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 22.8 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 24.0 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:14:51 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.xml has 478 samples queried.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.html is saved.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_14_51.evt is saved.
9/18/2012 10:14:52 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_14_51.evt is saved.
9/18/2012 10:14:52 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_14_52.xml is saved.
9/18/2012 10:14:52 AM -- Jetstress testing ends.
9/19/2012 5:15:21 PM -- Jetstress testing begins ...
9/19/2012 5:15:21 PM -- Prepare testing begins ...
9/19/2012 5:15:27 PM -- Attaching databases ...
9/19/2012 5:15:27 PM -- Prepare testing ends.
9/19/2012 5:15:27 PM -- Dispatching transactions begins ...
9/19/2012 5:15:27 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:27 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/19/2012 5:15:34 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/19/2012 5:15:34 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/19/2012 5:15:45 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/19/2012 5:15:45 PM -- Performance logging begins (interval: 15000 ms).
9/19/2012 5:15:45 PM -- Attaining prerequisites:
9/19/2012 5:18:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453081000.0 (lower bound: 1449551000.0, upper bound: none)
9/19/2012 7:18:23 PM -- Performance logging ends.

9/19/2012 8:41:47 PM -- JetInterop batch transaction stats: 28540, 28569, 28200, 28717, 28617 and 28565.

9/19/2012 8:41:47 PM -- Dispatching transactions ends.

9/19/2012 8:41:47 PM -- Shutting down databases …

9/19/2012 8:41:58 PM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)

9/19/2012 8:41:58 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.blg has 489 samples.

9/19/2012 8:41:58 PM -- Creating test report …

9/19/2012 8:42:07 PM -- Instance1744.1 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 18.2 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 18.6 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:07 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:07 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.xml has 478 samples queried.

Server 2 – EX01B

Test Summary

Overall Test Result	Pass
Machine Name	EX01B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:14:58 PM
Test End Time	9/19/2012 8:41:16 PM
Collection Start Time	9/19/2012 5:18:10 PM
Collection End Time	9/19/2012 7:18:04 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	606.862
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9027718610944
Final Database Size (bytes)	9030704955392
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2060.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2060.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2060.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2060.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2060.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2060.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	19.480	10.988	62.878	38.553	34271.703	35127.686	0.000	6.433	0.000	26.780	0.000	5475.282
Instance2060.2	17.593	10.780	62.518	38.382	34624.268	35115.236	0.000	6.453	0.000	26.602	0.000	5461.065
Instance2060.3	17.767	10.762	62.674	38.541	34488.327	35130.354	0.000	6.411	0.000	26.776	0.000	5453.534
Instance2060.4	17.877	10.098	62.516	38.442	34500.903	35102.106	0.000	6.387	0.000	26.533	0.000	5478.990
Instance2060.5	17.560	9.675	63.108	38.870	34520.142	35107.248	0.000	6.446	0.000	27.125	0.000	5517.102
Instance2060.6	17.572	9.312	62.206	38.172	34499.208	35157.471	0.000	6.452	0.000	26.491	0.000	5491.890

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2060.1	20.150	261869.036
Instance2060.2	23.346	261831.420
Instance2060.3	23.279	261855.616
Instance2060.4	23.666	261865.312
Instance2060.5	23.393	261899.942
Instance2060.6	23.251	261875.972

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2060.1	0.604	210287.475
Instance2060.2	0.597	214994.068
Instance2060.3	0.600	211665.813
Instance2060.4	0.599	212655.155
Instance2060.5	0.617	219595.064
Instance2060.6	0.599	213660.785

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	19.480	10.988	83.028	38.553	89507.014	35127.686	16.092	6.433	0.604	26.780	210287.475	5475.282
Instance2060.2	17.593	10.780	85.864	38.382	96399.868	35115.236	16.674	6.453	0.597	26.602	214994.068	5461.065
Instance2060.3	17.767	10.762	85.953	38.541	96066.846	35130.354	15.753	6.411	0.600	26.776	211665.813	5453.534
Instance2060.4	17.877	10.098	86.183	38.442	96936.814	35102.106	15.889	6.387	0.599	26.533	212655.155	5478.990
Instance2060.5	17.560	9.675	86.501	38.870	96012.847	35107.248	16.661	6.446	0.617	27.125	219595.064	5517.102
Instance2060.6	17.572	9.312	85.457	38.172	96363.788	35157.471	15.734	6.452	0.599	26.491	213660.785	5491.890

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.886	1.924	3.966
Available MBytes	44534.000	44528.000	44587.000
Free System Page Table Entries	33555607.933	33555594.000	33555608.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34378480.501	34369536.000	34422784.000
Pool Paged Bytes	133808760.785	131956736.000	135020544.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log 9/14/2012 1:49:51 PM -- Jetstress testing begins …
9/14/2012 1:49:51 PM -- Prepare testing begins …
9/14/2012 1:49:58 PM -- Attaching databases …
9/14/2012 1:49:58 PM -- Prepare testing ends.
9/14/2012 1:49:58 PM -- Dispatching transactions begins …
9/14/2012 1:49:58 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:49:58 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:07 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:07 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:19 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:19 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:19 PM -- Attaining prerequisites:
9/14/2012 1:57:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1459995000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:57:48 PM -- Performance logging ends.
9/17/2012 9:51:03 AM -- JetInterop batch transaction stats: 660706, 660506, 661635, 661580, 662126 and 661778.
9/17/2012 9:51:04 AM -- Dispatching transactions ends.
9/17/2012 9:51:04 AM -- Shutting down databases …
9/17/2012 9:51:11 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)
9/17/2012 9:51:11 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.blg has 508 samples.
9/17/2012 9:51:11 AM -- Creating test report …
9/17/2012 9:51:21 AM -- Instance2060.1 has 23.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 21.6 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 21.8 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 23.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 21.3 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.6 has 21.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.6 has 11.8 for I/O Log Writes Average Latency.

9/17/2012 9:51:21 AM -- Instance2060.6 has 11.8 for I/O Log Reads Average Latency.

9/17/2012 9:51:22 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:22 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:22 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.xml has 478 samples queried.

9/17/2012 9:51:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.html is saved.

9/17/2012 9:51:28 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:51:28 AM -- Verifying database checksums …

9/17/2012 9:54:07 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:08 AM -- Verifying log checksums …

9/17/2012 9:54:08 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_8.evt is saved.

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_8.evt is saved.

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_8.xml is saved.

9/17/2012 9:54:08 AM -- Jetstress testing ends.

9/17/2012 11:22:34 AM -- Jetstress testing begins …

9/17/2012 11:22:34 AM -- Prepare testing begins …

9/17/2012 11:22:40 AM -- Attaching databases …

9/17/2012 11:22:40 AM -- Prepare testing ends.

9/17/2012 11:22:40 AM -- Dispatching transactions begins …

9/17/2012 11:22:40 AM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 11:22:40 AM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 11:22:47 AM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 11:22:47 AM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 11:22:59 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 11:22:59 AM -- Performance logging begins (interval: 15000 ms).

9/17/2012 11:22:59 AM -- Attaining prerequisites:

9/17/2012 11:24:36 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452638000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 11:49:02 AM -- Performance logging ends.

9/17/2012 11:49:04 AM -- JetInterop batch transaction stats: 9527, 9404, 9571, 9571, 9661 and 9516.

9/17/2012 11:49:04 AM -- Dispatching transactions ends.

9/17/2012 11:49:04 AM -- Shutting down databases …

9/17/2012 11:49:08 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/17/2012 11:49:08 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.blg has 104 samples.

9/17/2012 11:49:08 AM -- Creating test report …

9/17/2012 11:49:09 AM -- Instance2060.1 has 9.9 for I/O Database Reads Average Latency.

9/17/2012 11:49:09 AM -- Instance2060.1 has 1.9 for I/O Log Writes Average Latency.

9/17/2012 11:49:09 AM -- Instance2060.1 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 9.8 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 9.3 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/17/2012 11:49:09 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/17/2012 11:49:09 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.xml has 97 samples queried.
9/17/2012 11:49:09 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.html is saved.
9/17/2012 11:49:11 AM -- Performance logging begins (interval: 30000 ms).
9/17/2012 11:49:11 AM -- Verifying database checksums …
9/17/2012 11:49:18 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/17/2012 11:49:18 AM -- Verifying log checksums …
9/17/2012 11:49:18 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_11_49_18.evt is saved.
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_11_49_18.evt is saved.
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_11_49_18.xml is saved.
9/17/2012 11:49:18 AM -- Jetstress testing ends.
9/17/2012 2:44:43 PM -- Jetstress testing begins …
9/17/2012 2:44:43 PM -- Prepare testing begins …
9/17/2012 2:44:50 PM -- Attaching databases …
9/17/2012 2:44:50 PM -- Prepare testing ends.
9/17/2012 2:44:50 PM -- Dispatching transactions begins …
9/17/2012 2:44:50 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/17/2012 2:44:50 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/17/2012 2:44:57 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:44:57 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:09 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:09 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:09 PM -- Attaining prerequisites:

9/17/2012 2:48:53 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456959000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:48:53 PM -- Performance logging ends.

9/18/2012 10:40:26 AM -- JetInterop batch transaction stats: 144301, 144824, 144291, 144113, 144521 and 144070.

9/18/2012 10:40:26 AM -- Dispatching transactions ends.

9/18/2012 10:40:26 AM -- Shutting down databases ...

9/18/2012 10:40:34 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/18/2012 10:40:34 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.blg has 494 samples.

9/18/2012 10:40:34 AM -- Creating test report ...

9/18/2012 10:40:40 AM -- Instance2060.1 has 24.1 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.1 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.1 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 22.7 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 24.0 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/18/2012 10:40:40 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/18/2012 10:40:40 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.xml has 479 samples queried.

9/18/2012 10:40:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.html is saved.

9/18/2012 10:40:42 AM -- Performance logging begins (interval: 30000 ms).

9/18/2012 10:40:42 AM -- Verifying database checksums ...

9/18/2012 10:41:54 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/18/2012 10:41:54 AM -- Verifying log checksums ...

9/18/2012 10:41:54 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_41_54.evt is saved.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_41_54.evt is saved.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_41_54.xml is saved.

9/18/2012 10:41:54 AM -- Jetstress testing ends.

9/19/2012 5:14:58 PM -- Jetstress testing begins ...

9/19/2012 5:14:58 PM -- Prepare testing begins ...

9/19/2012 5:15:04 PM -- Attaching databases ...

9/19/2012 5:15:04 PM -- Prepare testing ends.

9/19/2012 5:15:04 PM -- Dispatching transactions begins ...

9/19/2012 5:15:04 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/19/2012 5:15:04 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:11 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:11 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:22 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:22 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:22 PM -- Attaining prerequisites:

9/19/2012 5:18:10 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1462936000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:10 PM -- Performance logging ends.

9/19/2012 8:41:08 PM -- JetInterop batch transaction stats: 35060, 35015, 35216, 34975, 35271 and 34960.

9/19/2012 8:41:08 PM -- Dispatching transactions ends.

9/19/2012 8:41:08 PM -- Shutting down databases ...

9/19/2012 8:41:16 PM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/19/2012 8:41:16 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.blg has 490 samples.

9/19/2012 8:41:16 PM -- Creating test report ...

9/19/2012 8:41:31 PM -- Instance2060.1 has 19.5 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 17.8 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.4 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 17.6 for I/O Database Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 17.6 for I/O Database Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 6.5 for I/O Log Writes Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 6.5 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:41:31 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/19/2012 8:41:31 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.xml has 478 samples queried.

Server 3 – EX02A

Test Summary

Overall Test Result	Pass
Machine Name	EX02A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:02 PM
Test End Time	9/19/2012 8:41:56 PM
Collection Start Time	9/19/2012 5:18:14 PM
Collection End Time	9/19/2012 7:18:09 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_15.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	597.192
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9021880139776
Final Database Size (bytes)	9024304447488
Database Files (Count)	6

Jetstress System Parameters

Thread Count	5 (per database)
Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True

Database Configuration

Instance1064.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1064.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1064.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1064.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1064.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1064.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1064.1	18.142	12.130	61.544	37.756	34692.819	35065.455	0.000	6.604	0.000	26.290	0.000	5454.869
Instance1064.2	17.692	11.351	61.445	37.756	34402.612	35109.876	0.000	6.604	0.000	26.409	0.000	5448.651
Instance1064.3	17.958	11.411	62.067	38.213	34581.546	35123.205	0.000	6.592	0.000	26.389	0.000	5449.781
Instance1064.4	18.473	10.387	61.589	37.783	34423.394	35115.621	0.000	6.564	0.000	26.451	0.000	5484.582
Instance1064.5	17.832	10.110	61.259	37.740	34557.183	35086.759	0.000	6.588	0.000	26.096	0.000	5476.847
Instance1064.6	17.832	9.568	61.962	38.077	34796.776	35099.791	0.000	6.620	0.000	26.492	0.000	5472.459

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1064.1	23.339	261853.123
Instance1064.2	23.440	261887.404
Instance1064.3	23.270	261846.503
Instance1064.4	22.874	261849.437
Instance1064.5	23.315	261853.930
Instance1064.6	23.255	261872.116

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance1064.1	0.589	209198.314
Instance1064.2	0.592	214993.139
Instance1064.3	0.593	207178.430
Instance1064.4	0.597	211997.276
Instance1064.5	0.588	210277.737

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1064.1	18.142	12.130	84.882	37.756	97151.350	35065.455	16.079	6.604	0.589	26.290	209198.314	5454.869
Instance1064.2	17.692	11.351	84.885	37.756	97219.305	35109.876	17.013	6.604	0.592	26.409	214993.139	5448.651
Instance1064.3	17.958	11.411	85.337	38.213	96553.509	35123.205	15.475	6.592	0.593	26.389	207178.430	5449.781
Instance1064.4	18.473	10.387	84.463	37.783	96014.940	35115.621	16.242	6.564	0.597	26.451	211997.276	5484.582
Instance1064.5	17.832	10.110	84.574	37.740	97218.365	35086.759	16.161	6.588	0.588	26.096	210277.737	5476.847
Instance1064.6	17.832	9.568	85.217	38.077	96763.463	35099.791	16.171	6.620	0.597	26.492	210239.504	5472.459

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.925	2.079	3.809
Available MBytes	44509.056	44504.000	44573.000
Free System Page Table Entries	33555096.960	33555092.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34384654.430	34373632.000	34439168.000
Pool Paged Bytes	133786741.578	131940352.000	134950912.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:53 PM -- Jetstress testing begins ...

9/14/2012 1:49:54 PM -- Prepare testing begins ...

9/14/2012 1:50:01 PM -- Attaching databases ...

9/14/2012 1:50:01 PM -- Prepare testing ends.

9/14/2012 1:50:01 PM -- Dispatching transactions begins ...

9/14/2012 1:50:01 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:01 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:10 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:10 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:50:22 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:50:22 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:50:22 PM -- Attaining prerequisites:

9/14/2012 1:54:20 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1461314000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:54:21 PM -- Performance logging ends.

9/17/2012 9:51:08 AM -- JetInterop batch transaction stats: 652481, 652794, 652372, 652353, 651702 and 652228.

9/17/2012 9:51:08 AM -- Dispatching transactions ends.

9/17/2012 9:51:08 AM -- Shutting down databases ...

9/17/2012 9:51:20 AM -- Instance1064.1 (complete), Instance1064.2 (complete), Instance1064.3 (complete), Instance1064.4 (complete), Instance1064.5 (complete) and Instance1064.6 (complete)

9/17/2012 9:51:20 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_10.blg has 494 samples.

9/17/2012 9:51:20 AM -- Creating test report ...

9/17/2012 9:51:25 AM -- Instance1064.1 has 17.2 for I/O Database Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.1 has 11.3 for I/O Log Writes Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.1 has 11.3 for I/O Log Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.2 has 17.0 for I/O Database Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.2 has 11.4 for I/O Log Writes Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.2 has 11.4 for I/O Log Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.3 has 17.3 for I/O Database Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.3 has 11.3 for I/O Log Writes Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.3 has 11.3 for I/O Log Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.4 has 18.6 for I/O Database Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.4 has 11.3 for I/O Log Writes Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.4 has 11.3 for I/O Log Reads Average Latency.

9/17/2012 9:51:25 AM -- Instance1064.5 has 17.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:25 AM -- Instance1064.5 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:25 AM -- Instance1064.5 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:25 AM -- Instance1064.6 has 17.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:25 AM -- Instance1064.6 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:25 AM -- Instance1064.6 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:25 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/17/2012 9:51:25 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/17/2012 9:51:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_10.xml has 478 samples queried.
9/17/2012 9:51:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_10.html is saved.
9/17/2012 9:51:28 AM -- Performance logging begins (interval: 30000 ms).
9/17/2012 9:51:28 AM -- Verifying database checksums …
9/17/2012 9:54:05 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/17/2012 9:54:06 AM -- Verifying log checksums …
9/17/2012 9:54:06 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/17/2012 9:54:06 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_6.evt is saved.
9/17/2012 9:54:07 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_6.evt is saved.
9/17/2012 9:54:07 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_7.xml is saved.
9/17/2012 9:54:07 AM -- Jetstress testing ends.
9/17/2012 2:44:46 PM -- Jetstress testing begins …
9/17/2012 2:44:46 PM -- Prepare testing begins …
9/17/2012 2:44:52 PM -- Attaching databases …
9/17/2012 2:44:52 PM -- Prepare testing ends.
9/17/2012 2:44:52 PM -- Dispatching transactions begins …
9/17/2012 2:44:52 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/17/2012 2:44:52 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/17/2012 2:44:59 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/17/2012 2:44:59 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/17/2012 2:45:10 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/17/2012 2:45:10 PM -- Performance logging begins (interval: 15000 ms).
9/17/2012 2:45:10 PM -- Attaining prerequisites:
9/17/2012 2:49:01 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458684000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:01 PM -- Performance logging ends.

9/18/2012 10:40:53 AM -- JetInterop batch transaction stats: 144256, 143270, 143593, 143625, 143870 and 144251.

9/18/2012 10:40:54 AM -- Dispatching transactions ends.

9/18/2012 10:40:54 AM -- Shutting down databases …

9/18/2012 10:41:11 AM -- Instance1064.1 (complete), Instance1064.2 (complete), Instance1064.3 (complete), Instance1064.4 (complete), Instance1064.5 (complete) and Instance1064.6 (complete)

9/18/2012 10:41:11 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_59.blg has 494 samples.

9/18/2012 10:41:11 AM -- Creating test report …

9/18/2012 10:41:30 AM -- Instance1064.1 has 23.1 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.1 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.1 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.2 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.2 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.2 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.3 has 22.5 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.3 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.3 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.4 has 23.9 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.4 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.4 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.5 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.5 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.5 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.6 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.6 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:30 AM -- Instance1064.6 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:30 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/18/2012 10:41:30 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/18/2012 10:41:30 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_59.xml has 478 samples queried.

9/18/2012 10:41:30 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_59.html is saved.

9/18/2012 10:41:51 AM -- Performance logging begins (interval: 30000 ms).

9/18/2012 10:41:51 AM -- Verifying database checksums …

9/18/2012 11:16:10 AM -- C:\DB\DB1 (12% processed), C:\DB\DB2 (12% processed), C:\DB\DB3 (12% processed), C:\DB\DB4 (11% processed), C:\DB\DB5 (13% processed) and C:\DB\DB6 (12% processed)

9/18/2012 11:16:11 AM -- Verifying log checksums …

9/18/2012 11:16:11 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/18/2012 11:16:11 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_11_16_11.evt is saved.

9/18/2012 11:16:11 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_11_16_11.evt is saved.

9/18/2012 11:16:11 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_11_16_11.xml is saved.

9/18/2012 11:16:11 AM -- Jetstress testing ends.

9/19/2012 5:15:02 PM -- Jetstress testing begins …

9/19/2012 5:15:02 PM -- Prepare testing begins …

9/19/2012 5:15:09 PM -- Attaching databases …

9/19/2012 5:15:09 PM -- Prepare testing ends.

9/19/2012 5:15:09 PM -- Dispatching transactions begins …

9/19/2012 5:15:09 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/19/2012 5:15:09 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:15 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:15 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:27 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:27 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:27 PM -- Attaining prerequisites:

9/19/2012 5:18:14 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451381000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:14 PM -- Performance logging ends.

9/19/2012 8:41:34 PM -- JetInterop batch transaction stats: 28766, 28719, 28927, 28621, 28617 and 28741.

9/19/2012 8:41:35 PM -- Dispatching transactions ends.

9/19/2012 8:41:35 PM -- Shutting down databases …

9/19/2012 8:41:56 PM -- Instance1064.1 (complete), Instance1064.2 (complete), Instance1064.3 (complete), Instance1064.4 (complete), Instance1064.5 (complete) and Instance1064.6 (complete)

9/19/2012 8:41:56 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_15.blg has 490 samples.

9/19/2012 8:41:56 PM -- Creating test report …

9/19/2012 8:42:04 PM -- Instance1064.1 has 18.1 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.2 has 17.7 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.3 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1064.3 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.3 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.4 has 18.5 for I/O Database Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.4 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.4 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.5 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.5 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.5 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.6 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.6 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:04 PM -- Instance1064.6 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:04 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:42:04 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/19/2012 8:42:04 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_15.xml has 478 samples queried.

Server 4 – EX02B

Test Summary

Overall Test Result	Pass
Machine Name	EX02B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:07 PM
Test End Time	9/19/2012 8:41:57 PM
Collection Start Time	9/19/2012 5:18:15 PM
Collection End Time	9/19/2012 7:18:13 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	615.885
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9027768942592
Final Database Size (bytes)	9030755287040
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance1720.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1720.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1720.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1720.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1720.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1720.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	17.713	11.647	62.896	38.673	34465.189	35127.849	0.000	6.398	0.000	27.051	0.000	5515.288
Instance1720.2	17.608	10.972	63.623	39.105	34643.444	35098.225	0.000	6.420	0.000	27.159	0.000	5499.105
Instance1720.3	17.419	10.638	64.000	39.322	34608.847	35114.588	0.000	6.405	0.000	27.195	0.000	5513.357
Instance1720.4	18.030	9.925	63.447	38.834	34465.311	35061.750	0.000	6.418	0.000	27.231	0.000	5492.064
Instance1720.5	17.327	9.645	63.330	38.922	34714.569	35105.992	0.000	6.440	0.000	26.832	0.000	5519.163
Instance1720.6	17.354	9.058	64.208	39.526	34400.572	35071.972	0.000	6.408	0.000	27.348	0.000	5456.432

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1720.1	23.684	261896.592
Instance1720.2	23.064	261897.644
Instance1720.3	23.536	261877.852
Instance1720.4	23.349	261828.661
Instance1720.5	23.638	261892.672
Instance1720.6	23.702	261823.730

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance1720.1	0.615	217665.569
Instance1720.2	0.614	217087.783
Instance1720.3	0.617	216904.613
Instance1720.4	0.617	209728.402
Instance1720.5	0.609	213144.671
Instance1720.6	0.614	210749.494

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	17.713	11.647	86.580	38.673	96679.508	35127.849	15.141	6.398	0.615	27.051	217665.569	5515.288
Instance1720.2	17.608	10.972	86.687	39.105	95108.083	35098.225	16.273	6.420	0.614	27.159	217087.783	5499.105
Instance1720.3	17.419	10.638	87.536	39.322	95716.129	35114.588	15.896	6.405	0.617	27.195	216904.613	5513.357
Instance1720.4	18.030	9.925	86.796	38.834	95628.330	35061.750	15.084	6.418	0.617	27.231	209728.402	5492.064
Instance1720.5	17.327	9.645	86.968	38.922	96461.961	35105.992	15.581	6.440	0.609	26.832	213144.671	5519.163
Instance1720.6	17.354	9.058	87.910	39.526	95716.927	35071.972	15.342	6.408	0.614	27.348	210749.494	5456.432

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.984	1.785	7.409
Available MBytes	44513.279	44508.000	44653.000
Free System Page Table Entries	33555608.985	33555605.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34183236.267	34172928.000	34226176.000
Pool Paged Bytes	133808844.800	131846144.000	135016448.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:55 PM -- Jetstress testing begins …

9/14/2012 1:49:56 PM -- Prepare testing begins …

9/14/2012 1:50:03 PM -- Attaching databases …

9/14/2012 1:50:03 PM -- Prepare testing ends.

9/14/2012 1:50:03 PM -- Dispatching transactions begins …

9/14/2012 1:50:03 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:03 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:12 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:12 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:50:25 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:50:25 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:50:25 PM -- Attaining prerequisites:

9/14/2012 1:57:45 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1457869000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:57:46 PM -- Performance logging ends.

9/17/2012 9:51:12 AM -- JetInterop batch transaction stats: 671072, 671545, 670719, 671308, 672874 and 672186.

9/17/2012 9:51:12 AM -- Dispatching transactions ends.

9/17/2012 9:51:12 AM -- Shutting down databases …

9/17/2012 9:51:21 AM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/17/2012 9:51:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.blg has 508 samples.

9/17/2012 9:51:21 AM -- Creating test report …

9/17/2012 9:51:26 AM -- Instance1720.1 has 21.7 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.1 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.1 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 23.2 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 21.2 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:26 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:26 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.xml has 478 samples queried.

9/17/2012 9:51:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.html is saved.

9/17/2012 9:51:29 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:51:29 AM -- Verifying database checksums ...

9/17/2012 9:54:21 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:22 AM -- Verifying log checksums ...

9/17/2012 9:54:22 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_22.evt is saved.

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_22.evt is saved.

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_22.xml is saved.

9/17/2012 9:54:22 AM -- Jetstress testing ends.

9/17/2012 2:44:48 PM -- Jetstress testing begins ...

9/17/2012 2:44:48 PM -- Prepare testing begins ...

9/17/2012 2:44:54 PM -- Attaching databases ...

9/17/2012 2:44:54 PM -- Prepare testing ends.

9/17/2012 2:44:54 PM -- Dispatching transactions begins ...

9/17/2012 2:44:54 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:44:54 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:01 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:01 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:13 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:13 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:13 PM -- Attaining prerequisites:

9/17/2012 2:49:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452114000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:04 PM -- Performance logging ends.

9/18/2012 10:41:01 AM -- JetInterop batch transaction stats: 144579, 144999, 144746, 145032, 145441 and 144398.

9/18/2012 10:41:01 AM -- Dispatching transactions ends.

9/18/2012 10:41:01 AM -- Shutting down databases ...

9/18/2012 10:41:22 AM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/18/2012 10:41:22 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.blg has 494 samples.

9/18/2012 10:41:22 AM -- Creating test report ...

9/18/2012 10:41:33 AM -- Instance1720.1 has 23.1 for I/O Database Reads Average Latency.

9/18/2012 10:41:33 AM -- Instance1720.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 24.0 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:41:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:41:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.xml has 478 samples queried.
9/18/2012 10:41:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.html is saved.
9/18/2012 10:41:52 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:41:52 AM -- Verifying database checksums …
9/18/2012 10:42:02 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:42:02 AM -- Verifying log checksums …
9/18/2012 10:42:02 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_2.evt is saved.
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_2.evt is saved.
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_2.xml is saved.
9/18/2012 10:42:02 AM -- Jetstress testing ends.
9/19/2012 5:15:07 PM -- Jetstress testing begins …
9/19/2012 5:15:07 PM -- Prepare testing begins …
9/19/2012 5:15:13 PM -- Attaching databases …
9/19/2012 5:15:13 PM -- Prepare testing ends.
9/19/2012 5:15:13 PM -- Dispatching transactions begins …
9/19/2012 5:15:13 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:13 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:20 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:20 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:31 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:31 PM -- Attaining prerequisites:

9/19/2012 5:18:15 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1465328000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:16 PM -- Performance logging ends.

9/19/2012 8:41:39 PM -- JetInterop batch transaction stats: 35454, 35470, 35534, 35178, 35268 and 35615.

9/19/2012 8:41:40 PM -- Dispatching transactions ends.

9/19/2012 8:41:40 PM -- Shutting down databases ...

9/19/2012 8:41:57 PM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/19/2012 8:41:57 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.blg has 490 samples.

9/19/2012 8:41:57 PM -- Creating test report ...

9/19/2012 8:42:04 PM -- Instance1720.1 has 17.7 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 17.3 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:04 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:04 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.xml has 479 samples queried.

Server 5 – EX03A

Test Summary

Overall Test Result	Pass
Machine Name	EX03A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:10 PM
Test End Time	9/19/2012 8:42:07 PM
Collection Start Time	9/19/2012 5:18:25 PM
Collection End Time	9/19/2012 7:18:17 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	598.17
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9022031134720
Final Database Size (bytes)	9024472219648
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance496.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance496.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance496.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance496.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance496.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance496.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	18.253	11.832	61.817	38.079	34236.964	35104.949	0.000	6.611	0.000	26.418	0.000	5489.656
Instance496.2	17.794	11.063	61.815	38.034	34663.872	35089.543	0.000	6.595	0.000	26.248	0.000	5522.143
Instance496.3	17.769	10.821	61.772	37.840	34569.153	35084.302	0.000	6.575	0.000	26.239	0.000	5476.271
Instance496.4	18.256	10.052	61.669	37.895	34485.260	35176.310	0.000	6.574	0.000	26.478	0.000	5506.658
Instance496.5	17.880	9.692	61.752	38.013	34484.128	35132.999	0.000	6.571	0.000	26.181	0.000	5539.198
Instance496.6	17.788	9.169	61.738	37.746	34686.642	35089.748	0.000	6.600	0.000	26.079	0.000	5487.209

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance496.1	23.420	261858.306
Instance496.2	23.320	261907.838
Instance496.3	23.314	261898.485
Instance496.4	23.307	261888.576
Instance496.5	23.339	261896.660
Instance496.6	23.309	261877.936

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance496.1	0.597	212157.587
Instance496.2	0.595	215614.717
Instance496.3	0.590	206342.087
Instance496.4	0.602	213982.384
Instance496.5	0.597	213143.823
Instance496.6	0.588	208184.805

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	18.253	11.832	85.237	38.079	96779.547	35104.949	16.151	6.611	0.597	26.418	212157.587	5489.656
Instance496.2	17.794	11.063	85.135	38.034	96910.962	35089.543	16.427	6.595	0.595	26.248	215614.717	5522.143
Instance496.3	17.769	10.821	85.086	37.840	96857.680	35084.302	15.450	6.575	0.590	26.239	206342.087	5476.271
Instance496.4	18.256	10.052	84.976	37.895	96857.492	35176.310	17.186	6.574	0.602	26.478	213982.384	5506.658
Instance496.5	17.880	9.692	85.091	38.013	96860.240	35132.999	16.412	6.571	0.597	26.181	213143.823	5539.198
Instance496.6	17.788	9.169	85.047	37.746	96954.264	35089.748	15.887	6.600	0.588	26.079	208184.805	5487.20

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.987	2.131	3.809
Available MBytes	44556.328	44550.000	44661.000
Free System Page Table Entries	33555096.981	33555095.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34249341.061	34238464.000	34299904.000
Pool Paged Bytes	132616893.194	130768896.000	133787648.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:57 PM -- Jetstress testing begins …
9/14/2012 1:49:57 PM -- Prepare testing begins …
9/14/2012 1:50:04 PM -- Attaching databases …
9/14/2012 1:50:04 PM -- Prepare testing ends.
9/14/2012 1:50:04 PM -- Dispatching transactions begins …
9/14/2012 1:50:04 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:04 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:13 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:13 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:24 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:24 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:24 PM -- Attaining prerequisites:
9/14/2012 1:54:18 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450336000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:19 PM -- Performance logging ends.
9/17/2012 9:51:20 AM -- JetInterop batch transaction stats: 655253, 653099, 654849, 654241, 652600 and 653851.
9/17/2012 9:51:20 AM -- Dispatching transactions ends.
9/17/2012 9:51:20 AM -- Shutting down databases …
9/17/2012 9:51:41 AM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)
9/17/2012 9:51:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.blg has 494 samples.
9/17/2012 9:51:41 AM -- Creating test report …
9/17/2012 9:51:59 AM -- Instance496.1 has 17.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.1 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.1 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 17.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 16.9 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 18.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 17.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.6 has 16.8 for I/O Database Reads Average Latency.

9/17/2012 9:51:59 AM -- Instance496.6 has 11.4 for I/O Log Writes Average Latency.

9/17/2012 9:51:59 AM -- Instance496.6 has 11.4 for I/O Log Reads Average Latency.

9/17/2012 9:52:00 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:00 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.xml has 478 samples queried.

9/17/2012 9:52:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.html is saved.

9/17/2012 9:52:04 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:04 AM -- Verifying database checksums ...

9/17/2012 9:54:24 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:25 AM -- Verifying log checksums ...

9/17/2012 9:54:25 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_25.evt is saved.

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_25.evt is saved.

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_25.xml is saved.

9/17/2012 9:54:25 AM -- Jetstress testing ends.

9/17/2012 9:56:07 AM -- Jetstress testing begins ...

9/17/2012 9:56:07 AM -- Prepare testing begins ...

9/17/2012 9:56:14 AM -- Attaching databases ...

9/17/2012 9:56:14 AM -- Prepare testing ends.

9/17/2012 9:56:14 AM -- Jetstress testing ends.

9/17/2012 2:44:51 PM -- Jetstress testing begins ...

9/17/2012 2:44:51 PM -- Prepare testing begins ...

9/17/2012 2:44:57 PM -- Attaching databases ...

9/17/2012 2:44:57 PM -- Prepare testing ends.

9/17/2012 2:44:57 PM -- Dispatching transactions begins ...

9/17/2012 2:44:57 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:44:57 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:04 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:04 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:16 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:16 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:16 PM -- Attaining prerequisites:

9/17/2012 2:49:19 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451782000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:19 PM -- Performance logging ends.

9/18/2012 10:41:11 AM -- JetInterop batch transaction stats: 143816, 142976, 144346, 143507, 143902 and 143140.

9/18/2012 10:41:12 AM -- Dispatching transactions ends.

9/18/2012 10:41:12 AM -- Shutting down databases ...

9/18/2012 10:41:28 AM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)

9/18/2012 10:41:28 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.blg has 495 samples.

9/18/2012 10:41:28 AM -- Creating test report ...

9/18/2012 10:41:54 AM -- Instance496.1 has 23.1 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.1 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.1 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 23.9 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 22.9 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/18/2012 10:41:54 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.xml has 478 samples queried.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.html is saved.

9/18/2012 10:41:55 AM -- Performance logging begins (interval: 30000 ms).

9/18/2012 10:41:55 AM -- Verifying database checksums ...

9/18/2012 10:42:05 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/18/2012 10:42:05 AM -- Verifying log checksums ...

9/18/2012 10:42:05 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/18/2012 10:42:05 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_5.evt is saved.

9/18/2012 10:42:06 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_5.evt is saved.

9/18/2012 10:42:06 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_6.xml is saved.

9/18/2012 10:42:06 AM -- Jetstress testing ends.

9/19/2012 5:15:10 PM -- Jetstress testing begins ...

9/19/2012 5:15:10 PM -- Prepare testing begins ...

9/19/2012 5:15:16 PM -- Attaching databases ...
9/19/2012 5:15:16 PM -- Prepare testing ends.
9/19/2012 5:15:16 PM -- Dispatching transactions begins ...
9/19/2012 5:15:16 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:16 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/19/2012 5:15:23 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/19/2012 5:15:23 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/19/2012 5:15:35 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/19/2012 5:15:35 PM -- Performance logging begins (interval: 15000 ms).
9/19/2012 5:15:35 PM -- Attaining prerequisites:
9/19/2012 5:18:25 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454322000.0 (lower bound: 1449551000.0, upper bound: none)
9/19/2012 7:18:26 PM -- Performance logging ends.
9/19/2012 8:41:44 PM -- JetInterop batch transaction stats: 28719, 28734, 28576, 28663, 28507 and 28483.
9/19/2012 8:41:45 PM -- Dispatching transactions ends.
9/19/2012 8:41:45 PM -- Shutting down databases ...
9/19/2012 8:42:07 PM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)
9/19/2012 8:42:07 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.blg has 490 samples.
9/19/2012 8:42:07 PM -- Creating test report ...
9/19/2012 8:42:22 PM -- Instance496.1 has 18.3 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.1 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.1 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 18.3 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 17.9 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:42:22 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:22 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.xml has 478 samples queried.

Server 6 – EX03B

Test Summary

Overall Test Result	Pass
Machine Name	EX03B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:15 PM
Test End Time	9/19/2012 8:42:09 PM
Collection Start Time	9/19/2012 5:18:37 PM
Collection End Time	9/19/2012 7:18:37 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	615.172
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9027936714752
Final Database Size (bytes)	9030948225024
Database Files (Count)	6

Jetstress System Parameters

Thread Count	5 (per database)
Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	17.789	11.544	63.335	38.879	34573.243	35096.939	0.000	6.417	0.000	26.917	0.000	5469.207
Instance2988.2	17.471	10.861	63.282	38.962	34676.797	35143.481	0.000	6.417	0.000	26.939	0.000	5525.050
Instance2988.3	17.380	10.622	63.959	39.273	34381.005	35056.643	0.000	6.437	0.000	27.349	0.000	5495.992
Instance2988.4	19.270	9.813	63.483	38.945	34336.671	35093.204	0.000	6.403	0.000	27.147	0.000	5496.236
Instance2988.5	17.157	9.547	63.482	38.966	34547.417	35068.625	0.000	6.412	0.000	26.675	0.000	5462.010
Instance2988.6	17.414	8.937	63.610	38.995	34383.862	35106.162	0.000	6.426	0.000	26.954	0.000	5493.580

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2988.1	23.753	261814.887
Instance2988.2	23.352	261872.803
Instance2988.3	23.395	261885.984
Instance2988.4	20.581	261883.834
Instance2988.5	23.597	261916.402
Instance2988.6	23.408	261860.091

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2988.1	0.605	214025.133
Instance2988.2	0.613	215833.281
Instance2988.3	0.618	216093.081
Instance2988.4	0.614	216144.838
Instance2988.5	0.600	217540.261
Instance2988.6	0.609	215619.516

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	17.789	11.544	87.088	38.879	96552.127	35096.939	15.671	6.417	0.605	26.917	214025.133	5469.207
Instance2988.2	17.471	10.861	86.634	38.962	95917.662	35143.481	16.014	6.417	0.613	26.939	215833.281	5525.050
Instance2988.3	17.380	10.622	87.354	39.273	95311.508	35056.643	16.243	6.437	0.618	27.349	216093.081	5495.992
Instance2988.4	19.270	9.813	84.064	38.945	90045.322	35093.204	16.417	6.403	0.614	27.147	216144.838	5496.236
Instance2988.5	17.157	9.547	87.079	38.966	96160.146	35068.625	15.935	6.412	0.600	26.675	217540.261	5462.010
Instance2988.6	17.414	8.937	87.018	38.995	95574.277	35106.162	16.258	6.426	0.609	26.954	215619.516	5493.58

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.937	1.940	4.017
Available MBytes	44527.202	44522.000	44655.000
Free System Page Table Entries	33555096.967	33555093.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34173337.600	34160640.000	34222080.000
Pool Paged Bytes	132453410.133	130617344.000	133644288.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:59 PM -- Jetstress testing begins ...
9/14/2012 1:50:00 PM -- Prepare testing begins ...
9/14/2012 1:50:07 PM -- Attaching databases ...
9/14/2012 1:50:07 PM -- Prepare testing ends.
9/14/2012 1:50:07 PM -- Dispatching transactions begins ...
9/14/2012 1:50:07 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:07 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:18 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:18 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:29 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:29 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:29 PM -- Attaining prerequisites:
9/14/2012 1:57:38 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451348000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:57:39 PM -- Performance logging ends.
9/17/2012 9:51:26 AM -- JetInterop batch transaction stats: 668921, 669478, 670604, 670224, 669357 and 670653.
9/17/2012 9:51:27 AM -- Dispatching transactions ends.
9/17/2012 9:51:27 AM -- Shutting down databases ...
9/17/2012 9:51:41 AM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)
9/17/2012 9:51:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.blg has 507 samples.
9/17/2012 9:51:41 AM -- Creating test report ...
9/17/2012 9:51:59 AM -- Instance2988.1 has 22.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 21.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 21.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 21.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.6 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:59 AM -- Instance2988.6 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:59 AM -- Instance2988.6 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:59 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:59 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:59 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.xml has 478 samples queried.

9/17/2012 9:52:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.html is saved.

9/17/2012 9:52:04 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:04 AM -- Verifying database checksums ...

9/17/2012 9:54:30 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:31 AM -- Verifying log checksums ...

9/17/2012 9:54:31 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_31.evt is saved.

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_31.evt is saved.

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_31.xml is saved.

9/17/2012 9:54:31 AM -- Jetstress testing ends.

9/17/2012 2:44:59 PM -- Jetstress testing begins ...

9/17/2012 2:44:59 PM -- Prepare testing begins ...

9/17/2012 2:45:05 PM -- Attaching databases ...

9/17/2012 2:45:05 PM -- Prepare testing ends.

9/17/2012 2:45:05 PM -- Dispatching transactions begins ...

9/17/2012 2:45:05 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:05 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:13 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:13 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:24 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:24 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:24 PM -- Attaining prerequisites:

9/17/2012 2:49:23 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454785000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:23 PM -- Performance logging ends.

9/18/2012 10:41:42 AM -- JetInterop batch transaction stats: 144854, 145715, 145358, 145024, 144584 and 145306.

9/18/2012 10:41:50 AM -- Dispatching transactions ends.

9/18/2012 10:41:50 AM -- Shutting down databases ...

9/18/2012 10:42:02 AM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.blg has 495 samples.

9/18/2012 10:42:02 AM -- Creating test report ...

9/18/2012 10:42:07 AM -- Instance2988.1 has 23.2 for I/O Database Reads Average Latency.

9/18/2012 10:42:07 AM -- Instance2988.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 23.0 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:42:07 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:42:07 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.xml has 479 samples queried.
9/18/2012 10:42:07 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.html is saved.
9/18/2012 10:42:09 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:42:09 AM -- Verifying database checksums …
9/18/2012 10:42:30 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:42:30 AM -- Verifying log checksums …
9/18/2012 10:42:30 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_30.evt is saved.
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_30.evt is saved.
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_30.xml is saved.
9/18/2012 10:42:30 AM -- Jetstress testing ends.
9/19/2012 5:15:15 PM -- Jetstress testing begins …
9/19/2012 5:15:15 PM -- Prepare testing begins …
9/19/2012 5:15:21 PM -- Attaching databases …
9/19/2012 5:15:21 PM -- Prepare testing ends.
9/19/2012 5:15:21 PM -- Dispatching transactions begins …
9/19/2012 5:15:21 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:21 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:28 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:28 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:40 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:40 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:40 PM -- Attaining prerequisites:

9/19/2012 5:18:37 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452683000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:37 PM -- Performance logging ends.

9/19/2012 8:41:55 PM -- JetInterop batch transaction stats: 35267, 35321, 35760, 35682, 35209 and 35529.

9/19/2012 8:41:55 PM -- Dispatching transactions ends.

9/19/2012 8:41:55 PM -- Shutting down databases ...

9/19/2012 8:42:09 PM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/19/2012 8:42:09 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.blg has 491 samples.

9/19/2012 8:42:09 PM -- Creating test report ...

9/19/2012 8:42:22 PM -- Instance2988.1 has 17.8 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 19.3 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 17.2 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:22 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:22 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.xml has 479 samples queried.

Server 7 – EX04A

Test Summary

Overall Test Result	Pass
Machine Name	EX04A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:18 PM
Test End Time	9/19/2012 8:42:48 PM
Collection Start Time	9/19/2012 5:18:35 PM
Collection End Time	9/19/2012 7:18:26 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	605.462
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9023339757568
Final Database Size (bytes)	9025806008320
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2296.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2296.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2296.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2296.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2296.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2296.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	17.473	11.263	62.292	38.255	34744.931	35100.744	0.000	6.611	0.000	26.334	0.000	5531.144
Instance2296.2	17.926	11.150	62.984	38.721	34632.393	35078.397	0.000	6.621	0.000	26.837	0.000	5456.619
Instance2296.3	17.875	11.033	62.406	38.274	34517.823	35134.591	0.000	6.620	0.000	26.495	0.000	5530.038
Instance2296.4	17.949	10.324	61.891	37.980	34387.242	35100.601	0.000	6.604	0.000	26.355	0.000	5494.619
Instance2296.5	17.890	9.988	62.318	38.247	34558.816	35139.234	0.000	6.649	0.000	26.435	0.000	5559.822
Instance2296.6	17.962	9.343	63.199	38.896	34481.434	35117.397	0.000	6.597	0.000	26.667	0.000	5498.311

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2296.1	23.546	261876.217
Instance2296.2	22.929	261840.269
Instance2296.3	23.097	261862.563
Instance2296.4	22.971	261818.619
Instance2296.5	23.027	261871.513
Instance2296.6	22.962	261873.196

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2296.1	0.600	211703.300
Instance2296.2	0.604	210181.356
Instance2296.3	0.603	211199.688
Instance2296.4	0.597	216533.842
Instance2296.5	0.604	214077.314
Instance2296.6	0.604	216519.044

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	17.473	11.263	85.838	38.255	97049.523	35100.744	16.572	6.611	0.600	26.334	211703.300	5531.144
Instance2296.2	17.926	11.150	85.912	38.721	95270.132	35078.397	15.957	6.621	0.604	26.837	210181.356	5456.619
Instance2296.3	17.875	11.033	85.503	38.274	95931.273	35134.591	15.228	6.620	0.603	26.495	211199.688	5530.038
Instance2296.4	17.949	10.324	84.862	37.980	95949.897	35100.601	16.482	6.604	0.597	26.355	216533.842	5494.619
Instance2296.5	17.890	9.988	85.345	38.247	95889.282	35139.234	15.605	6.649	0.604	26.435	214077.314	5559.822
Instance2296.6	17.962	9.343	86.160	38.896	95080.979	35117.397	16.449	6.597	0.604	26.667	216519.044	5498.311

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.899	2.131	3.757
Available MBytes	44510.025	44504.000	44595.000
Free System Page Table Entries	33555608.967	33555604.000	33555609.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34468344.518	34455552.000	34504704.000
Pool Paged Bytes	133932957.662	132096000.000	135122944.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:02 PM -- Jetstress testing begins …
9/14/2012 1:50:02 PM -- Prepare testing begins …
9/14/2012 1:50:10 PM -- Attaching databases …
9/14/2012 1:50:10 PM -- Prepare testing ends.
9/14/2012 1:50:10 PM -- Dispatching transactions begins …
9/14/2012 1:50:10 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:10 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:20 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:20 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:31 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:31 PM -- Attaining prerequisites:
9/14/2012 1:54:20 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1460322000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:20 PM -- Performance logging ends.
9/17/2012 9:51:31 AM -- JetInterop batch transaction stats: 666083, 667704, 667902, 666539, 666310 and 666169.
9/17/2012 9:51:32 AM -- Dispatching transactions ends.
9/17/2012 9:51:32 AM -- Shutting down databases …
9/17/2012 9:51:45 AM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)
9/17/2012 9:51:45 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.blg has 494 samples.
9/17/2012 9:51:45 AM -- Creating test report …
9/17/2012 9:51:58 AM -- Instance2296.1 has 20.7 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.1 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.1 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 18.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 22.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 22.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 19.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 30.9 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 30.9 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 21.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 33.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 33.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 19.2 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 36.0 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 36.0 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.6 has 19.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:58 AM -- Instance2296.6 has 45.0 for I/O Log Writes Average Latency.

9/17/2012 9:51:58 AM -- Instance2296.6 has 45.0 for I/O Log Reads Average Latency.

9/17/2012 9:51:58 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:58 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:58 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.xml has 479 samples queried.

9/17/2012 9:52:03 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.html is saved.

9/17/2012 9:52:05 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:05 AM -- Verifying database checksums ...

9/17/2012 9:54:32 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:32 AM -- Verifying log checksums ...

9/17/2012 9:54:32 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_32.evt is saved.

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_32.evt is saved.

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_32.xml is saved.

9/17/2012 9:54:32 AM -- Jetstress testing ends.

9/17/2012 2:45:01 PM -- Jetstress testing begins ...

9/17/2012 2:45:01 PM -- Prepare testing begins ...

9/17/2012 2:45:08 PM -- Attaching databases ...

9/17/2012 2:45:08 PM -- Prepare testing ends.

9/17/2012 2:45:08 PM -- Dispatching transactions begins ...

9/17/2012 2:45:08 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:08 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:16 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:16 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:28 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:28 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:28 PM -- Attaining prerequisites:

9/17/2012 2:49:33 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453920000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:34 PM -- Performance logging ends.

9/18/2012 10:42:40 AM -- JetInterop batch transaction stats: 143248, 143575, 143113, 143345, 143794 and 143433.

9/18/2012 10:42:40 AM -- Dispatching transactions ends.

9/18/2012 10:42:40 AM -- Shutting down databases ...

9/18/2012 10:42:47 AM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)

9/18/2012 10:42:47 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.blg has 495 samples.

9/18/2012 10:42:47 AM -- Creating test report ...

9/18/2012 10:43:00 AM -- Instance2296.1 has 22.4 for I/O Database Reads Average Latency.

9/18/2012 10:43:00 AM -- Instance2296.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:00 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.xml has 478 samples queried.
9/18/2012 10:43:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.html is saved.
9/18/2012 10:43:02 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:02 AM -- Verifying database checksums …
9/18/2012 10:44:59 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:45:00 AM -- Verifying log checksums …
9/18/2012 10:45:00 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_45_0.evt is saved.
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_45_0.evt is saved.
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_45_0.xml is saved.
9/18/2012 10:45:00 AM -- Jetstress testing ends.
9/19/2012 5:15:18 PM -- Jetstress testing begins …
9/19/2012 5:15:18 PM -- Prepare testing begins …
9/19/2012 5:15:24 PM -- Attaching databases …
9/19/2012 5:15:24 PM -- Prepare testing ends.
9/19/2012 5:15:24 PM -- Dispatching transactions begins …
9/19/2012 5:15:24 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:24 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:32 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:32 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:44 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:44 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:44 PM -- Attaining prerequisites:

9/19/2012 5:18:35 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453875000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:36 PM -- Performance logging ends.

9/19/2012 8:42:25 PM -- JetInterop batch transaction stats: 29078, 29003, 29089, 28965, 29120 and 28909.

9/19/2012 8:42:26 PM -- Dispatching transactions ends.

9/19/2012 8:42:26 PM -- Shutting down databases ...

9/19/2012 8:42:48 PM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)

9/19/2012 8:42:48 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.blg has 490 samples.

9/19/2012 8:42:48 PM -- Creating test report ...

9/19/2012 8:43:00 PM -- Instance2296.1 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:00 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:00 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.xml has 478 samples queried.

Server 8 – EX04B

Test Summary

Overall Test Result	Pass
Machine Name	EX04B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:54 PM
Test End Time	9/19/2012 8:43:15 PM
Collection Start Time	9/19/2012 5:19:22 PM
Collection End Time	9/19/2012 7:19:16 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	614.46
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9028179984384
Final Database Size (bytes)	9031183106048
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2868.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2868.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2868.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2868.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2868.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2868.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	17.625	10.706	63.489	38.989	34706.801	35097.824	0.000	6.452	0.000	26.849	0.000	5495.002
Instance2868.2	17.966	10.657	63.488	39.015	34296.950	34999.702	0.000	6.435	0.000	26.961	0.000	5427.556
Instance2868.3	17.930	10.509	63.700	39.090	34313.393	35104.811	0.000	6.441	0.000	27.063	0.000	5489.154
Instance2868.4	17.812	9.952	62.809	38.601	34372.530	35149.187	0.000	6.446	0.000	26.953	0.000	5534.590
Instance2868.5	17.949	9.495	63.563	39.061	34461.094	35100.088	0.000	6.460	0.000	27.176	0.000	5524.289
Instance2868.6	18.009	8.927	63.584	39.071	34625.770	35052.273	0.000	6.457	0.000	26.940	0.000	5464.570

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2868.1	22.683	261844.983
Instance2868.2	22.523	261841.220
Instance2868.3	22.645	261871.296
Instance2868.4	22.813	261839.674
Instance2868.5	22.633	261887.908
Instance2868.6	22.465	261883.620

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2868.1	0.609	209566.215
Instance2868.2	0.604	215384.598
Instance2868.3	0.613	216081.082
Instance2868.4	0.614	217538.351
Instance2868.5	0.619	211775.695
Instance2868.6	0.607	215082.083

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	17.625	10.706	86.173	38.989	94496.584	35097.824	16.184	6.452	0.609	26.849	209566.215	5495.002
Instance2868.2	17.966	10.657	86.011	39.015	93882.084	34999.702	15.962	6.435	0.604	26.961	215384.598	5427.556
Instance2868.3	17.930	10.509	86.345	39.090	93993.622	35104.811	15.652	6.441	0.613	27.063	216081.082	5489.154
Instance2868.4	17.812	9.952	85.622	38.601	94977.538	35149.187	16.677	6.446	0.614	26.953	217538.351	5534.590
Instance2868.5	17.949	9.495	86.196	39.061	94178.163	35100.088	16.354	6.460	0.619	27.176	211775.695	5524.289
Instance2868.6	18.009	8.927	86.049	39.071	93956.534	35052.273	15.453	6.457	0.607	26.940	215082.083	5464.570

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.817	2.131	3.723
Available MBytes	44529.355	44524.000	44586.000
Free System Page Table Entries	33555096.973	33555095.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34273600.668	34250752.000	34320384.000
Pool Paged Bytes	132317346.472	130469888.000	133525504.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:30 PM -- Jetstress testing begins …

9/14/2012 1:50:30 PM -- Prepare testing begins …

9/14/2012 1:50:38 PM -- Attaching databases …

9/14/2012 1:50:38 PM -- Prepare testing ends.

9/14/2012 1:50:38 PM -- Dispatching transactions begins …

9/14/2012 1:50:38 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:38 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:49 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:49 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:51:00 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:51:00 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:51:00 PM -- Attaining prerequisites:

9/14/2012 1:58:19 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450385000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:58:20 PM -- Performance logging ends.

9/17/2012 9:52:05 AM -- JetInterop batch transaction stats: 676238, 676580, 677077, 675729, 677203 and 676533.

9/17/2012 9:52:06 AM -- Dispatching transactions ends.

9/17/2012 9:52:06 AM -- Shutting down databases …

9/17/2012 9:52:16 AM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)

9/17/2012 9:52:16 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.blg has 507 samples.

9/17/2012 9:52:16 AM -- Creating test report …

9/17/2012 9:52:27 AM -- Instance2868.1 has 24.1 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.1 has 18.0 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.1 has 18.0 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.2 has 23.8 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.2 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.2 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.3 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.3 has 22.4 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.3 has 22.4 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.4 has 24.2 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.4 has 19.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.4 has 19.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.5 has 24.5 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.5 has 15.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.5 has 15.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.6 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.6 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.6 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:27 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.xml has 478 samples queried.

9/17/2012 9:52:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.html is saved.

9/17/2012 9:52:34 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:34 AM -- Verifying database checksums ...

9/17/2012 9:55:06 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:55:06 AM -- Verifying log checksums ...

9/17/2012 9:55:06 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_55_6.evt is saved.

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_55_6.evt is saved.

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_55_6.xml is saved.

9/17/2012 9:55:06 AM -- Jetstress testing ends.

9/17/2012 2:45:33 PM -- Jetstress testing begins ...

9/17/2012 2:45:33 PM -- Prepare testing begins ...

9/17/2012 2:45:39 PM -- Attaching databases ...

9/17/2012 2:45:39 PM -- Prepare testing ends.

9/17/2012 2:45:40 PM -- Dispatching transactions begins ...

9/17/2012 2:45:40 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:40 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:48 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:48 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:57 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:57 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:57 PM -- Attaining prerequisites:

9/17/2012 2:50:08 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451872000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:50:09 PM -- Performance logging ends.

9/18/2012 10:43:19 AM -- JetInterop batch transaction stats: 143687, 144419, 143705, 144042, 143824 and 143704.

9/18/2012 10:43:19 AM -- Dispatching transactions ends.

9/18/2012 10:43:19 AM -- Shutting down databases ...

9/18/2012 10:43:27 AM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)

9/18/2012 10:43:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.blg has 495 samples.

9/18/2012 10:43:27 AM -- Creating test report ...

9/18/2012 10:43:33 AM -- Instance2868.1 has 22.5 for I/O Database Reads Average Latency.

9/18/2012 10:43:33 AM -- Instance2868.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.xml has 478 samples queried.
9/18/2012 10:43:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.html is saved.
9/18/2012 10:43:35 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:35 AM -- Verifying database checksums …
9/18/2012 10:45:26 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:45:26 AM -- Verifying log checksums …
9/18/2012 10:45:26 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_45_26.evt is saved.
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_45_26.evt is saved.
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_45_26.xml is saved.
9/18/2012 10:45:26 AM -- Jetstress testing ends.
9/19/2012 5:15:54 PM -- Jetstress testing begins …
9/19/2012 5:15:54 PM -- Prepare testing begins …
9/19/2012 5:16:00 PM -- Attaching databases …
9/19/2012 5:16:00 PM -- Prepare testing ends.
9/19/2012 5:16:00 PM -- Dispatching transactions begins …
9/19/2012 5:16:00 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:16:00 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:16:08 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/19/2012 5:16:08 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/19/2012 5:16:20 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/19/2012 5:16:20 PM -- Performance logging begins (interval: 15000 ms).
9/19/2012 5:16:20 PM -- Attaining prerequisites:
9/19/2012 5:19:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458622000.0 (lower bound: 1449551000.0, upper bound: none)
9/19/2012 7:19:22 PM -- Performance logging ends.
9/19/2012 8:43:00 PM -- JetInterop batch transaction stats: 35543, 35492, 35274, 35497, 35133 and 35427.
9/19/2012 8:43:01 PM -- Dispatching transactions ends.
9/19/2012 8:43:01 PM -- Shutting down databases ...
9/19/2012 8:43:15 PM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)
9/19/2012 8:43:15 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.blg has 491 samples.
9/19/2012 8:43:15 PM -- Creating test report ...
9/19/2012 8:43:30 PM -- Instance2868.1 has 17.6 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.1 has 6.5 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.1 has 6.5 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.2 has 18.0 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.2 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.2 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.3 has 17.9 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.3 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.3 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.4 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.4 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.4 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.5 has 17.9 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.5 has 6.5 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.5 has 6.5 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.6 has 18.0 for I/O Database Reads Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.6 has 6.5 for I/O Log Writes Average Latency.
9/19/2012 8:43:30 PM -- Instance2868.6 has 6.5 for I/O Log Reads Average Latency.
9/19/2012 8:43:30 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:43:30 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/19/2012 8:43:30 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.xml has 478 samples queried.

Server 9 – EX05A

Test Summary

Overall Test Result	Pass
Machine Name	EX05A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:27 PM
Test End Time	9/19/2012 8:42:58 PM
Collection Start Time	9/19/2012 5:18:44 PM
Collection End Time	9/19/2012 7:18:35 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	595.449
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9022056300544
Final Database Size (bytes)	9024480608256
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2488.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2488.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2488.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2488.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2488.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2488.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	18.073	11.341	61.350	37.662	34692.639	35124.813	0.000	6.666	0.000	25.974	0.000	5455.573
Instance2488.2	18.427	11.091	61.488	37.809	34481.454	35109.784	0.000	6.669	0.000	26.240	0.000	5499.146
Instance2488.3	18.426	11.019	62.443	38.416	34419.737	35062.306	0.000	6.643	0.000	26.562	0.000	5488.280
Instance2488.4	18.394	10.457	61.547	37.834	34817.086	35075.857	0.000	6.631	0.000	26.201	0.000	5449.857
Instance2488.5	18.403	9.918	61.338	37.789	34456.034	35148.190	0.000	6.630	0.000	26.237	0.000	5549.524
Instance2488.6	18.496	9.498	60.660	37.114	34879.049	35141.342	0.000	6.635	0.000	25.978	0.000	5463.782

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2488.1	22.406	261862.070
Instance2488.2	22.416	261897.470
Instance2488.3	22.465	261871.947
Instance2488.4	22.510	261836.727
Instance2488.5	22.474	261832.489
Instance2488.6	22.375	261858.295

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2488.1	0.585	210101.930
Instance2488.2	0.594	215520.407
Instance2488.3	0.600	214176.518
Instance2488.4	0.589	211752.234
Instance2488.5	0.599	215910.688
Instance2488.6	0.584	212860.915

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	18.073	11.341	83.756	37.662	95464.829	35124.813	16.057	6.666	0.585	25.974	210101.930	5455.573
Instance2488.2	18.427	11.091	83.904	37.809	95237.634	35109.784	16.416	6.669	0.594	26.240	215520.407	5499.146
Instance2488.3	18.426	11.019	84.908	38.416	94599.658	35062.306	17.063	6.643	0.600	26.562	214176.518	5488.280
Instance2488.4	18.394	10.457	84.057	37.834	95612.815	35075.857	16.256	6.631	0.589	26.201	211752.234	5449.857
Instance2488.5	18.403	9.918	83.812	37.789	95425.508	35148.190	17.258	6.630	0.599	26.237	215910.688	5549.524
Instance2488.6	18.496	9.498	83.035	37.114	96041.384	35141.342	16.392	6.635	0.584	25.978	212860.915	5463.782

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.944	2.200	4.000
Available MBytes	44533.664	44528.000	44615.000
Free System Page Table Entries	33555096.981	33555095.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34180735.198	34160640.000	34226176.000
Pool Paged Bytes	133706540.359	131846144.000	134881280.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:11 PM -- Jetstress testing begins ...
9/14/2012 1:50:11 PM -- Prepare testing begins ...
9/14/2012 1:50:18 PM -- Attaching databases ...
9/14/2012 1:50:18 PM -- Prepare testing ends.
9/14/2012 1:50:18 PM -- Dispatching transactions begins ...
9/14/2012 1:50:18 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:18 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:28 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:28 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:40 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:40 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:40 PM -- Attaining prerequisites:
9/14/2012 1:54:30 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454604000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:30 PM -- Performance logging ends.
9/17/2012 9:51:40 AM -- JetInterop batch transaction stats: 654040, 652782, 652772, 655289, 652490 and 655345.
9/17/2012 9:51:40 AM -- Dispatching transactions ends.
9/17/2012 9:51:40 AM -- Shutting down databases ...
9/17/2012 9:51:52 AM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)
9/17/2012 9:51:52 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.blg has 494 samples.
9/17/2012 9:51:52 AM -- Creating test report ...
9/17/2012 9:52:21 AM -- Instance2488.1 has 18.4 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.1 has 17.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.1 has 17.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.2 has 19.9 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.2 has 21.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.2 has 21.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.3 has 19.4 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.3 has 24.9 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.3 has 24.9 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.4 has 19.9 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.4 has 21.5 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.4 has 21.5 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.5 has 19.9 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.5 has 26.8 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.5 has 26.8 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2488.6 has 20.1 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.6 has 15.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.6 has 15.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:21 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.xml has 478 samples queried.

9/17/2012 9:52:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.html is saved.

9/17/2012 9:52:26 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:26 AM -- Verifying database checksums ...

9/17/2012 9:54:40 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:40 AM -- Verifying log checksums ...

9/17/2012 9:54:40 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_40.evt is saved.

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_40.evt is saved.

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_40.xml is saved.

9/17/2012 9:54:40 AM -- Jetstress testing ends.

9/17/2012 2:45:06 PM -- Jetstress testing begins ...

9/17/2012 2:45:06 PM -- Prepare testing begins ...

9/17/2012 2:45:13 PM -- Attaching databases ...

9/17/2012 2:45:13 PM -- Prepare testing ends.

9/17/2012 2:45:13 PM -- Dispatching transactions begins ...

9/17/2012 2:45:13 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:13 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:21 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:21 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:31 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:31 PM -- Attaining prerequisites:

9/17/2012 2:49:35 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452311000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:35 PM -- Performance logging ends.

9/18/2012 10:42:56 AM -- JetInterop batch transaction stats: 142387, 142373, 142117, 142182, 142088 and 142351.

9/18/2012 10:42:57 AM -- Dispatching transactions ends.

9/18/2012 10:42:57 AM -- Shutting down databases ...

9/18/2012 10:43:04 AM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/18/2012 10:43:04 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.blg has 495 samples.

9/18/2012 10:43:04 AM -- Creating test report ...

9/18/2012 10:43:12 AM -- Instance2488.1 has 22.1 for I/O Database Reads Average Latency.

9/18/2012 10:43:12 AM -- Instance2488.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:12 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:12 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.xml has 478 samples queried.
9/18/2012 10:43:12 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.html is saved.
9/18/2012 10:43:14 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:14 AM -- Verifying database checksums …
9/18/2012 10:44:51 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:51 AM -- Verifying log checksums …
9/18/2012 10:44:51 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_51.evt is saved.
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_51.evt is saved.
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_52.xml is saved.
9/18/2012 10:44:52 AM -- Jetstress testing ends.
9/19/2012 5:15:27 PM -- Jetstress testing begins …
9/19/2012 5:15:27 PM -- Prepare testing begins …
9/19/2012 5:15:33 PM -- Attaching databases …
9/19/2012 5:15:33 PM -- Prepare testing ends.
9/19/2012 5:15:33 PM -- Dispatching transactions begins …
9/19/2012 5:15:33 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:33 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:41 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:41 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:53 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:53 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:53 PM -- Attaining prerequisites:

9/19/2012 5:18:44 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452986000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:44 PM -- Performance logging ends.

9/19/2012 8:42:33 PM -- JetInterop batch transaction stats: 28407, 28750, 28748, 28587, 28516 and 28596.

9/19/2012 8:42:34 PM -- Dispatching transactions ends.

9/19/2012 8:42:34 PM -- Shutting down databases ...

9/19/2012 8:42:58 PM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/19/2012 8:42:58 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.blg has 490 samples.

9/19/2012 8:42:58 PM -- Creating test report ...

9/19/2012 8:43:09 PM -- Instance2488.1 has 18.1 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.1 has 6.7 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.1 has 6.7 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 6.7 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 6.7 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 18.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:09 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:09 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.xml has 478 samples queried.

Server 10 – EX05B

Test Summary

Overall Test Result	Pass
Machine Name	EX05B
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:30 PM
Test End Time	9/19/2012 8:42:54 PM
Collection Start Time	9/19/2012 5:19:03 PM
Collection End Time	9/19/2012 7:18:53 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	620.604
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9023675301888
Final Database Size (bytes)	9026728755200
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2704.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2704.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2704.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2704.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2704.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2704.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.565	10.781	64.113	39.266	34702.071	35109.049	0.000	6.462	0.000	27.215	0.000	5471.860
Instance2704.2	17.965	10.725	63.769	39.117	34420.503	35130.330	0.000	6.461	0.000	27.104	0.000	5473.802
Instance2704.3	17.891	10.515	64.040	39.449	34519.439	35163.222	0.000	6.444	0.000	27.420	0.000	5584.186
Instance2704.4	17.869	9.896	65.101	40.010	34293.360	35072.206	0.000	6.446	0.000	27.730	0.000	5447.521
Instance2704.5	17.920	9.564	63.838	39.139	34422.865	35108.995	0.000	6.455	0.000	27.091	0.000	5517.340
Instance2704.6	17.981	9.025	63.678	39.085	34524.283	35100.667	0.000	6.449	0.000	27.160	0.000	5463.168

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2704.1	22.720	261880.144
Instance2704.2	22.528	261894.750
Instance2704.3	22.688	261900.030
Instance2704.4	22.731	261899.790
Instance2704.5	22.669	261855.753
Instance2704.6	22.571	261887.636

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2704.1	0.613	217526.544
Instance2704.2	0.612	214203.515
Instance2704.3	0.630	218432.700
Instance2704.4	0.620	216007.906
Instance2704.5	0.615	215542.736
Instance2704.6	0.612	217663.129

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.565	10.781	86.833	39.266	94144.002	35109.049	16.259	6.462	0.613	27.215	217526.544	5471.860
Instance2704.2	17.965	10.725	86.297	39.117	93804.107	35130.330	16.698	6.461	0.612	27.104	214203.515	5473.802
Instance2704.3	17.891	10.515	86.728	39.449	94003.241	35163.222	16.443	6.444	0.630	27.420	218432.700	5584.186
Instance2704.4	17.869	9.896	87.832	40.010	93198.265	35072.206	16.129	6.446	0.620	27.730	216007.906	5447.521
Instance2704.5	17.920	9.564	86.507	39.139	94021.002	35108.995	15.979	6.455	0.615	27.091	215542.736	5517.340
Instance2704.6	17.981	9.025	86.249	39.085	94023.937	35100.667	16.509	6.449	0.612	27.160	217663.129	5463.168

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.944	1.958	3.982
Available MBytes	44513.983	44508.000	44619.000
Free System Page Table Entries	33555608.969	33555607.000	33555609.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34302708.777	34283520.000	34340864.000
Pool Paged Bytes	133782910.664	132001792.000	135032832.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:15 PM -- Jetstress testing begins …
9/14/2012 1:50:16 PM -- Prepare testing begins …
9/14/2012 1:50:23 PM -- Attaching databases …
9/14/2012 1:50:23 PM -- Prepare testing ends.
9/14/2012 1:50:23 PM -- Dispatching transactions begins …
9/14/2012 1:50:23 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:23 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:36 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:36 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:46 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:46 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:46 PM -- Attaining prerequisites:
9/14/2012 1:58:05 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458070000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:58:05 PM -- Performance logging ends.
9/17/2012 9:51:45 AM -- JetInterop batch transaction stats: 673795, 673943, 674237, 673838, 673704 and 673564.
9/17/2012 9:51:45 AM -- Dispatching transactions ends.
9/17/2012 9:51:45 AM -- Shutting down databases …
9/17/2012 9:51:56 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)
9/17/2012 9:51:56 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.blg has 508 samples.
9/17/2012 9:51:56 AM -- Creating test report …
9/17/2012 9:52:21 AM -- Instance2704.1 has 22.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 24.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 23.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.6 has 23.5 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:21 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.xml has 479 samples queried.

9/17/2012 9:52:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.html is saved.

9/17/2012 9:52:27 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:27 AM -- Verifying database checksums ...

9/17/2012 9:54:43 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:43 AM -- Verifying log checksums ...

9/17/2012 9:54:43 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_43.xml is saved.

9/17/2012 9:54:43 AM -- Jetstress testing ends.

9/17/2012 2:45:08 PM -- Jetstress testing begins ...

9/17/2012 2:45:08 PM -- Prepare testing begins ...

9/17/2012 2:45:15 PM -- Attaching databases ...

9/17/2012 2:45:15 PM -- Prepare testing ends.

9/17/2012 2:45:15 PM -- Dispatching transactions begins ...

9/17/2012 2:45:15 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:15 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:34 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:34 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:34 PM -- Attaining prerequisites:

9/17/2012 2:49:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450586000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:49 PM -- Performance logging ends.

9/18/2012 10:43:07 AM -- JetInterop batch transaction stats: 143941, 143618, 143948, 143457, 143738 and 143709.

9/18/2012 10:43:07 AM -- Dispatching transactions ends.

9/18/2012 10:43:07 AM -- Shutting down databases ...

9/18/2012 10:43:23 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/18/2012 10:43:23 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.blg has 496 samples.

9/18/2012 10:43:23 AM -- Creating test report ...

9/18/2012 10:43:41 AM -- Instance2704.1 has 22.4 for I/O Database Reads Average Latency.

9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:41 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.xml has 479 samples queried.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.html is saved.
9/18/2012 10:43:42 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:42 AM -- Verifying database checksums …
9/18/2012 10:44:48 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:49 AM -- Verifying log checksums …
9/18/2012 10:44:49 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_49.xml is saved.
9/18/2012 10:44:49 AM -- Jetstress testing ends.
9/19/2012 5:15:30 PM -- Jetstress testing begins …
9/19/2012 5:15:30 PM -- Prepare testing begins …
9/19/2012 5:15:37 PM -- Attaching databases …
9/19/2012 5:15:37 PM -- Prepare testing ends.
9/19/2012 5:15:37 PM -- Dispatching transactions begins …
9/19/2012 5:15:37 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:37 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:44 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:44 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:56 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:56 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:56 PM -- Attaining prerequisites:

9/19/2012 5:19:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456464000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:03 PM -- Performance logging ends.

9/19/2012 8:42:38 PM -- JetInterop batch transaction stats: 35677, 35625, 35637, 35819, 35781 and 35739.

9/19/2012 8:42:39 PM -- Dispatching transactions ends.

9/19/2012 8:42:39 PM -- Shutting down databases ...

9/19/2012 8:42:54 PM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/19/2012 8:42:54 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.blg has 491 samples.

9/19/2012 8:42:54 PM -- Creating test report ...

9/19/2012 8:43:06 PM -- Instance2704.1 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:06 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:06 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.xml has 478 samples queried.

Server 11 – EX06A

Test Summary

Overall Test Result	Pass
Machine Name	EX06A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:34 PM
Test End Time	9/19/2012 8:43:01 PM
Collection Start Time	9/19/2012 5:18:59 PM
Collection End Time	9/19/2012 7:18:55 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_49.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	605.446
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9022366679040
Final Database Size (bytes)	9024816152576
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2356.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2356.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2356.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2356.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2356.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2356.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2356.1	17.198	11.420	63.615	39.200	34723.253	35061.145	0.000	6.602	0.000	26.824	0.000	5507.450
Instance2356.2	17.965	11.204	62.529	38.481	34584.089	35072.602	0.000	6.599	0.000	26.410	0.000	5443.356
Instance2356.3	17.961	10.995	61.766	37.880	34654.032	35078.938	0.000	6.635	0.000	26.312	0.000	5456.586
Instance2356.4	17.991	10.468	62.407	38.346	34324.953	35122.088	0.000	6.649	0.000	26.610	0.000	5532.807
Instance2356.5	18.001	10.123	62.342	38.309	34628.964	35071.665	0.000	6.666	0.000	26.307	0.000	5448.396
Instance2356.6	18.026	9.518	62.288	38.282	34578.079	35115.782	0.000	6.634	0.000	26.380	0.000	5543.186

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2356.1	23.874	261840.298
Instance2356.2	23.259	261865.382
Instance2356.3	23.231	261885.905
Instance2356.4	23.223	261892.362
Instance2356.5	23.264	261832.014
Instance2356.6	23.244	261891.421

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2356.1	0.609	213939.613
Instance2356.2	0.590	210098.498
Instance2356.3	0.590	213185.191
Instance2356.4	0.607	213276.195
Instance2356.5	0.589	210618.909
Instance2356.6	0.603	209500.458

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2356.1	17.198	11.420	87.488	39.200	96698.231	35061.145	16.905	6.602	0.609	26.824	213939.613	5507.450
Instance2356.2	17.965	11.204	85.789	38.481	96205.691	35072.602	16.455	6.599	0.590	26.410	210098.498	5443.356
Instance2356.3	17.961	10.995	84.997	37.880	96760.019	35078.938	16.177	6.635	0.590	26.312	213185.191	5456.586
Instance2356.4	17.991	10.468	85.630	38.346	96040.802	35122.088	16.444	6.649	0.607	26.610	213276.195	5532.807
Instance2356.5	18.001	10.123	85.606	38.309	96372.470	35071.665	16.209	6.666	0.589	26.307	210618.909	5448.396
Instance2356.6	18.026	9.518	85.532	38.282	96353.069	35115.782	15.366	6.634	0.603	26.380	209500.458	5543.186

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.003	2.234	3.861
Available MBytes	44527.129	44522.000	44578.000
Free System Page Table Entries	33555607.973	33555607.000	33555608.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34442246.413	34426880.000	34484224.000
Pool Paged Bytes	132329548.960	130490368.000	133517312.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:19 PM -- Jetstress testing begins ...
9/14/2012 1:50:19 PM -- Prepare testing begins ...
9/14/2012 1:50:27 PM -- Attaching databases ...
9/14/2012 1:50:27 PM -- Prepare testing ends.
9/14/2012 1:50:27 PM -- Dispatching transactions begins ...
9/14/2012 1:50:27 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:27 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:39 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:39 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:51 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:51 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:51 PM -- Attaining prerequisites:
9/14/2012 1:54:57 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452515000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:57 PM -- Performance logging ends.
9/17/2012 9:51:50 AM -- JetInterop batch transaction stats: 657846, 659567, 658118, 658213, 658442 and 658894.
9/17/2012 9:51:51 AM -- Dispatching transactions ends.
9/17/2012 9:51:51 AM -- Shutting down databases ...
9/17/2012 9:52:03 AM -- Instance2356.1 (complete), Instance2356.2 (complete), Instance2356.3 (complete), Instance2356.4 (complete), Instance2356.5 (complete) and Instance2356.6 (complete)
9/17/2012 9:52:03 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_39.blg has 495 samples.
9/17/2012 9:52:03 AM -- Creating test report ...
9/17/2012 9:52:31 AM -- Instance2356.1 has 17.4 for I/O Database Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.1 has 16.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.1 has 16.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.2 has 18.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.2 has 19.0 for I/O Log Writes Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.2 has 19.0 for I/O Log Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.3 has 19.2 for I/O Database Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.3 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.3 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.4 has 18.5 for I/O Database Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.4 has 15.7 for I/O Log Writes Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.4 has 15.7 for I/O Log Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.5 has 18.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.5 has 18.9 for I/O Log Writes Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.5 has 18.9 for I/O Log Reads Average Latency.
9/17/2012 9:52:31 AM -- Instance2356.6 has 18.9 for I/O Database Reads Average Latency.

9/17/2012 9:52:31 AM -- Instance2356.6 has 11.4 for I/O Log Writes Average Latency.

9/17/2012 9:52:31 AM -- Instance2356.6 has 11.4 for I/O Log Reads Average Latency.

9/17/2012 9:52:31 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:31 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:31 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_39.xml has 478 samples queried.

9/17/2012 9:52:37 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_39.html is saved.

9/17/2012 9:52:39 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:39 AM -- Verifying database checksums ...

9/17/2012 9:54:46 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:46 AM -- Verifying log checksums ...

9/17/2012 9:54:46 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:47 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_46.evt is saved.

9/17/2012 9:54:47 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_46.evt is saved.

9/17/2012 9:54:47 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_47.xml is saved.

9/17/2012 9:54:47 AM -- Jetstress testing ends.

9/17/2012 2:45:11 PM -- Jetstress testing begins ...

9/17/2012 2:45:11 PM -- Prepare testing begins ...

9/17/2012 2:45:17 PM -- Attaching databases ...

9/17/2012 2:45:17 PM -- Prepare testing ends.

9/17/2012 2:45:17 PM -- Dispatching transactions begins ...

9/17/2012 2:45:18 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:18 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:26 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:26 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:37 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:37 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:37 PM -- Attaining prerequisites:

9/17/2012 2:49:53 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458278000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:54 PM -- Performance logging ends.

9/18/2012 10:43:14 AM -- JetInterop batch transaction stats: 142428, 142442, 142307, 142204, 142514 and 142526.

9/18/2012 10:43:14 AM -- Dispatching transactions ends.

9/18/2012 10:43:14 AM -- Shutting down databases ...

9/18/2012 10:43:33 AM -- Instance2356.1 (complete), Instance2356.2 (complete), Instance2356.3 (complete), Instance2356.4 (complete), Instance2356.5 (complete) and Instance2356.6 (complete)

9/18/2012 10:43:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_26.blg has 496 samples.

9/18/2012 10:43:33 AM -- Creating test report ...

9/18/2012 10:43:43 AM -- Instance2356.1 has 22.2 for I/O Database Reads Average Latency.

9/18/2012 10:43:43 AM -- Instance2356.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.2 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.3 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.4 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.5 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.6 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:43 AM -- Instance2356.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:43 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:43 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:43 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_26.xml has 478 samples queried.
9/18/2012 10:43:43 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_26.html is saved.
9/18/2012 10:43:45 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:45 AM -- Verifying database checksums …
9/18/2012 10:44:43 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:43 AM -- Verifying log checksums …
9/18/2012 10:44:43 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:43 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_43.evt is saved.
9/18/2012 10:44:43 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_43.evt is saved.
9/18/2012 10:44:43 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_43.xml is saved.
9/18/2012 10:44:43 AM -- Jetstress testing ends.
9/19/2012 5:15:34 PM -- Jetstress testing begins …
9/19/2012 5:15:34 PM -- Prepare testing begins …
9/19/2012 5:15:40 PM -- Attaching databases …
9/19/2012 5:15:40 PM -- Prepare testing ends.
9/19/2012 5:15:40 PM -- Dispatching transactions begins …
9/19/2012 5:15:40 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:40 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:49 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:49 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:59 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:59 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:59 PM -- Attaining prerequisites:

9/19/2012 5:18:59 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1455792000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:00 PM -- Performance logging ends.

9/19/2012 8:42:42 PM -- JetInterop batch transaction stats: 29378, 28868, 28878, 28852, 28765 and 28936.

9/19/2012 8:42:43 PM -- Dispatching transactions ends.

9/19/2012 8:42:43 PM -- Shutting down databases ...

9/19/2012 8:43:01 PM -- Instance2356.1 (complete), Instance2356.2 (complete), Instance2356.3 (complete), Instance2356.4 (complete), Instance2356.5 (complete) and Instance2356.6 (complete)

9/19/2012 8:43:01 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_49.blg has 491 samples.

9/19/2012 8:43:01 PM -- Creating test report ...

9/19/2012 8:43:17 PM -- Instance2356.1 has 17.2 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.2 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.3 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.4 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.5 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.5 has 6.7 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.5 has 6.7 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:17 PM -- Instance2356.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:17 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:17 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:17 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_49.xml has 478 samples queried.

Server 12 – EX06B

Test Summary

Overall Test Result	Pass
Machine Name	EX06B
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/19/2012 5:15:37 PM
Test End Time	9/19/2012 8:42:57 PM
Collection Start Time	9/19/2012 5:19:08 PM
Collection End Time	9/19/2012 7:19:00 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	623.053
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9023868239872
Final Database Size (bytes)	9026879750144
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2512.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2512.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2512.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2512.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2512.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2512.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	16.723	11.197	64.642	39.677	34670.131	35111.630	0.000	6.489	0.000	27.172	0.000	5541.043
Instance2512.2	17.482	10.922	64.387	39.513	34608.399	35057.072	0.000	6.455	0.000	27.306	0.000	5492.830
Instance2512.3	17.511	10.799	64.270	39.539	34462.528	35107.808	0.000	6.483	0.000	27.441	0.000	5492.470
Instance2512.4	17.483	10.211	64.859	39.930	34586.979	35106.437	0.000	6.480	0.000	27.319	0.000	5527.168
Instance2512.5	17.537	9.865	62.826	38.563	34549.330	35112.919	0.000	6.467	0.000	26.856	0.000	5488.750
Instance2512.6	17.489	9.254	64.992	39.855	34475.023	35120.782	0.000	6.470	0.000	27.551	0.000	5499.190

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2512.1	24.191	261908.610
Instance2512.2	23.489	261901.016
Instance2512.3	23.470	261882.559
Instance2512.4	23.503	261816.484
Instance2512.5	23.519	261821.967
Instance2512.6	23.526	261811.549

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2512.1	0.619	214095.931
Instance2512.2	0.617	214561.479
Instance2512.3	0.622	216517.330
Instance2512.4	0.620	217345.058
Instance2512.5	0.605	212127.582
Instance2512.6	0.624	216062.402

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	16.723	11.197	88.834	39.677	96551.668	35111.630	16.198	6.489	0.619	27.172	214095.931	5541.043
Instance2512.2	17.482	10.922	87.876	39.513	95363.868	35057.072	16.054	6.455	0.617	27.306	214561.479	5492.830
Instance2512.3	17.511	10.799	87.741	39.539	95296.371	35107.808	16.101	6.483	0.622	27.441	216517.330	5492.470
Instance2512.4	17.483	10.211	88.362	39.930	95026.887	35106.437	16.817	6.480	0.620	27.319	217345.058	5527.168
Instance2512.5	17.537	9.865	86.345	38.563	96454.970	35112.919	16.034	6.467	0.605	26.856	212127.582	5488.750
Instance2512.6	17.489	9.254	88.518	39.855	94895.030	35120.782	15.709	6.470	0.624	27.551	216062.402	5499.190

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.052	2.165	3.896
Available MBytes	44477.499	44471.000	44561.000
Free System Page Table Entries	33555608.965	33555605.000	33555609.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35555469.094	35545088.000	35627008.000
Pool Paged Bytes	143838821.545	142016512.000	145031168.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:23 PM -- Jetstress testing begins …
9/14/2012 1:50:24 PM -- Prepare testing begins …
9/14/2012 1:50:31 PM -- Attaching databases …
9/14/2012 1:50:31 PM -- Prepare testing ends.
9/14/2012 1:50:31 PM -- Dispatching transactions begins …
9/14/2012 1:50:32 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:32 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:45 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:45 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:57 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:57 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:57 PM -- Attaining prerequisites:
9/14/2012 1:58:16 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1459106000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:58:17 PM -- Performance logging ends.
9/17/2012 9:51:55 AM -- JetInterop batch transaction stats: 677579, 676340, 676486, 677319, 676070 and 676386.
9/17/2012 9:51:55 AM -- Dispatching transactions ends.
9/17/2012 9:51:55 AM -- Shutting down databases …
9/17/2012 9:52:03 AM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)
9/17/2012 9:52:03 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.blg has 508 samples.
9/17/2012 9:52:03 AM -- Creating test report …
9/17/2012 9:52:33 AM -- Instance2512.1 has 23.0 for I/O Database Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.2 has 23.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.2 has 28.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.2 has 28.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.3 has 25.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.3 has 27.8 for I/O Log Writes Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.3 has 27.8 for I/O Log Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.4 has 24.7 for I/O Database Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.4 has 60.7 for I/O Log Writes Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.4 has 60.7 for I/O Log Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.5 has 23.6 for I/O Database Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.5 has 28.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.5 has 28.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:33 AM -- Instance2512.6 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.6 has 28.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.6 has 28.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.xml has 479 samples queried.

9/17/2012 9:52:38 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.html is saved.

9/17/2012 9:52:40 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:40 AM -- Verifying database checksums ...

9/17/2012 9:54:49 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:49 AM -- Verifying log checksums ...

9/17/2012 9:54:49 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_49.evt is saved.

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_49.evt is saved.

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_50.xml is saved.

9/17/2012 9:54:50 AM -- Jetstress testing ends.

9/17/2012 2:45:13 PM -- Jetstress testing begins ...

9/17/2012 2:45:13 PM -- Prepare testing begins ...

9/17/2012 2:45:20 PM -- Attaching databases ...

9/17/2012 2:45:20 PM -- Prepare testing ends.

9/17/2012 2:45:20 PM -- Dispatching transactions begins ...

9/17/2012 2:45:20 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:20 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:29 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:29 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:41 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:41 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:41 PM -- Attaining prerequisites:

9/17/2012 2:50:00 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452794000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:50:00 PM -- Performance logging ends.

9/18/2012 10:43:22 AM -- JetInterop batch transaction stats: 143636, 143475, 143347, 143452, 143791 and 143450.

9/18/2012 10:43:22 AM -- Dispatching transactions ends.

9/18/2012 10:43:22 AM -- Shutting down databases ...

9/18/2012 10:43:35 AM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)

9/18/2012 10:43:35 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.blg has 496 samples.

9/18/2012 10:43:35 AM -- Creating test report ...

9/18/2012 10:43:44 AM -- Instance2512.1 has 22.2 for I/O Database Reads Average Latency.

9/18/2012 10:43:44 AM -- Instance2512.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 22.8 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 23.0 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:44 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:44 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.xml has 478 samples queried.
9/18/2012 10:43:45 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.html is saved.
9/18/2012 10:43:46 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:46 AM -- Verifying database checksums …
9/18/2012 10:44:33 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:34 AM -- Verifying log checksums …
9/18/2012 10:44:34 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_34.evt is saved.
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_34.evt is saved.
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_34.xml is saved.
9/18/2012 10:44:34 AM -- Jetstress testing ends.
9/19/2012 5:15:37 PM -- Jetstress testing begins …
9/19/2012 5:15:37 PM -- Prepare testing begins …
9/19/2012 5:15:44 PM -- Attaching databases …
9/19/2012 5:15:44 PM -- Prepare testing ends.
9/19/2012 5:15:44 PM -- Dispatching transactions begins …
9/19/2012 5:15:44 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:44 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:52 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:52 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:16:04 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:16:04 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:16:04 PM -- Attaining prerequisites:

9/19/2012 5:19:08 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456062000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:08 PM -- Performance logging ends.

9/19/2012 8:42:46 PM -- JetInterop batch transaction stats: 35699, 35492, 35715, 35939, 35580 and 35803.

9/19/2012 8:42:46 PM -- Dispatching transactions ends.

9/19/2012 8:42:46 PM -- Shutting down databases ...

9/19/2012 8:42:57 PM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)

9/19/2012 8:42:57 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.blg has 491 samples.

9/19/2012 8:42:57 PM -- Creating test report ...

9/19/2012 8:43:02 PM -- Instance2512.1 has 16.7 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:02 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:02 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.xml has 478 samples queried.

Appendix B: Stress Testing

Server 1 – EX01A

Test Summary

Overall Test Result	Pass
Machine Name	EX01A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:02 PM
Test End Time	9/21/2012 7:04:32 PM
Collection Start Time	9/20/2012 2:15:07 PM
Collection End Time	9/21/2012 2:14:57 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	566.375
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9024237338624
Final Database Size (bytes)	9048517115904

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True

Database Configuration

Instance1744.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1744.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1744.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1744.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1744.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1744.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	18.481	12.034	58.357	35.782	34733.112	35134.728	0.000	7.503	0.000	24.502	0.000	5596.841
Instance1744.2	18.959	11.973	58.416	35.801	34792.022	35138.532	0.000	7.489	0.000	24.462	0.000	5596.600
Instance1744.3	19.183	11.945	58.652	35.970	34713.888	35148.800	0.000	7.506	0.000	24.526	0.000	5594.432
Instance1744.4	19.226	11.245	58.534	35.886	34736.921	35143.771	0.000	7.509	0.000	24.504	0.000	5595.853
Instance1744.5	18.932	10.899	58.661	35.965	34800.980	35130.998	0.000	7.503	0.000	24.528	0.000	5582.465
Instance1744.6	18.973	10.398	58.495	35.856	34811.584	35145.021	0.000	7.498	0.000	24.475	0.000	5606.846

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1744.1	23.294	261870.339
Instance1744.2	21.930	261870.945
Instance1744.3	21.847	261876.630
Instance1744.4	22.306	261873.127
Instance1744.5	21.957	261854.014
Instance1744.6	21.968	261874.882

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance1744.1	0.565	204652.468
Instance1744.2	0.564	205795.393
Instance1744.3	0.565	205181.053
Instance1744.4	0.565	205787.006
Instance1744.5	0.564	206227.364
Instance1744.6	0.565	206351.279

Dell Compellent Storage Center SC8000 50,000 Mailbox Exchange 2010 Resiliency Storage Solution – Virtualized with VMWare ESXi 5.0

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	18.481	12.034	81.651	35.782	99531.896	35134.728	16.233	7.503	0.565	24.502	204652.468	5596.841
Instance1744.2	18.959	11.973	80.347	35.801	96772.838	35138.532	16.313	7.489	0.564	24.462	205795.393	5596.600
Instance1744.3	19.183	11.945	80.498	35.970	96364.475	35148.800	16.361	7.506	0.565	24.526	205181.053	5594.432
Instance1744.4	19.226	11.245	80.841	35.886	97410.683	35143.771	16.315	7.509	0.565	24.504	205787.006	5595.853
Instance1744.5	18.932	10.899	80.618	35.965	96641.813	35130.998	16.069	7.503	0.564	24.528	206227.364	5582.465
Instance1744.6	18.973	10.398	80.464	35.856	96805.176	35145.021	16.503	7.498	0.565	24.475	206351.279	5606.846

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.906	1.560	8.846
Available MBytes	44572.868	44553.000	44695.000
Free System Page Table Entries	33555607.782	33555598.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34281836.303	34242560.000	34385920.000
Pool Paged Bytes	133666889.715	131801088.000	135143424.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

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Test Log

9/17/2012 11:22:39 AM -- Jetstress testing begins ...
9/17/2012 11:22:40 AM -- Prepare testing begins ...
9/17/2012 11:22:47 AM -- Attaching databases ...
9/17/2012 11:22:47 AM -- Prepare testing ends.
9/17/2012 11:22:47 AM -- Dispatching transactions begins ...
9/17/2012 11:22:47 AM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/17/2012 11:22:47 AM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/17/2012 11:22:54 AM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/17/2012 11:22:54 AM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/17/2012 11:23:06 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/17/2012 11:23:06 AM -- Performance logging begins (interval: 15000 ms).
9/17/2012 11:23:06 AM -- Attaining prerequisites:
9/17/2012 11:25:28 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456841000.0 (lower bound: 1449551000.0, upper bound: none)
9/17/2012 11:49:24 AM -- Performance logging ends.
9/17/2012 11:49:26 AM -- JetInterop batch transaction stats: 9235, 8990, 9039, 8868, 9222 and 9178.
9/17/2012 11:49:26 AM -- Dispatching transactions ends.
9/17/2012 11:49:26 AM -- Shutting down databases ...
9/17/2012 11:49:31 AM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)
9/17/2012 11:49:31 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.blg has 103 samples.
9/17/2012 11:49:31 AM -- Creating test report ...
9/17/2012 11:49:33 AM -- Instance1744.1 has 9.9 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.1 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.1 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.2 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 9.5 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.3 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 9.8 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.4 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 9.4 for I/O Database Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.5 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:33 AM -- Instance1744.6 has 9.2 for I/O Database Reads Average Latency.

9/17/2012 11:49:33 AM -- Instance1744.6 has 1.9 for I/O Log Writes Average Latency.

9/17/2012 11:49:33 AM -- Instance1744.6 has 1.9 for I/O Log Reads Average Latency.

9/17/2012 11:49:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 11:49:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 11:49:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.xml has 94 samples queried.

9/17/2012 11:49:36 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_54.html is saved.

9/17/2012 11:49:37 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 11:49:37 AM -- Verifying database checksums ...

9/17/2012 11:49:41 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 11:49:42 AM -- Verifying log checksums ...

9/17/2012 11:49:42 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_11_49_42.evt is saved.

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_11_49_42.evt is saved.

9/17/2012 11:49:42 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_11_49_42.xml is saved.

9/17/2012 11:49:42 AM -- Jetstress testing ends.

9/17/2012 2:45:10 PM -- Jetstress testing begins ...

9/17/2012 2:45:10 PM -- Prepare testing begins ...

9/17/2012 2:45:17 PM -- Attaching databases ...

9/17/2012 2:45:17 PM -- Prepare testing ends.

9/17/2012 2:45:17 PM -- Dispatching transactions begins ...

9/17/2012 2:45:17 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:17 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:35 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:35 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:35 PM -- Attaining prerequisites:

9/17/2012 2:49:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454653000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:23 PM -- Performance logging ends.

9/18/2012 10:14:23 AM -- JetInterop batch transaction stats: 139283, 139129, 139672, 139183, 139528 and 138643.

9/18/2012 10:14:23 AM -- Dispatching transactions ends.

9/18/2012 10:14:23 AM -- Shutting down databases ...

9/18/2012 10:14:38 AM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)

9/18/2012 10:14:38 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.blg has 494 samples.

9/18/2012 10:14:38 AM -- Creating test report ...

9/18/2012 10:14:51 AM -- Instance1744.1 has 24.1 for I/O Database Reads Average Latency.

9/18/2012 10:14:51 AM -- Instance1744.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 22.8 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 24.0 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:14:51 AM -- Instance1744.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:14:51 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:14:51 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.xml has 478 samples queried.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.html is saved.
9/18/2012 10:14:51 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_14_51.evt is saved.
9/18/2012 10:14:52 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_14_51.evt is saved.
9/18/2012 10:14:52 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_14_52.xml is saved.
9/18/2012 10:14:52 AM -- Jetstress testing ends.
9/19/2012 5:15:21 PM -- Jetstress testing begins …
9/19/2012 5:15:21 PM -- Prepare testing begins …
9/19/2012 5:15:27 PM -- Attaching databases …
9/19/2012 5:15:27 PM -- Prepare testing ends.
9/19/2012 5:15:27 PM -- Dispatching transactions begins …
9/19/2012 5:15:27 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:27 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/19/2012 5:15:34 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/19/2012 5:15:34 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/19/2012 5:15:45 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/19/2012 5:15:45 PM -- Performance logging begins (interval: 15000 ms).
9/19/2012 5:15:45 PM -- Attaining prerequisites:
9/19/2012 5:18:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453081000.0 (lower bound: 1449551000.0, upper bound: none)
9/19/2012 7:18:23 PM -- Performance logging ends.

9/19/2012 8:41:47 PM -- JetInterop batch transaction stats: 28540, 28569, 28200, 28717, 28617 and 28565.

9/19/2012 8:41:47 PM -- Dispatching transactions ends.

9/19/2012 8:41:47 PM -- Shutting down databases …

9/19/2012 8:41:58 PM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)

9/19/2012 8:41:58 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.blg has 489 samples.

9/19/2012 8:41:58 PM -- Creating test report …

9/19/2012 8:42:07 PM -- Instance1744.1 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 18.2 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 18.6 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:42:07 PM -- Instance1744.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:42:07 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:07 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:07 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.xml has 478 samples queried.

9/19/2012 8:42:08 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_34.html is saved.

9/19/2012 8:42:09 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:42:09 PM -- Verifying database checksums …

9/20/2012 6:00:14 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100% processed) and C:\DB\DB6 (100% processed)

9/20/2012 6:00:14 AM -- Performance logging ends.

9/20/2012 6:00:14 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_8.blg has 1115 samples.

9/20/2012 6:00:27 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_8.html is saved.

9/20/2012 6:00:27 AM -- Verifying log checksums …

9/20/2012 6:00:28 AM -- C:\LOG\LOG1 (7 log(s) processed), C:\LOG\LOG2 (8 log(s) processed), C:\LOG\LOG3 (8 log(s) processed), C:\LOG\LOG4 (8 log(s) processed), C:\LOG\LOG5 (8 log(s) processed) and C:\LOG\LOG6 (7 log(s) processed)

9/20/2012 6:00:28 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_6_0_28.evt is saved.

9/20/2012 6:00:28 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_6_0_28.evt is saved.

9/20/2012 6:00:28 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_6_0_28.xml is saved.

9/20/2012 6:00:28 AM -- Jetstress testing ends.

9/20/2012 2:12:02 PM -- Jetstress testing begins ...

9/20/2012 2:12:02 PM -- Prepare testing begins ...

9/20/2012 2:12:09 PM -- Attaching databases ...

9/20/2012 2:12:09 PM -- Prepare testing ends.

9/20/2012 2:12:09 PM -- Dispatching transactions begins ...

9/20/2012 2:12:09 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:09 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:16 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:16 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:28 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:28 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:28 PM -- Attaining prerequisites:

9/20/2012 2:15:07 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1462125000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:08 PM -- Performance logging ends.

9/21/2012 7:04:24 PM -- JetInterop batch transaction stats: 282341, 282779, 283082, 282231, 282298 and 282697.

9/21/2012 7:04:24 PM -- Dispatching transactions ends.

9/21/2012 7:04:24 PM -- Shutting down databases ...

9/21/2012 7:04:32 PM -- Instance1744.1 (complete), Instance1744.2 (complete), Instance1744.3 (complete), Instance1744.4 (complete), Instance1744.5 (complete) and Instance1744.6 (complete)

9/21/2012 7:04:32 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.blg has 5761 samples.

9/21/2012 7:04:32 PM -- Creating test report ...

9/21/2012 7:05:34 PM -- Instance1744.1 has 18.5 for I/O Database Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.1 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.1 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.2 has 19.0 for I/O Database Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.2 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.2 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.3 has 19.2 for I/O Database Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.3 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.3 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.4 has 19.2 for I/O Database Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.4 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.4 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.5 has 18.9 for I/O Database Reads Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.5 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:34 PM -- Instance1744.5 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:34 PM -- Instance1744.6 has 19.0 for I/O Database Reads Average Latency.
9/21/2012 7:05:34 PM -- Instance1744.6 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:34 PM -- Instance1744.6 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:34 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:34 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:34 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.xml has 5750 samples queried.

Server 2 – EX01B

Test Summary

Overall Test Result	Pass
Machine Name	EX01B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:11:34 PM
Test End Time	9/21/2012 7:04:05 PM
Collection Start Time	9/20/2012 2:14:48 PM
Collection End Time	9/21/2012 2:14:42 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_47.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	600.837
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9030704955392
Final Database Size (bytes)	9056117194752
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2060.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2060.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2060.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2060.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2060.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2060.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	17.655	11.713	61.845	38.014	34628.805	35065.602	0.000	7.201	0.000	25.945	0.000	5560.201
Instance2060.2	18.067	11.605	62.230	38.266	34580.594	35072.125	0.000	7.188	0.000	26.017	0.000	5577.767
Instance2060.3	18.218	11.546	62.073	38.161	34529.789	35109.234	0.000	7.213	0.000	25.909	0.000	5601.740
Instance2060.4	18.425	10.835	62.186	38.225	34472.763	35060.530	0.000	7.213	0.000	25.953	0.000	5547.528
Instance2060.5	18.127	10.499	61.914	38.036	34566.710	35065.513	0.000	7.216	0.000	25.810	0.000	5569.147
Instance2060.6	18.079	9.931	61.877	38.011	34550.033	35094.064	0.000	7.219	0.000	25.877	0.000	5581.463

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2060.1	23.966	261878.953
Instance2060.2	22.155	261872.011
Instance2060.3	22.172	261879.828
Instance2060.4	22.400	261865.959
Instance2060.5	22.177	261872.661
Instance2060.6	22.130	261880.783

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2060.1	0.594	211521.151
Instance2060.2	0.598	212390.040
Instance2060.3	0.598	213450.876
Instance2060.4	0.593	211934.618
Instance2060.5	0.592	211942.666
Instance2060.6	0.596	210209.668

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	17.655	11.713	85.811	38.014	98098.162	35065.602	15.908	7.201	0.594	25.945	211521.151	5560.201
Instance2060.2	18.067	11.605	84.385	38.266	94256.189	35072.125	15.723	7.188	0.598	26.017	212390.040	5577.767
Instance2060.3	18.218	11.546	84.245	38.161	94364.330	35109.234	16.053	7.213	0.598	25.909	213450.876	5601.740
Instance2060.4	18.425	10.835	84.586	38.225	94689.844	35060.530	15.978	7.213	0.593	25.953	211934.618	5547.528
Instance2060.5	18.127	10.499	84.090	38.036	94512.550	35065.513	16.096	7.216	0.592	25.810	211942.666	5569.147
Instance2060.6	18.079	9.931	84.008	38.011	94436.093	35094.064	15.714	7.219	0.596	25.877	210209.668	5581.463

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.956	0.799	7.791
Available MBytes	44490.660	44472.000	44573.000
Free System Page Table Entries	33555607.784	33555599.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34935125.155	34914304.000	35012608.000
Pool Paged Bytes	134689957.414	132673536.000	136126464.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:51 PM -- Jetstress testing begins ...
9/14/2012 1:49:51 PM -- Prepare testing begins ...
9/14/2012 1:49:58 PM -- Attaching databases ...
9/14/2012 1:49:58 PM -- Prepare testing ends.
9/14/2012 1:49:58 PM -- Dispatching transactions begins ...
9/14/2012 1:49:58 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:49:58 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:07 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:07 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:19 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:19 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:19 PM -- Attaining prerequisites:
9/14/2012 1:57:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1459995000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:57:48 PM -- Performance logging ends.
9/17/2012 9:51:03 AM -- JetInterop batch transaction stats: 660706, 660506, 661635, 661580, 662126 and 661778.
9/17/2012 9:51:04 AM -- Dispatching transactions ends.
9/17/2012 9:51:04 AM -- Shutting down databases ...
9/17/2012 9:51:11 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)
9/17/2012 9:51:11 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.blg has 508 samples.
9/17/2012 9:51:11 AM -- Creating test report ...
9/17/2012 9:51:21 AM -- Instance2060.1 has 23.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 21.6 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.2 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 21.8 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.3 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 23.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.4 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 21.3 for I/O Database Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.5 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:21 AM -- Instance2060.6 has 21.4 for I/O Database Reads Average Latency.

9/17/2012 9:51:21 AM -- Instance2060.6 has 11.8 for I/O Log Writes Average Latency.

9/17/2012 9:51:21 AM -- Instance2060.6 has 11.8 for I/O Log Reads Average Latency.

9/17/2012 9:51:22 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:22 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:22 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.xml has 478 samples queried.

9/17/2012 9:51:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_7.html is saved.

9/17/2012 9:51:28 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:51:28 AM -- Verifying database checksums ...

9/17/2012 9:54:07 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:08 AM -- Verifying log checksums ...

9/17/2012 9:54:08 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_8.evt is saved.

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_8.evt is saved.

9/17/2012 9:54:08 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_8.xml is saved.

9/17/2012 9:54:08 AM -- Jetstress testing ends.

9/17/2012 11:22:34 AM -- Jetstress testing begins ...

9/17/2012 11:22:34 AM -- Prepare testing begins ...

9/17/2012 11:22:40 AM -- Attaching databases ...

9/17/2012 11:22:40 AM -- Prepare testing ends.

9/17/2012 11:22:40 AM -- Dispatching transactions begins ...

9/17/2012 11:22:40 AM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 11:22:40 AM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 11:22:47 AM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 11:22:47 AM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 11:22:59 AM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 11:22:59 AM -- Performance logging begins (interval: 15000 ms).

9/17/2012 11:22:59 AM -- Attaining prerequisites:

9/17/2012 11:24:36 AM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452638000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 11:49:02 AM -- Performance logging ends.

9/17/2012 11:49:04 AM -- JetInterop batch transaction stats: 9527, 9404, 9571, 9571, 9661 and 9516.

9/17/2012 11:49:04 AM -- Dispatching transactions ends.

9/17/2012 11:49:04 AM -- Shutting down databases ...

9/17/2012 11:49:08 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/17/2012 11:49:08 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.blg has 104 samples.

9/17/2012 11:49:08 AM -- Creating test report ...

9/17/2012 11:49:09 AM -- Instance2060.1 has 9.9 for I/O Database Reads Average Latency.

9/17/2012 11:49:09 AM -- Instance2060.1 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.1 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.2 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.3 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 9.8 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.4 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 9.2 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.5 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 9.3 for I/O Database Reads Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 1.9 for I/O Log Writes Average Latency.
9/17/2012 11:49:09 AM -- Instance2060.6 has 1.9 for I/O Log Reads Average Latency.
9/17/2012 11:49:09 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/17/2012 11:49:09 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/17/2012 11:49:09 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.xml has 97 samples queried.
9/17/2012 11:49:09 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_11_22_47.html is saved.
9/17/2012 11:49:11 AM -- Performance logging begins (interval: 30000 ms).
9/17/2012 11:49:11 AM -- Verifying database checksums …
9/17/2012 11:49:18 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/17/2012 11:49:18 AM -- Verifying log checksums …
9/17/2012 11:49:18 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_11_49_18.evt is saved.
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_11_49_18.evt is saved.
9/17/2012 11:49:18 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_11_49_18.xml is saved.
9/17/2012 11:49:18 AM -- Jetstress testing ends.
9/17/2012 2:44:43 PM -- Jetstress testing begins …
9/17/2012 2:44:43 PM -- Prepare testing begins …
9/17/2012 2:44:50 PM -- Attaching databases …
9/17/2012 2:44:50 PM -- Prepare testing ends.
9/17/2012 2:44:50 PM -- Dispatching transactions begins …
9/17/2012 2:44:50 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/17/2012 2:44:50 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:44:57 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:44:57 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:09 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:09 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:09 PM -- Attaining prerequisites:

9/17/2012 2:48:53 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456959000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:48:53 PM -- Performance logging ends.

9/18/2012 10:40:26 AM -- JetInterop batch transaction stats: 144301, 144824, 144291, 144113, 144521 and 144070.

9/18/2012 10:40:26 AM -- Dispatching transactions ends.

9/18/2012 10:40:26 AM -- Shutting down databases ...

9/18/2012 10:40:34 AM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/18/2012 10:40:34 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.blg has 494 samples.

9/18/2012 10:40:34 AM -- Creating test report ...

9/18/2012 10:40:40 AM -- Instance2060.1 has 24.1 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.1 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.1 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.2 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 22.7 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.3 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 24.0 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.4 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.5 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:40:40 AM -- Instance2060.6 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:40:40 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/18/2012 10:40:40 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/18/2012 10:40:40 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.xml has 479 samples queried.

9/18/2012 10:40:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_44_57.html is saved.

9/18/2012 10:40:42 AM -- Performance logging begins (interval: 30000 ms).

9/18/2012 10:40:42 AM -- Verifying database checksums ...

9/18/2012 10:41:54 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed)

and C:\DB\DB6 (0% processed)

9/18/2012 10:41:54 AM -- Verifying log checksums …

9/18/2012 10:41:54 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_41_54.evt is saved.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_41_54.evt is saved.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_41_54.xml is saved.

9/18/2012 10:41:54 AM -- Jetstress testing ends.

9/19/2012 5:14:58 PM -- Jetstress testing begins …

9/19/2012 5:14:58 PM -- Prepare testing begins …

9/19/2012 5:15:04 PM -- Attaching databases …

9/19/2012 5:15:04 PM -- Prepare testing ends.

9/19/2012 5:15:04 PM -- Dispatching transactions begins …

9/19/2012 5:15:04 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/19/2012 5:15:04 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:11 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:11 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:22 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:22 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:22 PM -- Attaining prerequisites:

9/19/2012 5:18:10 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1462936000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:10 PM -- Performance logging ends.

9/19/2012 8:41:08 PM -- JetInterop batch transaction stats: 35060, 35015, 35216, 34975, 35271 and 34960.

9/19/2012 8:41:08 PM -- Dispatching transactions ends.

9/19/2012 8:41:08 PM -- Shutting down databases …

9/19/2012 8:41:16 PM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)

9/19/2012 8:41:16 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.blg has 490 samples.

9/19/2012 8:41:16 PM -- Creating test report …

9/19/2012 8:41:31 PM -- Instance2060.1 has 19.5 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 17.8 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:41:31 PM -- Instance2060.4 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.4 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 17.6 for I/O Database Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 6.4 for I/O Log Writes Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.5 has 6.4 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 17.6 for I/O Database Reads Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 6.5 for I/O Log Writes Average Latency.
9/19/2012 8:41:31 PM -- Instance2060.6 has 6.5 for I/O Log Reads Average Latency.
9/19/2012 8:41:31 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:41:31 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/19/2012 8:41:31 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.xml has 478 samples queried.
9/19/2012 8:41:31 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_11.html is saved.
9/19/2012 8:41:33 PM -- Performance logging begins (interval: 30000 ms).
9/19/2012 8:41:33 PM -- Verifying database checksums …
9/20/2012 3:43:59 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100% processed) and C:\DB\DB6 (100% processed)
9/20/2012 3:44:00 AM -- Performance logging ends.
9/20/2012 3:44:00 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_41_31.blg has 844 samples.
9/20/2012 3:44:27 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_41_31.html is saved.
9/20/2012 3:44:27 AM -- Verifying log checksums …
9/20/2012 3:44:28 AM -- C:\LOG\LOG1 (8 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (7 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (7 log(s) processed) and C:\LOG\LOG6 (7 log(s) processed)
9/20/2012 3:44:28 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_3_44_28.evt is saved.
9/20/2012 3:44:28 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_3_44_28.evt is saved.
9/20/2012 3:44:28 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_3_44_28.xml is saved.
9/20/2012 3:44:28 AM -- Jetstress testing ends.
9/20/2012 2:11:34 PM -- Jetstress testing begins …
9/20/2012 2:11:34 PM -- Prepare testing begins …
9/20/2012 2:11:40 PM -- Attaching databases …
9/20/2012 2:11:40 PM -- Prepare testing ends.
9/20/2012 2:11:40 PM -- Dispatching transactions begins …
9/20/2012 2:11:40 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/20/2012 2:11:40 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/20/2012 2:11:47 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).
9/20/2012 2:11:47 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).
9/20/2012 2:11:58 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/20/2012 2:11:58 PM -- Performance logging begins (interval: 15000 ms).
9/20/2012 2:11:58 PM -- Attaining prerequisites:
9/20/2012 2:14:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450709000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:14:48 PM -- Performance logging ends.
9/21/2012 7:03:56 PM -- JetInterop batch transaction stats: 298860, 299317, 298846, 298261, 297516 and 298945.
9/21/2012 7:03:57 PM -- Dispatching transactions ends.
9/21/2012 7:03:57 PM -- Shutting down databases …
9/21/2012 7:04:05 PM -- Instance2060.1 (complete), Instance2060.2 (complete), Instance2060.3 (complete), Instance2060.4 (complete), Instance2060.5 (complete) and Instance2060.6 (complete)
9/21/2012 7:04:05 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_47.blg has 5762 samples.
9/21/2012 7:04:05 PM -- Creating test report …
9/21/2012 7:05:03 PM -- Instance2060.1 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.1 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.1 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.2 has 18.1 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.2 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.2 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.3 has 18.2 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.4 has 18.4 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.5 has 18.1 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.6 has 18.1 for I/O Database Reads Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:03 PM -- Instance2060.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:03 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:03 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:03 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_47.xml has 5750 samples queried.

Server 3 – EX02A

Test Summary

Overall Test Result	Pass
Machine Name	EX02A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:11:37 PM
Test End Time	9/21/2012 7:04:10 PM
Collection Start Time	9/20/2012 2:15:00 PM
Collection End Time	9/21/2012 2:14:45 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_50.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	573.472
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9024304447488
Final Database Size (bytes)	9048609390592
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	19.901	13.083	59.232	36.432	34611.095	35086.085	0.000	7.479	0.000	24.843	0.000	5561.715
Instance2988.2	18.530	12.267	59.091	36.356	34781.312	35088.535	0.000	7.519	0.000	24.673	0.000	5579.440
Instance2988.3	18.766	12.124	58.978	36.272	34727.593	35129.939	0.000	7.499	0.000	24.690	0.000	5571.488
Instance2988.4	18.957	11.197	59.050	36.331	34704.668	35103.175	0.000	7.482	0.000	24.865	0.000	5556.457
Instance2988.5	18.560	10.881	59.573	36.680	34737.421	35081.589	0.000	7.499	0.000	24.870	0.000	5571.150
Instance2988.6	18.542	10.365	59.122	36.355	34801.094	35090.776	0.000	7.510	0.000	24.723	0.000	5574.186

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2988.1	20.508	261860.013
Instance2988.2	22.417	261871.854
Instance2988.3	22.264	261864.648
Instance2988.4	22.569	261869.510
Instance2988.5	22.427	261872.436
Instance2988.6	22.439	261860.610

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2988.1	0.569	205778.838
Instance2988.2	0.567	206168.837
Instance2988.3	0.567	205259.587
Instance2988.4	0.569	207326.289
Instance2988.5	0.571	207116.642
Instance2988.6	0.568	206241.448

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	19.901	13.083	79.741	36.432	93056.513	35086.085	16.122	7.479	0.569	24.843	205778.838	5561.715
Instance2988.2	18.530	12.267	81.508	36.356	97237.049	35088.535	16.680	7.519	0.567	24.673	206168.837	5579.440
Instance2988.3	18.766	12.124	81.242	36.272	96973.478	35129.939	16.453	7.499	0.567	24.690	205259.587	5571.488
Instance2988.4	18.957	11.197	81.619	36.331	97519.910	35103.175	16.189	7.482	0.569	24.865	207326.289	5556.457
Instance2988.5	18.560	10.881	82.000	36.680	96857.952	35081.589	16.451	7.499	0.571	24.870	207116.642	5571.150
Instance2988.6	18.542	10.365	81.561	36.355	97269.885	35090.776	16.400	7.510	0.568	24.723	206241.448	5574.186

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.838	1.490	7.686
Available MBytes	44522.503	44509.000	44668.000
Free System Page Table Entries	33555096.783	33555086.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34510719.444	34484224.000	34627584.000
Pool Paged Bytes	134656402.407	132845568.000	136060928.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

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Test Log

9/20/2012 2:11:36 PM -- Jetstress testing begins ...

9/20/2012 2:11:37 PM -- Prepare testing begins ...

9/20/2012 2:11:43 PM -- Attaching databases ...

9/20/2012 2:11:43 PM -- Prepare testing ends.

9/20/2012 2:11:43 PM -- Dispatching transactions begins ...

9/20/2012 2:11:43 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:11:43 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:11:50 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:11:50 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:02 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:02 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:02 PM -- Attaining prerequisites:

9/20/2012 2:15:00 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452446000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:00 PM -- Performance logging ends.

9/21/2012 7:04:00 PM -- JetInterop batch transaction stats: 286214, 286274, 286262, 286576, 287427 and 286130.

9/21/2012 7:04:00 PM -- Dispatching transactions ends.

9/21/2012 7:04:00 PM -- Shutting down databases ...

9/21/2012 7:04:10 PM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/21/2012 7:04:10 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_50.blg has 5762 samples.

9/21/2012 7:04:10 PM -- Creating test report ...

9/21/2012 7:05:04 PM -- Instance2988.1 has 19.9 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.1 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.1 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.2 has 18.5 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.2 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.2 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.3 has 18.8 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.3 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.3 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.4 has 19.0 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.4 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.4 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.5 has 18.6 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.5 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.5 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.6 has 18.5 for I/O Database Reads Average Latency.

9/21/2012 7:05:04 PM -- Instance2988.6 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:04 PM -- Instance2988.6 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:04 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:04 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:04 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_50.xml has 5750 samples queried.

Server 4 – EX02B

Test Summary

Overall Test Result	Pass
Machine Name	EX02B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:11:39 PM
Test End Time	9/21/2012 7:04:15 PM
Collection Start Time	9/20/2012 2:14:49 PM
Collection End Time	9/21/2012 2:14:47 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_53.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	608.135
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9030755287040
Final Database Size (bytes)	9056503070720
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance1720.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1720.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1720.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1720.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1720.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1720.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	18.984	12.613	62.670	38.545	34481.379	35071.956	0.000	7.173	0.000	26.226	0.000	5580.175
Instance1720.2	17.528	11.747	62.816	38.634	34656.416	35075.531	0.000	7.215	0.000	26.198	0.000	5593.912
Instance1720.3	17.577	11.438	62.871	38.665	34577.410	35087.553	0.000	7.180	0.000	26.222	0.000	5592.858
Instance1720.4	18.051	10.658	62.897	38.681	34596.872	35064.657	0.000	7.183	0.000	26.275	0.000	5563.141
Instance1720.5	17.540	10.267	62.749	38.583	34676.604	35065.424	0.000	7.205	0.000	26.159	0.000	5576.863
Instance1720.6	17.576	9.707	62.570	38.453	34617.290	35084.717	0.000	7.187	0.000	26.110	0.000	5593.603

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1720.1	20.866	261858.529
Instance1720.2	23.087	261877.804
Instance1720.3	23.082	261885.406
Instance1720.4	23.084	261868.085
Instance1720.5	23.068	261872.931
Instance1720.6	23.070	261869.337

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance1720.1	0.603	214199.159
Instance1720.2	0.604	213561.800
Instance1720.3	0.604	213453.354
Instance1720.4	0.602	214675.516
Instance1720.5	0.601	212292.810
Instance1720.6	0.602	213272.801

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	18.984	12.613	83.537	38.545	91277.249	35071.956	15.712	7.173	0.603	26.226	214199.159	5580.175
Instance1720.2	17.528	11.747	85.903	38.634	95723.819	35075.531	16.303	7.215	0.604	26.198	213561.800	5593.912
Instance1720.3	17.577	11.438	85.952	38.665	95618.749	35087.553	15.817	7.180	0.604	26.222	213453.354	5592.858
Instance1720.4	18.051	10.658	85.981	38.681	95614.393	35064.657	15.985	7.183	0.602	26.275	214675.516	5563.141
Instance1720.5	17.540	10.267	85.818	38.583	95747.977	35065.424	16.089	7.205	0.601	26.159	212292.810	5576.863
Instance1720.6	17.576	9.707	85.640	38.453	95834.625	35084.717	15.420	7.187	0.602	26.110	213272.801	5593.603

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.930	0.971	7.825
Available MBytes	44473.699	44455.000	44550.000
Free System Page Table Entries	33555608.800	33555599.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34619235.311	34521088.000	34697216.000
Pool Paged Bytes	134668669.752	132673536.000	136052736.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:55 PM -- Jetstress testing begins …

9/14/2012 1:49:56 PM -- Prepare testing begins …

9/14/2012 1:50:03 PM -- Attaching databases …

9/14/2012 1:50:03 PM -- Prepare testing ends.

9/14/2012 1:50:03 PM -- Dispatching transactions begins …

9/14/2012 1:50:03 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:03 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:12 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:12 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:50:25 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:50:25 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:50:25 PM -- Attaining prerequisites:

9/14/2012 1:57:45 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1457869000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:57:46 PM -- Performance logging ends.

9/17/2012 9:51:12 AM -- JetInterop batch transaction stats: 671072, 671545, 670719, 671308, 672874 and 672186.

9/17/2012 9:51:12 AM -- Dispatching transactions ends.

9/17/2012 9:51:12 AM -- Shutting down databases …

9/17/2012 9:51:21 AM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/17/2012 9:51:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.blg has 508 samples.

9/17/2012 9:51:21 AM -- Creating test report …

9/17/2012 9:51:26 AM -- Instance1720.1 has 21.7 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.1 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.1 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.2 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.3 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 23.2 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.4 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 21.2 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.5 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:51:26 AM -- Instance1720.6 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:51:26 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:26 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:26 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.xml has 478 samples queried.

9/17/2012 9:51:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_12.html is saved.

9/17/2012 9:51:29 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:51:29 AM -- Verifying database checksums ...

9/17/2012 9:54:21 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:22 AM -- Verifying log checksums ...

9/17/2012 9:54:22 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_22.evt is saved.

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_22.evt is saved.

9/17/2012 9:54:22 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_22.xml is saved.

9/17/2012 9:54:22 AM -- Jetstress testing ends.

9/17/2012 2:44:48 PM -- Jetstress testing begins ...

9/17/2012 2:44:48 PM -- Prepare testing begins ...

9/17/2012 2:44:54 PM -- Attaching databases ...

9/17/2012 2:44:54 PM -- Prepare testing ends.

9/17/2012 2:44:54 PM -- Dispatching transactions begins ...

9/17/2012 2:44:54 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:44:54 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:01 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:01 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:13 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:13 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:13 PM -- Attaining prerequisites:

9/17/2012 2:49:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452114000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:04 PM -- Performance logging ends.

9/18/2012 10:41:01 AM -- JetInterop batch transaction stats: 144579, 144999, 144746, 145032, 145441 and 144398.

9/18/2012 10:41:01 AM -- Dispatching transactions ends.

9/18/2012 10:41:01 AM -- Shutting down databases ...

9/18/2012 10:41:22 AM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/18/2012 10:41:22 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.blg has 494 samples.

9/18/2012 10:41:22 AM -- Creating test report ...

9/18/2012 10:41:33 AM -- Instance1720.1 has 23.1 for I/O Database Reads Average Latency.

9/18/2012 10:41:33 AM -- Instance1720.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 24.0 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:41:33 AM -- Instance1720.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:41:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:41:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:41:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.xml has 478 samples queried.
9/18/2012 10:41:51 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_1.html is saved.
9/18/2012 10:41:52 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:41:52 AM -- Verifying database checksums …
9/18/2012 10:42:02 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:42:02 AM -- Verifying log checksums …
9/18/2012 10:42:02 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_2.evt is saved.
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_2.evt is saved.
9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_2.xml is saved.
9/18/2012 10:42:02 AM -- Jetstress testing ends.
9/19/2012 5:15:07 PM -- Jetstress testing begins …
9/19/2012 5:15:07 PM -- Prepare testing begins …
9/19/2012 5:15:13 PM -- Attaching databases …
9/19/2012 5:15:13 PM -- Prepare testing ends.
9/19/2012 5:15:13 PM -- Dispatching transactions begins …
9/19/2012 5:15:13 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:13 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:20 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:20 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:31 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:31 PM -- Attaining prerequisites:

9/19/2012 5:18:15 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1465328000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:16 PM -- Performance logging ends.

9/19/2012 8:41:39 PM -- JetInterop batch transaction stats: 35454, 35470, 35534, 35178, 35268 and 35615.

9/19/2012 8:41:40 PM -- Dispatching transactions ends.

9/19/2012 8:41:40 PM -- Shutting down databases ...

9/19/2012 8:41:57 PM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/19/2012 8:41:57 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.blg has 490 samples.

9/19/2012 8:41:57 PM -- Creating test report ...

9/19/2012 8:42:04 PM -- Instance1720.1 has 17.7 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.2 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 17.3 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.5 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:04 PM -- Instance1720.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:04 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:04 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:04 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.xml has 479 samples queried.

9/19/2012 8:42:05 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_20.html is saved.

9/19/2012 8:42:06 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:42:06 PM -- Verifying database checksums ...

9/20/2012 6:59:38 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 6:59:38 AM -- Performance logging ends.

9/20/2012 6:59:38 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_5.blg has 1234 samples.

9/20/2012 6:59:46 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_5.html is saved.

9/20/2012 6:59:46 AM -- Verifying log checksums …

9/20/2012 6:59:47 AM -- C:\LOG\LOG1 (8 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (8 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (7 log(s) processed) and C:\LOG\LOG6 (6 log(s) processed)

9/20/2012 6:59:47 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_6_59_47.evt is saved.

9/20/2012 6:59:47 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_6_59_47.evt is saved.

9/20/2012 6:59:47 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_6_59_47.xml is saved.

9/20/2012 6:59:47 AM -- Jetstress testing ends.

9/20/2012 2:11:39 PM -- Jetstress testing begins …

9/20/2012 2:11:39 PM -- Prepare testing begins …

9/20/2012 2:11:46 PM -- Attaching databases …

9/20/2012 2:11:46 PM -- Prepare testing ends.

9/20/2012 2:11:46 PM -- Dispatching transactions begins …

9/20/2012 2:11:46 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:11:46 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:11:53 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:11:53 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:04 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:04 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:04 PM -- Attaining prerequisites:

9/20/2012 2:14:49 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1449660000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:14:50 PM -- Performance logging ends.

9/21/2012 7:04:06 PM -- JetInterop batch transaction stats: 302878, 303153, 303173, 302853, 302036 and 301900.

9/21/2012 7:04:06 PM -- Dispatching transactions ends.

9/21/2012 7:04:06 PM -- Shutting down databases …

9/21/2012 7:04:15 PM -- Instance1720.1 (complete), Instance1720.2 (complete), Instance1720.3 (complete), Instance1720.4 (complete), Instance1720.5 (complete) and Instance1720.6 (complete)

9/21/2012 7:04:15 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_53.blg has 5762 samples.

9/21/2012 7:04:15 PM -- Creating test report …

9/21/2012 7:05:06 PM -- Instance1720.1 has 19.0 for I/O Database Reads Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.1 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.1 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.2 has 17.5 for I/O Database Reads Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.2 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.2 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.3 has 17.6 for I/O Database Reads Average Latency.

9/21/2012 7:05:06 PM -- Instance1720.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.4 has 18.1 for I/O Database Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.5 has 17.5 for I/O Database Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.6 has 17.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:06 PM -- Instance1720.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:06 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:06 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:06 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_11_53.xml has 5750 samples queried.

Server 5 – EX03A

Test Summary

Overall Test Result	Pass
Machine Name	EX03A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:11:55 PM
Test End Time	9/21/2012 7:04:21 PM
Collection Start Time	9/20/2012 2:15:17 PM
Collection End Time	9/21/2012 2:15:05 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_9.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	573.182
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9024472219648
Final Database Size (bytes)	9048726831104
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance496.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance496.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance496.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance496.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance496.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance496.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	19.917	12.876	59.218	36.410	34646.053	35066.877	0.000	7.492	0.000	24.851	0.000	5554.950
Instance496.2	18.622	12.071	59.191	36.409	34780.819	35077.241	0.000	7.490	0.000	24.799	0.000	5554.420
Instance496.3	18.623	11.780	58.982	36.265	34818.843	35100.791	0.000	7.492	0.000	24.689	0.000	5568.974
Instance496.4	19.042	11.062	59.127	36.354	34730.035	35111.096	0.000	7.483	0.000	24.908	0.000	5546.945
Instance496.5	18.702	10.709	59.033	36.294	34779.990	35093.329	0.000	7.491	0.000	24.716	0.000	5570.681
Instance496.6	18.611	10.183	59.371	36.526	34847.516	35086.031	0.000	7.512	0.000	24.824	0.000	5564.268

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance496.1	20.755	261867.832
Instance496.2	22.330	261867.630
Instance496.3	22.323	261858.490
Instance496.4	22.431	261876.819
Instance496.5	22.320	261869.247
Instance496.6	22.336	261880.021

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance496.1	0.568	206192.563
Instance496.2	0.567	206077.386
Instance496.3	0.566	205111.800
Instance496.4	0.569	206803.507
Instance496.5	0.567	206967.373
Instance496.6	0.569	206195.660

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	19.917	12.876	79.973	36.410	93615.842	35066.877	16.540	7.492	0.568	24.851	206192.563	5554.950
Instance496.2	18.622	12.071	81.521	36.409	96983.386	35077.241	16.382	7.490	0.567	24.799	206077.386	5554.420
Instance496.3	18.623	11.780	81.306	36.265	97154.462	35100.791	16.167	7.492	0.566	24.689	205111.800	5568.974
Instance496.4	19.042	11.062	81.559	36.354	97202.855	35111.096	16.600	7.483	0.569	24.908	206803.507	5546.945
Instance496.5	18.702	10.709	81.353	36.294	97083.745	35093.329	16.434	7.491	0.567	24.716	206967.373	5570.681
Instance496.6	18.611	10.183	81.707	36.526	96910.438	35086.031	16.429	7.512	0.569	24.824	206195.660	5564.268

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.914	1.473	8.032
Available MBytes	44536.817	44522.000	44669.000
Free System Page Table Entries	33555096.789	33555084.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34636569.417	34590720.000	34734080.000
Pool Paged Bytes	133551730.223	131694592.000	134901760.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:57 PM -- Jetstress testing begins …
9/14/2012 1:49:57 PM -- Prepare testing begins …
9/14/2012 1:50:04 PM -- Attaching databases …
9/14/2012 1:50:04 PM -- Prepare testing ends.
9/14/2012 1:50:04 PM -- Dispatching transactions begins …
9/14/2012 1:50:04 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:04 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:13 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:13 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:24 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:24 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:24 PM -- Attaining prerequisites:
9/14/2012 1:54:18 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450336000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:19 PM -- Performance logging ends.
9/17/2012 9:51:20 AM -- JetInterop batch transaction stats: 655253, 653099, 654849, 654241, 652600 and 653851.
9/17/2012 9:51:20 AM -- Dispatching transactions ends.
9/17/2012 9:51:20 AM -- Shutting down databases …
9/17/2012 9:51:41 AM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)
9/17/2012 9:51:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.blg has 494 samples.
9/17/2012 9:51:41 AM -- Creating test report …
9/17/2012 9:51:59 AM -- Instance496.1 has 17.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.1 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.1 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 17.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.2 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 16.9 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 11.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.3 has 11.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 18.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.4 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 17.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance496.5 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance496.6 has 16.8 for I/O Database Reads Average Latency.

9/17/2012 9:51:59 AM -- Instance496.6 has 11.4 for I/O Log Writes Average Latency.

9/17/2012 9:51:59 AM -- Instance496.6 has 11.4 for I/O Log Reads Average Latency.

9/17/2012 9:52:00 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:00 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.xml has 478 samples queried.

9/17/2012 9:52:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_13.html is saved.

9/17/2012 9:52:04 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:04 AM -- Verifying database checksums ...

9/17/2012 9:54:24 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:25 AM -- Verifying log checksums ...

9/17/2012 9:54:25 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_25.evt is saved.

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_25.evt is saved.

9/17/2012 9:54:25 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_25.xml is saved.

9/17/2012 9:54:25 AM -- Jetstress testing ends.

9/17/2012 9:56:07 AM -- Jetstress testing begins ...

9/17/2012 9:56:07 AM -- Prepare testing begins ...

9/17/2012 9:56:14 AM -- Attaching databases ...

9/17/2012 9:56:14 AM -- Prepare testing ends.

9/17/2012 9:56:14 AM -- Jetstress testing ends.

9/17/2012 2:44:51 PM -- Jetstress testing begins ...

9/17/2012 2:44:51 PM -- Prepare testing begins ...

9/17/2012 2:44:57 PM -- Attaching databases ...

9/17/2012 2:44:57 PM -- Prepare testing ends.

9/17/2012 2:44:57 PM -- Dispatching transactions begins ...

9/17/2012 2:44:57 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:44:57 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:04 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:04 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:16 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:16 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:16 PM -- Attaining prerequisites:

9/17/2012 2:49:19 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451782000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:19 PM -- Performance logging ends.

9/18/2012 10:41:11 AM -- JetInterop batch transaction stats: 143816, 142976, 144346, 143507, 143902 and 143140.

9/18/2012 10:41:12 AM -- Dispatching transactions ends.

9/18/2012 10:41:12 AM -- Shutting down databases ...

9/18/2012 10:41:28 AM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)

9/18/2012 10:41:28 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.blg has 495 samples.

9/18/2012 10:41:28 AM -- Creating test report …

9/18/2012 10:41:54 AM -- Instance496.1 has 23.1 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.1 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.1 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.2 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.3 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 23.9 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.4 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 22.9 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.5 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 22.6 for I/O Database Reads Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 13.2 for I/O Log Writes Average Latency.

9/18/2012 10:41:54 AM -- Instance496.6 has 13.2 for I/O Log Reads Average Latency.

9/18/2012 10:41:54 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/18/2012 10:41:54 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.xml has 478 samples queried.

9/18/2012 10:41:54 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_4.html is saved.

9/18/2012 10:41:55 AM -- Performance logging begins (interval: 30000 ms).

9/18/2012 10:41:55 AM -- Verifying database checksums …

9/18/2012 10:42:05 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/18/2012 10:42:05 AM -- Verifying log checksums …

9/18/2012 10:42:05 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/18/2012 10:42:05 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_5.evt is saved.

9/18/2012 10:42:06 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_5.evt is saved.

9/18/2012 10:42:06 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_6.xml is saved.

9/18/2012 10:42:06 AM -- Jetstress testing ends.

9/19/2012 5:15:10 PM -- Jetstress testing begins …

9/19/2012 5:15:10 PM -- Prepare testing begins …

9/19/2012 5:15:16 PM -- Attaching databases ...
9/19/2012 5:15:16 PM -- Prepare testing ends.
9/19/2012 5:15:16 PM -- Dispatching transactions begins ...
9/19/2012 5:15:16 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:16 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/19/2012 5:15:23 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/19/2012 5:15:23 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/19/2012 5:15:35 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/19/2012 5:15:35 PM -- Performance logging begins (interval: 15000 ms).
9/19/2012 5:15:35 PM -- Attaining prerequisites:
9/19/2012 5:18:25 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454322000.0 (lower bound: 1449551000.0, upper bound: none)
9/19/2012 7:18:26 PM -- Performance logging ends.
9/19/2012 8:41:44 PM -- JetInterop batch transaction stats: 28719, 28734, 28576, 28663, 28507 and 28483.
9/19/2012 8:41:45 PM -- Dispatching transactions ends.
9/19/2012 8:41:45 PM -- Shutting down databases ...
9/19/2012 8:42:07 PM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)
9/19/2012 8:42:07 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.blg has 490 samples.
9/19/2012 8:42:07 PM -- Creating test report ...
9/19/2012 8:42:22 PM -- Instance496.1 has 18.3 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.1 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.1 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.2 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.3 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 18.3 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.4 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 17.9 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.5 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 17.8 for I/O Database Reads Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 6.6 for I/O Log Writes Average Latency.
9/19/2012 8:42:22 PM -- Instance496.6 has 6.6 for I/O Log Reads Average Latency.
9/19/2012 8:42:22 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/19/2012 8:42:22 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:22 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.xml has 478 samples queried.

9/19/2012 8:42:23 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_23.html is saved.

9/19/2012 8:42:24 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:42:24 PM -- Verifying database checksums ...

9/20/2012 10:53:42 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100% processed) and C:\DB\DB6 (100% processed)

9/20/2012 10:53:42 AM -- Performance logging ends.

9/20/2012 10:53:42 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_23.blg has 1701 samples.

9/20/2012 10:53:52 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_23.html is saved.

9/20/2012 10:53:52 AM -- Verifying log checksums ...

9/20/2012 10:53:53 AM -- C:\LOG\LOG1 (8 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (8 log(s) processed), C:\LOG\LOG4 (8 log(s) processed), C:\LOG\LOG5 (8 log(s) processed) and C:\LOG\LOG6 (8 log(s) processed)

9/20/2012 10:53:53 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_10_53_53.evt is saved.

9/20/2012 10:53:53 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_10_53_53.evt is saved.

9/20/2012 10:53:53 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_10_53_53.xml is saved.

9/20/2012 10:53:53 AM -- Jetstress testing ends.

9/20/2012 2:11:55 PM -- Jetstress testing begins ...

9/20/2012 2:11:55 PM -- Prepare testing begins ...

9/20/2012 2:12:01 PM -- Attaching databases ...

9/20/2012 2:12:01 PM -- Prepare testing ends.

9/20/2012 2:12:01 PM -- Dispatching transactions begins ...

9/20/2012 2:12:01 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:01 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:09 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:09 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:21 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:21 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:21 PM -- Attaining prerequisites:

9/20/2012 2:15:17 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453011000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:17 PM -- Performance logging ends.

9/21/2012 7:04:12 PM -- JetInterop batch transaction stats: 286315, 285428, 285087, 286281, 285442 and 286243.

9/21/2012 7:04:13 PM -- Dispatching transactions ends.

9/21/2012 7:04:13 PM -- Shutting down databases ...

9/21/2012 7:04:21 PM -- Instance496.1 (complete), Instance496.2 (complete), Instance496.3 (complete), Instance496.4 (complete), Instance496.5 (complete) and Instance496.6 (complete)

9/21/2012 7:04:21 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_9.blg has 5762 samples.

9/21/2012 7:04:21 PM -- Creating test report ...

9/21/2012 7:05:16 PM -- Instance496.1 has 19.9 for I/O Database Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance496.1 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:16 PM -- Instance496.1 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.2 has 18.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.2 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance496.2 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.3 has 18.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.3 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance496.3 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.4 has 19.0 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.4 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance496.4 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.5 has 18.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.5 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance496.5 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.6 has 18.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance496.6 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance496.6 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:16 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:16 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_9.xml has 5750 samples queried.

Server 6 – EX03B

Test Summary

Overall Test Result	Pass
Machine Name	EX03B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:11:58 PM
Test End Time	9/21/2012 7:04:26 PM
Collection Start Time	9/20/2012 2:15:25 PM
Collection End Time	9/21/2012 2:15:22 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_12.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	608.375
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9030948225024
Final Database Size (bytes)	9056696008704
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	18.007	12.543	62.831	38.634	34579.676	35065.349	0.000	7.170	0.000	26.292	0.000	5564.035
Instance2988.2	17.577	11.724	62.981	38.744	34697.605	35054.781	0.000	7.198	0.000	26.237	0.000	5567.102
Instance2988.3	17.365	11.341	62.729	38.575	34660.122	35072.707	0.000	7.190	0.000	26.166	0.000	5587.420
Instance2988.4	18.408	10.638	62.833	38.641	34433.375	35067.319	0.000	7.190	0.000	26.298	0.000	5571.330
Instance2988.5	17.271	10.282	62.724	38.569	34686.992	35079.071	0.000	7.215	0.000	26.103	0.000	5596.078
Instance2988.6	17.477	9.737	62.613	38.501	34659.662	35078.109	0.000	7.214	0.000	26.154	0.000	5591.991

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2988.1	23.245	261868.688
Instance2988.2	23.108	261874.926
Instance2988.3	23.384	261869.184
Instance2988.4	22.382	261874.534
Instance2988.5	23.431	261860.545
Instance2988.6	23.191	261864.593

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2988.1	0.603	212280.377
Instance2988.2	0.602	214042.260
Instance2988.3	0.602	212568.426
Instance2988.4	0.604	212636.807
Instance2988.5	0.602	213338.670
Instance2988.6	0.603	213805.555

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	18.007	12.543	86.076	38.634	95958.773	35065.349	15.926	7.170	0.603	26.292	212280.377	5564.035
Instance2988.2	17.577	11.724	86.089	38.744	95675.968	35054.781	16.140	7.198	0.602	26.237	214042.260	5567.102
Instance2988.3	17.365	11.341	86.114	38.575	96358.868	35072.707	15.969	7.190	0.602	26.166	212568.426	5587.420
Instance2988.4	18.408	10.638	85.214	38.641	94171.162	35067.319	15.963	7.190	0.604	26.298	212636.807	5571.330
Instance2988.5	17.271	10.282	86.155	38.569	96469.544	35079.071	16.138	7.215	0.602	26.103	213338.670	5596.078
Instance2988.6	17.477	9.737	85.804	38.501	96068.242	35078.109	16.335	7.214	0.603	26.154	213805.555	5591.991

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.959	1.040	8.275
Available MBytes	44497.241	44473.000	44565.000
Free System Page Table Entries	33555096.967	33555087.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34506111.355	34496512.000	34545664.000
Pool Paged Bytes	133264216.805	131313664.000	134782976.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:49:59 PM -- Jetstress testing begins ...
9/14/2012 1:50:00 PM -- Prepare testing begins ...
9/14/2012 1:50:07 PM -- Attaching databases ...
9/14/2012 1:50:07 PM -- Prepare testing ends.
9/14/2012 1:50:07 PM -- Dispatching transactions begins ...
9/14/2012 1:50:07 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:07 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:18 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:18 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:29 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:29 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:29 PM -- Attaining prerequisites:
9/14/2012 1:57:38 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451348000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:57:39 PM -- Performance logging ends.
9/17/2012 9:51:26 AM -- JetInterop batch transaction stats: 668921, 669478, 670604, 670224, 669357 and 670653.
9/17/2012 9:51:27 AM -- Dispatching transactions ends.
9/17/2012 9:51:27 AM -- Shutting down databases ...
9/17/2012 9:51:41 AM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)
9/17/2012 9:51:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.blg has 507 samples.
9/17/2012 9:51:41 AM -- Creating test report ...
9/17/2012 9:51:59 AM -- Instance2988.1 has 22.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 21.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.2 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 21.5 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.3 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.4 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 21.1 for I/O Database Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.5 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:59 AM -- Instance2988.6 has 21.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:59 AM -- Instance2988.6 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:51:59 AM -- Instance2988.6 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:51:59 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:59 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:59 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.xml has 478 samples queried.

9/17/2012 9:52:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_18.html is saved.

9/17/2012 9:52:04 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:04 AM -- Verifying database checksums ...

9/17/2012 9:54:30 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:31 AM -- Verifying log checksums ...

9/17/2012 9:54:31 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_31.evt is saved.

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_31.evt is saved.

9/17/2012 9:54:31 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_31.xml is saved.

9/17/2012 9:54:31 AM -- Jetstress testing ends.

9/17/2012 2:44:59 PM -- Jetstress testing begins ...

9/17/2012 2:44:59 PM -- Prepare testing begins ...

9/17/2012 2:45:05 PM -- Attaching databases ...

9/17/2012 2:45:05 PM -- Prepare testing ends.

9/17/2012 2:45:05 PM -- Dispatching transactions begins ...

9/17/2012 2:45:05 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:05 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:13 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:13 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:24 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:24 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:24 PM -- Attaining prerequisites:

9/17/2012 2:49:23 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454785000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:23 PM -- Performance logging ends.

9/18/2012 10:41:42 AM -- JetInterop batch transaction stats: 144854, 145715, 145358, 145024, 144584 and 145306.

9/18/2012 10:41:50 AM -- Dispatching transactions ends.

9/18/2012 10:41:50 AM -- Shutting down databases ...

9/18/2012 10:42:02 AM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/18/2012 10:42:02 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.blg has 495 samples.

9/18/2012 10:42:02 AM -- Creating test report ...

9/18/2012 10:42:07 AM -- Instance2988.1 has 23.2 for I/O Database Reads Average Latency.

9/18/2012 10:42:07 AM -- Instance2988.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 22.7 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 23.0 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:42:07 AM -- Instance2988.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:42:07 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:42:07 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:42:07 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.xml has 479 samples queried.
9/18/2012 10:42:07 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_13.html is saved.
9/18/2012 10:42:09 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:42:09 AM -- Verifying database checksums …
9/18/2012 10:42:30 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:42:30 AM -- Verifying log checksums …
9/18/2012 10:42:30 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_42_30.evt is saved.
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_42_30.evt is saved.
9/18/2012 10:42:30 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_42_30.xml is saved.
9/18/2012 10:42:30 AM -- Jetstress testing ends.
9/19/2012 5:15:15 PM -- Jetstress testing begins …
9/19/2012 5:15:15 PM -- Prepare testing begins …
9/19/2012 5:15:21 PM -- Attaching databases …
9/19/2012 5:15:21 PM -- Prepare testing ends.
9/19/2012 5:15:21 PM -- Dispatching transactions begins …
9/19/2012 5:15:21 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:21 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:28 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:28 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:40 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:40 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:40 PM -- Attaining prerequisites:

9/19/2012 5:18:37 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452683000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:37 PM -- Performance logging ends.

9/19/2012 8:41:55 PM -- JetInterop batch transaction stats: 35267, 35321, 35760, 35682, 35209 and 35529.

9/19/2012 8:41:55 PM -- Dispatching transactions ends.

9/19/2012 8:41:55 PM -- Shutting down databases ...

9/19/2012 8:42:09 PM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/19/2012 8:42:09 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.blg has 491 samples.

9/19/2012 8:42:09 PM -- Creating test report ...

9/19/2012 8:42:22 PM -- Instance2988.1 has 17.8 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.1 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.1 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.2 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 19.3 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 17.2 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.5 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 17.4 for I/O Database Reads Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:42:22 PM -- Instance2988.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:42:22 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:42:22 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:42:22 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.xml has 479 samples queried.

9/19/2012 8:42:23 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_28.html is saved.

9/19/2012 8:42:24 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:42:24 PM -- Verifying database checksums ...

9/20/2012 6:57:04 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 6:57:04 AM -- Performance logging ends.

9/20/2012 6:57:04 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_23.blg has 1228 samples.

9/20/2012 6:57:18 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_42_23.html is saved.

9/20/2012 6:57:18 AM -- Verifying log checksums ...

9/20/2012 6:57:18 AM -- C:\LOG\LOG1 (7 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (7 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (7 log(s) processed) and C:\LOG\LOG6 (6 log(s) processed)

9/20/2012 6:57:18 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_6_57_18.evt is saved.

9/20/2012 6:57:18 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_6_57_18.evt is saved.

9/20/2012 6:57:18 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_6_57_18.xml is saved.

9/20/2012 6:57:18 AM -- Jetstress testing ends.

9/20/2012 2:11:58 PM -- Jetstress testing begins ...

9/20/2012 2:11:58 PM -- Prepare testing begins ...

9/20/2012 2:12:04 PM -- Attaching databases ...

9/20/2012 2:12:04 PM -- Prepare testing ends.

9/20/2012 2:12:04 PM -- Dispatching transactions begins ...

9/20/2012 2:12:04 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:04 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:12 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:12 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:24 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:24 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:24 PM -- Attaining prerequisites:

9/20/2012 2:15:25 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458733000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:25 PM -- Performance logging ends.

9/21/2012 7:04:17 PM -- JetInterop batch transaction stats: 303331, 303311, 302435, 302379, 302231 and 302519.

9/21/2012 7:04:18 PM -- Dispatching transactions ends.

9/21/2012 7:04:18 PM -- Shutting down databases ...

9/21/2012 7:04:26 PM -- Instance2988.1 (complete), Instance2988.2 (complete), Instance2988.3 (complete), Instance2988.4 (complete), Instance2988.5 (complete) and Instance2988.6 (complete)

9/21/2012 7:04:26 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_12.blg has 5763 samples.

9/21/2012 7:04:26 PM -- Creating test report ...

9/21/2012 7:05:16 PM -- Instance2988.1 has 18.0 for I/O Database Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.1 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.1 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.2 has 17.6 for I/O Database Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.2 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.2 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.3 has 17.4 for I/O Database Reads Average Latency.

9/21/2012 7:05:16 PM -- Instance2988.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.4 has 18.4 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.5 has 17.3 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.6 has 17.5 for I/O Database Reads Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:16 PM -- Instance2988.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:16 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:16 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:16 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_12.xml has 5750 samples queried.

Server 7 – EX04A

Test Summary

Overall Test Result	Pass
Machine Name	EX04A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:01 PM
Test End Time	9/21/2012 7:04:28 PM
Collection Start Time	9/20/2012 2:15:16 PM
Collection End Time	9/21/2012 2:15:10 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	584.791
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9025806008320
Final Database Size (bytes)	9050580713472
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2296.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2296.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2296.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2296.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2296.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2296.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	17.912	12.240	60.408	37.186	34786.693	35080.133	0.000	7.533	0.000	25.258	0.000	5591.949
Instance2296.2	18.433	12.089	60.083	36.974	34755.516	35092.791	0.000	7.539	0.000	25.165	0.000	5587.480
Instance2296.3	18.462	11.956	60.688	37.365	34738.920	35078.413	0.000	7.524	0.000	25.308	0.000	5578.310
Instance2296.4	18.451	11.321	60.257	37.060	34700.915	35080.338	0.000	7.533	0.000	25.171	0.000	5582.385
Instance2296.5	18.457	10.933	60.468	37.186	34736.871	35069.559	0.000	7.539	0.000	25.158	0.000	5559.473
Instance2296.6	18.479	10.409	60.129	36.986	34678.802	35095.385	0.000	7.523	0.000	25.110	0.000	5593.984

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2296.1	23.294	261876.426
Instance2296.2	22.562	261867.242
Instance2296.3	22.542	261874.853
Instance2296.4	22.558	261874.903
Instance2296.5	22.577	261874.574
Instance2296.6	22.552	261869.549

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2296.1	0.582	209487.768
Instance2296.2	0.580	208487.417
Instance2296.3	0.582	208510.598
Instance2296.4	0.579	208709.569
Instance2296.5	0.576	207348.614
Instance2296.6	0.579	208141.489

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	17.912	12.240	83.703	37.186	97985.315	35080.133	16.696	7.533	0.582	25.258	209487.768	5591.949
Instance2296.2	18.433	12.089	82.645	36.974	96756.300	35092.791	17.024	7.539	0.580	25.165	208487.417	5587.480
Instance2296.3	18.462	11.956	83.230	37.365	96255.227	35078.413	16.520	7.524	0.582	25.308	208510.598	5578.310
Instance2296.4	18.451	11.321	82.815	37.060	96581.783	35080.338	16.529	7.533	0.579	25.171	208709.569	5582.385
Instance2296.5	18.457	10.933	83.045	37.186	96488.106	35069.559	16.241	7.539	0.576	25.158	207348.614	5559.473
Instance2296.6	18.479	10.409	82.681	36.986	96648.301	35095.385	16.353	7.523	0.579	25.110	208141.489	5593.984

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.054	1.783	8.378
Available MBytes	44482.599	44467.000	44588.000
Free System Page Table Entries	33555608.792	33555597.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34831757.955	34721792.000	34897920.000
Pool Paged Bytes	134851457.758	132935680.000	136146944.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:02 PM -- Jetstress testing begins ...
9/14/2012 1:50:02 PM -- Prepare testing begins ...
9/14/2012 1:50:10 PM -- Attaching databases ...
9/14/2012 1:50:10 PM -- Prepare testing ends.
9/14/2012 1:50:10 PM -- Dispatching transactions begins ...
9/14/2012 1:50:10 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:10 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:20 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:20 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:31 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:31 PM -- Attaining prerequisites:
9/14/2012 1:54:20 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1460322000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:54:20 PM -- Performance logging ends.
9/17/2012 9:51:31 AM -- JetInterop batch transaction stats: 666083, 667704, 667902, 666539, 666310 and 666169.
9/17/2012 9:51:32 AM -- Dispatching transactions ends.
9/17/2012 9:51:32 AM -- Shutting down databases ...
9/17/2012 9:51:45 AM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)
9/17/2012 9:51:45 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.blg has 494 samples.
9/17/2012 9:51:45 AM -- Creating test report ...
9/17/2012 9:51:58 AM -- Instance2296.1 has 20.7 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.1 has 11.4 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.1 has 11.4 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 18.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 22.3 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.2 has 22.3 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 19.4 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 30.9 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.3 has 30.9 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 21.0 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 33.7 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.4 has 33.7 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 19.2 for I/O Database Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 36.0 for I/O Log Writes Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.5 has 36.0 for I/O Log Reads Average Latency.
9/17/2012 9:51:58 AM -- Instance2296.6 has 19.5 for I/O Database Reads Average Latency.

9/17/2012 9:51:58 AM -- Instance2296.6 has 45.0 for I/O Log Writes Average Latency.

9/17/2012 9:51:58 AM -- Instance2296.6 has 45.0 for I/O Log Reads Average Latency.

9/17/2012 9:51:58 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:51:58 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:51:58 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.xml has 479 samples queried.

9/17/2012 9:52:03 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_20.html is saved.

9/17/2012 9:52:05 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:05 AM -- Verifying database checksums ...

9/17/2012 9:54:32 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:32 AM -- Verifying log checksums ...

9/17/2012 9:54:32 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_32.evt is saved.

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_32.evt is saved.

9/17/2012 9:54:32 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_32.xml is saved.

9/17/2012 9:54:32 AM -- Jetstress testing ends.

9/17/2012 2:45:01 PM -- Jetstress testing begins ...

9/17/2012 2:45:01 PM -- Prepare testing begins ...

9/17/2012 2:45:08 PM -- Attaching databases ...

9/17/2012 2:45:08 PM -- Prepare testing ends.

9/17/2012 2:45:08 PM -- Dispatching transactions begins ...

9/17/2012 2:45:08 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:08 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:16 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:16 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:28 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:28 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:28 PM -- Attaining prerequisites:

9/17/2012 2:49:33 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453920000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:34 PM -- Performance logging ends.

9/18/2012 10:42:40 AM -- JetInterop batch transaction stats: 143248, 143575, 143113, 143345, 143794 and 143433.

9/18/2012 10:42:40 AM -- Dispatching transactions ends.

9/18/2012 10:42:40 AM -- Shutting down databases ...

9/18/2012 10:42:47 AM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)

9/18/2012 10:42:47 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.blg has 495 samples.

9/18/2012 10:42:47 AM -- Creating test report ...

9/18/2012 10:43:00 AM -- Instance2296.1 has 22.4 for I/O Database Reads Average Latency.

9/18/2012 10:43:00 AM -- Instance2296.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.4 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:00 AM -- Instance2296.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:00 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:00 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.xml has 478 samples queried.
9/18/2012 10:43:00 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_16.html is saved.
9/18/2012 10:43:02 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:02 AM -- Verifying database checksums …
9/18/2012 10:44:59 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:45:00 AM -- Verifying log checksums …
9/18/2012 10:45:00 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_45_0.evt is saved.
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_45_0.evt is saved.
9/18/2012 10:45:00 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_45_0.xml is saved.
9/18/2012 10:45:00 AM -- Jetstress testing ends.
9/19/2012 5:15:18 PM -- Jetstress testing begins …
9/19/2012 5:15:18 PM -- Prepare testing begins …
9/19/2012 5:15:24 PM -- Attaching databases …
9/19/2012 5:15:24 PM -- Prepare testing ends.
9/19/2012 5:15:24 PM -- Dispatching transactions begins …
9/19/2012 5:15:24 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:24 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:32 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:32 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:44 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:44 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:44 PM -- Attaining prerequisites:

9/19/2012 5:18:35 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1453875000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:36 PM -- Performance logging ends.

9/19/2012 8:42:25 PM -- JetInterop batch transaction stats: 29078, 29003, 29089, 28965, 29120 and 28909.

9/19/2012 8:42:26 PM -- Dispatching transactions ends.

9/19/2012 8:42:26 PM -- Shutting down databases ...

9/19/2012 8:42:48 PM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)

9/19/2012 8:42:48 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.blg has 490 samples.

9/19/2012 8:42:48 PM -- Creating test report ...

9/19/2012 8:43:00 PM -- Instance2296.1 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.1 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.1 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.2 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:00 PM -- Instance2296.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:00 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:00 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:00 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.xml has 478 samples queried.

9/19/2012 8:43:00 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_32.html is saved.

9/19/2012 8:43:02 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:02 PM -- Verifying database checksums ...

9/20/2012 5:58:55 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 5:58:55 AM -- Performance logging ends.

9/20/2012 5:58:55 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_0.blg has 1111 samples.

9/20/2012 5:59:04 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_0.html is saved.

9/20/2012 5:59:04 AM -- Verifying log checksums …

9/20/2012 5:59:06 AM -- C:\LOG\LOG1 (8 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (9 log(s) processed), C:\LOG\LOG4 (8 log(s) processed), C:\LOG\LOG5 (8 log(s) processed) and C:\LOG\LOG6 (8 log(s) processed)

9/20/2012 5:59:06 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_5_59_6.evt is saved.

9/20/2012 5:59:06 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_5_59_6.evt is saved.

9/20/2012 5:59:06 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_5_59_6.xml is saved.

9/20/2012 5:59:06 AM -- Jetstress testing ends.

9/20/2012 2:12:01 PM -- Jetstress testing begins …

9/20/2012 2:12:01 PM -- Prepare testing begins …

9/20/2012 2:12:08 PM -- Attaching databases …

9/20/2012 2:12:08 PM -- Prepare testing ends.

9/20/2012 2:12:08 PM -- Dispatching transactions begins …

9/20/2012 2:12:08 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:08 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:16 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:16 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:27 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:27 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:27 PM -- Attaining prerequisites:

9/20/2012 2:15:16 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450418000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:17 PM -- Performance logging ends.

9/21/2012 7:04:22 PM -- JetInterop batch transaction stats: 291228, 290624, 291687, 291244, 290827 and 291255.

9/21/2012 7:04:22 PM -- Dispatching transactions ends.

9/21/2012 7:04:22 PM -- Shutting down databases …

9/21/2012 7:04:28 PM -- Instance2296.1 (complete), Instance2296.2 (complete), Instance2296.3 (complete), Instance2296.4 (complete), Instance2296.5 (complete) and Instance2296.6 (complete)

9/21/2012 7:04:28 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.blg has 5762 samples.

9/21/2012 7:04:28 PM -- Creating test report …

9/21/2012 7:05:19 PM -- Instance2296.1 has 17.9 for I/O Database Reads Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.1 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.1 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.2 has 18.4 for I/O Database Reads Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.2 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.2 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.3 has 18.5 for I/O Database Reads Average Latency.

9/21/2012 7:05:19 PM -- Instance2296.3 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.3 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.4 has 18.5 for I/O Database Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.4 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.4 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.5 has 18.5 for I/O Database Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.5 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.5 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.6 has 18.5 for I/O Database Reads Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.6 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:19 PM -- Instance2296.6 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:19 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:19 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:19 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_16.xml has 5750 samples queried.

Server 8 – EX04B

Test Summary

Overall Test Result	Pass
Machine Name	EX04B
Test Description	4168 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:36 PM
Test End Time	9/21/2012 7:05:04 PM
Collection Start Time	9/20/2012 2:16:03 PM
Collection End Time	9/21/2012 2:16:01 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_50.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	612.306
Target Transactional I/O per Second	500.16
Initial Database Size (bytes)	9031183106048
Final Database Size (bytes)	9057115439104
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2868.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2868.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2868.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2868.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2868.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2868.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	17.102	11.611	63.255	38.903	34603.460	35061.665	0.000	7.202	0.000	26.376	0.000	5594.453
Instance2868.2	17.592	11.493	63.138	38.838	34622.061	35078.753	0.000	7.205	0.000	26.349	0.000	5587.906
Instance2868.3	17.602	11.354	63.211	38.876	34587.661	35068.635	0.000	7.200	0.000	26.406	0.000	5582.190
Instance2868.4	17.570	10.781	63.058	38.787	34608.116	35079.382	0.000	7.220	0.000	26.261	0.000	5593.833
Instance2868.5	17.617	10.404	63.146	38.846	34553.343	35087.272	0.000	7.216	0.000	26.408	0.000	5588.200
Instance2868.6	17.621	9.858	63.305	38.945	34571.707	35084.146	0.000	7.204	0.000	26.432	0.000	5583.339

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2868.1	23.832	261871.934
Instance2868.2	23.289	261874.329
Instance2868.3	23.244	261886.831
Instance2868.4	23.332	261867.056
Instance2868.5	23.271	261865.231
Instance2868.6	23.290	261871.282

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2868.1	0.608	214442.916
Instance2868.2	0.607	213560.597
Instance2868.3	0.608	213147.927
Instance2868.4	0.606	213954.430
Instance2868.5	0.608	215467.965
Instance2868.6	0.609	213540.703

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	17.102	11.611	87.086	38.903	96796.579	35061.665	16.081	7.202	0.608	26.376	214442.916	5594.453
Instance2868.2	17.592	11.493	86.427	38.838	95858.412	35078.753	15.752	7.205	0.607	26.349	213560.597	5587.906
Instance2868.3	17.602	11.354	86.454	38.876	95697.852	35068.635	16.204	7.200	0.608	26.406	213147.927	5582.190
Instance2868.4	17.570	10.781	86.390	38.787	95986.906	35079.382	16.167	7.220	0.606	26.261	213954.430	5593.833
Instance2868.5	17.617	10.404	86.416	38.846	95765.070	35087.272	16.005	7.216	0.608	26.408	215467.965	5588.200
Instance2868.6	17.621	9.858	86.595	38.945	95704.384	35084.146	15.727	7.204	0.609	26.432	213540.703	5583.339

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.021	1.006	6.475
Available MBytes	44489.764	44442.000	44560.000
Free System Page Table Entries	33555096.791	33555086.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34712481.808	34697216.000	34750464.000
Pool Paged Bytes	133235060.493	131248128.000	134717440.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:30 PM -- Jetstress testing begins ...
9/14/2012 1:50:30 PM -- Prepare testing begins ...
9/14/2012 1:50:38 PM -- Attaching databases ...
9/14/2012 1:50:38 PM -- Prepare testing ends.
9/14/2012 1:50:38 PM -- Dispatching transactions begins ...
9/14/2012 1:50:38 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:38 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:49 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:49 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:51:00 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:51:00 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:51:00 PM -- Attaining prerequisites:
9/14/2012 1:58:19 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450385000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:58:20 PM -- Performance logging ends.
9/17/2012 9:52:05 AM -- JetInterop batch transaction stats: 676238, 676580, 677077, 675729, 677203 and 676533.
9/17/2012 9:52:06 AM -- Dispatching transactions ends.
9/17/2012 9:52:06 AM -- Shutting down databases ...
9/17/2012 9:52:16 AM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)
9/17/2012 9:52:16 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.blg has 507 samples.
9/17/2012 9:52:16 AM -- Creating test report ...
9/17/2012 9:52:27 AM -- Instance2868.1 has 24.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.1 has 18.0 for I/O Log Writes Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.1 has 18.0 for I/O Log Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.2 has 23.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.2 has 11.7 for I/O Log Writes Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.2 has 11.7 for I/O Log Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.3 has 24.7 for I/O Database Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.3 has 22.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.3 has 22.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.4 has 24.2 for I/O Database Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.4 has 19.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.4 has 19.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.5 has 24.5 for I/O Database Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.5 has 15.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.5 has 15.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:27 AM -- Instance2868.6 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.6 has 11.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:27 AM -- Instance2868.6 has 11.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:27 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:27 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.xml has 478 samples queried.

9/17/2012 9:52:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_49.html is saved.

9/17/2012 9:52:34 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:34 AM -- Verifying database checksums ...

9/17/2012 9:55:06 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:55:06 AM -- Verifying log checksums ...

9/17/2012 9:55:06 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_55_6.evt is saved.

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_55_6.evt is saved.

9/17/2012 9:55:06 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_55_6.xml is saved.

9/17/2012 9:55:06 AM -- Jetstress testing ends.

9/17/2012 2:45:33 PM -- Jetstress testing begins ...

9/17/2012 2:45:33 PM -- Prepare testing begins ...

9/17/2012 2:45:39 PM -- Attaching databases ...

9/17/2012 2:45:39 PM -- Prepare testing ends.

9/17/2012 2:45:40 PM -- Dispatching transactions begins ...

9/17/2012 2:45:40 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:40 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:48 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:48 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:57 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:57 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:57 PM -- Attaining prerequisites:

9/17/2012 2:50:08 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1451872000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:50:09 PM -- Performance logging ends.

9/18/2012 10:43:19 AM -- JetInterop batch transaction stats: 143687, 144419, 143705, 144042, 143824 and 143704.

9/18/2012 10:43:19 AM -- Dispatching transactions ends.

9/18/2012 10:43:19 AM -- Shutting down databases ...

9/18/2012 10:43:27 AM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)

9/18/2012 10:43:27 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.blg has 495 samples.

9/18/2012 10:43:27 AM -- Creating test report ...

9/18/2012 10:43:33 AM -- Instance2868.1 has 22.5 for I/O Database Reads Average Latency.

9/18/2012 10:43:33 AM -- Instance2868.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.4 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:33 AM -- Instance2868.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.xml has 478 samples queried.
9/18/2012 10:43:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_48.html is saved.
9/18/2012 10:43:35 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:35 AM -- Verifying database checksums …
9/18/2012 10:45:26 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:45:26 AM -- Verifying log checksums …
9/18/2012 10:45:26 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_45_26.evt is saved.
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_45_26.evt is saved.
9/18/2012 10:45:26 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_45_26.xml is saved.
9/18/2012 10:45:26 AM -- Jetstress testing ends.
9/19/2012 5:15:54 PM -- Jetstress testing begins …
9/19/2012 5:15:54 PM -- Prepare testing begins …
9/19/2012 5:16:00 PM -- Attaching databases …
9/19/2012 5:16:00 PM -- Prepare testing ends.
9/19/2012 5:16:00 PM -- Dispatching transactions begins …
9/19/2012 5:16:00 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:16:00 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:16:08 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:16:08 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:16:20 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:16:20 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:16:20 PM -- Attaining prerequisites:

9/19/2012 5:19:22 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458622000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:22 PM -- Performance logging ends.

9/19/2012 8:43:00 PM -- JetInterop batch transaction stats: 35543, 35492, 35274, 35497, 35133 and 35427.

9/19/2012 8:43:01 PM -- Dispatching transactions ends.

9/19/2012 8:43:01 PM -- Shutting down databases ...

9/19/2012 8:43:15 PM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)

9/19/2012 8:43:15 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.blg has 491 samples.

9/19/2012 8:43:15 PM -- Creating test report ...

9/19/2012 8:43:30 PM -- Instance2868.1 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.2 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.2 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.2 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.4 has 17.8 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.6 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:30 PM -- Instance2868.6 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:30 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:30 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:30 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.xml has 478 samples queried.

9/19/2012 8:43:30 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_16_8.html is saved.

9/19/2012 8:43:32 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:32 PM -- Verifying database checksums ...

9/20/2012 3:41:12 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 3:41:12 AM -- Performance logging ends.

9/20/2012 3:41:12 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_30.blg has 834 samples.

9/20/2012 3:41:20 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_30.html is saved.

9/20/2012 3:41:20 AM -- Verifying log checksums …

9/20/2012 3:41:21 AM -- C:\LOG\LOG1 (6 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (7 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (8 log(s) processed) and C:\LOG\LOG6 (6 log(s) processed)

9/20/2012 3:41:21 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_3_41_21.evt is saved.

9/20/2012 3:41:21 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_3_41_21.evt is saved.

9/20/2012 3:41:21 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_3_41_21.xml is saved.

9/20/2012 3:41:21 AM -- Jetstress testing ends.

9/20/2012 2:12:36 PM -- Jetstress testing begins …

9/20/2012 2:12:36 PM -- Prepare testing begins …

9/20/2012 2:12:43 PM -- Attaching databases …

9/20/2012 2:12:43 PM -- Prepare testing ends.

9/20/2012 2:12:43 PM -- Dispatching transactions begins …

9/20/2012 2:12:43 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:43 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:50 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:50 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:13:03 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:13:03 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:13:03 PM -- Attaining prerequisites:

9/20/2012 2:16:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452995000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:16:04 PM -- Performance logging ends.

9/21/2012 7:04:59 PM -- JetInterop batch transaction stats: 304883, 304056, 304640, 304115, 305201 and 304974.

9/21/2012 7:04:59 PM -- Dispatching transactions ends.

9/21/2012 7:04:59 PM -- Shutting down databases …

9/21/2012 7:05:04 PM -- Instance2868.1 (complete), Instance2868.2 (complete), Instance2868.3 (complete), Instance2868.4 (complete), Instance2868.5 (complete) and Instance2868.6 (complete)

9/21/2012 7:05:04 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_50.blg has 5763 samples.

9/21/2012 7:05:04 PM -- Creating test report …

9/21/2012 7:05:54 PM -- Instance2868.1 has 17.1 for I/O Database Reads Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.1 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.1 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.2 has 17.6 for I/O Database Reads Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.2 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.2 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.3 has 17.6 for I/O Database Reads Average Latency.

9/21/2012 7:05:54 PM -- Instance2868.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.4 has 17.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.5 has 17.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.6 has 17.6 for I/O Database Reads Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:54 PM -- Instance2868.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:54 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:54 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:54 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_50.xml has 5750 samples queried.

Server 9 - EX05A

Test Summary

Overall Test Result	Pass
Machine Name	EX05A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:07 PM
Test End Time	9/21/2012 7:04:37 PM
Collection Start Time	9/20/2012 2:15:40 PM
Collection End Time	9/21/2012 2:15:31 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_21.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	571.649
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9024480608256
Final Database Size (bytes)	9048760385536
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2488.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2488.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2488.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2488.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2488.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2488.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	18.310	12.142	58.986	36.292	34853.536	35067.030	0.000	7.527	0.000	24.720	0.000	5561.835
Instance2488.2	18.717	11.970	59.075	36.355	34771.564	35102.694	0.000	7.527	0.000	24.809	0.000	5568.648
Instance2488.3	18.736	11.837	58.736	36.143	34759.700	35094.784	0.000	7.529	0.000	24.690	0.000	5560.677
Instance2488.4	18.725	11.253	59.142	36.426	34791.197	35101.386	0.000	7.519	0.000	24.843	0.000	5568.994
Instance2488.5	18.733	10.876	58.907	36.267	34797.765	35094.728	0.000	7.520	0.000	24.780	0.000	5572.370
Instance2488.6	18.745	10.336	59.004	36.316	34809.858	35095.114	0.000	7.525	0.000	24.728	0.000	5568.587

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2488.1	22.834	261868.745
Instance2488.2	22.614	261876.361
Instance2488.3	22.625	261873.195
Instance2488.4	22.622	261878.932
Instance2488.5	22.649	261872.523
Instance2488.6	22.620	261859.790

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2488.1	0.566	205202.834
Instance2488.2	0.569	207384.997
Instance2488.3	0.566	206687.175
Instance2488.4	0.570	206540.448
Instance2488.5	0.569	206717.527
Instance2488.6	0.567	206772.173

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	18.310	12.142	81.820	36.292	98206.851	35067.030	16.367	7.527	0.566	24.720	205202.834	5561.835
Instance2488.2	18.717	11.970	81.689	36.355	97642.142	35102.694	16.168	7.527	0.569	24.809	207384.997	5568.648
Instance2488.3	18.736	11.837	81.361	36.143	97916.753	35094.784	16.552	7.529	0.566	24.690	206687.175	5560.677
Instance2488.4	18.725	11.253	81.764	36.426	97620.602	35101.386	16.561	7.519	0.570	24.843	206540.448	5568.994
Instance2488.5	18.733	10.876	81.555	36.267	97858.237	35094.728	16.387	7.520	0.569	24.780	206717.527	5572.370
Instance2488.6	18.745	10.336	81.624	36.316	97731.015	35095.114	16.021	7.525	0.567	24.728	206772.173	5568.587

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.918	1.646	7.305
Available MBytes	44495.817	44448.000	44617.000
Free System Page Table Entries	33555096.875	33555089.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34663277.816	34652160.000	34717696.000
Pool Paged Bytes	134519135.483	132583424.000	137822208.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:11 PM -- Jetstress testing begins …

9/14/2012 1:50:11 PM -- Prepare testing begins …

9/14/2012 1:50:18 PM -- Attaching databases …

9/14/2012 1:50:18 PM -- Prepare testing ends.

9/14/2012 1:50:18 PM -- Dispatching transactions begins …

9/14/2012 1:50:18 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:18 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:28 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:28 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:50:40 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:50:40 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:50:40 PM -- Attaining prerequisites:

9/14/2012 1:54:30 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454604000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:54:30 PM -- Performance logging ends.

9/17/2012 9:51:40 AM -- JetInterop batch transaction stats: 654040, 652782, 652772, 655289, 652490 and 655345.

9/17/2012 9:51:40 AM -- Dispatching transactions ends.

9/17/2012 9:51:40 AM -- Shutting down databases …

9/17/2012 9:51:52 AM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/17/2012 9:51:52 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.blg has 494 samples.

9/17/2012 9:51:52 AM -- Creating test report …

9/17/2012 9:52:21 AM -- Instance2488.1 has 18.4 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.1 has 17.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.1 has 17.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.2 has 19.9 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.2 has 21.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.2 has 21.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.3 has 19.4 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.3 has 24.9 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.3 has 24.9 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.4 has 19.9 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.4 has 21.5 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.4 has 21.5 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.5 has 19.9 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.5 has 26.8 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.5 has 26.8 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.6 has 20.1 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.6 has 15.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2488.6 has 15.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:21 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.xml has 478 samples queried.

9/17/2012 9:52:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_28.html is saved.

9/17/2012 9:52:26 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:26 AM -- Verifying database checksums ...

9/17/2012 9:54:40 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:40 AM -- Verifying log checksums ...

9/17/2012 9:54:40 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_40.evt is saved.

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_40.evt is saved.

9/17/2012 9:54:40 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_40.xml is saved.

9/17/2012 9:54:40 AM -- Jetstress testing ends.

9/17/2012 2:45:06 PM -- Jetstress testing begins ...

9/17/2012 2:45:06 PM -- Prepare testing begins ...

9/17/2012 2:45:13 PM -- Attaching databases ...

9/17/2012 2:45:13 PM -- Prepare testing ends.

9/17/2012 2:45:13 PM -- Dispatching transactions begins ...

9/17/2012 2:45:13 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:13 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:21 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:21 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:31 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:31 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:31 PM -- Attaining prerequisites:

9/17/2012 2:49:35 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452311000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:35 PM -- Performance logging ends.

9/18/2012 10:42:56 AM -- JetInterop batch transaction stats: 142387, 142373, 142117, 142182, 142088 and 142351.

9/18/2012 10:42:57 AM -- Dispatching transactions ends.

9/18/2012 10:42:57 AM -- Shutting down databases ...

9/18/2012 10:43:04 AM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/18/2012 10:43:04 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.blg has 495 samples.

9/18/2012 10:43:04 AM -- Creating test report ...

9/18/2012 10:43:12 AM -- Instance2488.1 has 22.1 for I/O Database Reads Average Latency.

9/18/2012 10:43:12 AM -- Instance2488.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 22.6 for I/O Database Reads Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:12 AM -- Instance2488.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:12 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:12 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:12 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.xml has 478 samples queried.
9/18/2012 10:43:12 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_21.html is saved.
9/18/2012 10:43:14 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:14 AM -- Verifying database checksums …
9/18/2012 10:44:51 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:51 AM -- Verifying log checksums …
9/18/2012 10:44:51 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_51.evt is saved.
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_51.evt is saved.
9/18/2012 10:44:52 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_52.xml is saved.
9/18/2012 10:44:52 AM -- Jetstress testing ends.
9/19/2012 5:15:27 PM -- Jetstress testing begins …
9/19/2012 5:15:27 PM -- Prepare testing begins …
9/19/2012 5:15:33 PM -- Attaching databases …
9/19/2012 5:15:33 PM -- Prepare testing ends.
9/19/2012 5:15:33 PM -- Dispatching transactions begins …
9/19/2012 5:15:33 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:33 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:41 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:41 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:53 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:53 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:53 PM -- Attaining prerequisites:

9/19/2012 5:18:44 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452986000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:18:44 PM -- Performance logging ends.

9/19/2012 8:42:33 PM -- JetInterop batch transaction stats: 28407, 28750, 28748, 28587, 28516 and 28596.

9/19/2012 8:42:34 PM -- Dispatching transactions ends.

9/19/2012 8:42:34 PM -- Shutting down databases ...

9/19/2012 8:42:58 PM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/19/2012 8:42:58 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.blg has 490 samples.

9/19/2012 8:42:58 PM -- Creating test report ...

9/19/2012 8:43:09 PM -- Instance2488.1 has 18.1 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.1 has 6.7 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.1 has 6.7 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 6.7 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.2 has 6.7 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.3 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.4 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 18.4 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.5 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 18.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 6.6 for I/O Log Writes Average Latency.

9/19/2012 8:43:09 PM -- Instance2488.6 has 6.6 for I/O Log Reads Average Latency.

9/19/2012 8:43:09 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:09 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:09 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.xml has 478 samples queried.

9/19/2012 8:43:09 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_41.html is saved.

9/19/2012 8:43:11 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:11 PM -- Verifying database checksums ...

9/20/2012 5:59:43 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 5:59:43 AM -- Performance logging ends.

9/20/2012 5:59:43 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_9.blg has 1112 samples.

9/20/2012 5:59:56 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_9.html is saved.

9/20/2012 5:59:56 AM -- Verifying log checksums ...

9/20/2012 5:59:57 AM -- C:\LOG\LOG1 (8 log(s) processed), C:\LOG\LOG2 (8 log(s) processed), C:\LOG\LOG3 (8 log(s) processed), C:\LOG\LOG4 (8 log(s) processed), C:\LOG\LOG5 (7 log(s) processed) and C:\LOG\LOG6 (8 log(s) processed)

9/20/2012 5:59:57 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_5_59_57.evt is saved.

9/20/2012 5:59:57 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_5_59_57.evt is saved.

9/20/2012 5:59:57 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_5_59_57.xml is saved.

9/20/2012 5:59:57 AM -- Jetstress testing ends.

9/20/2012 2:12:07 PM -- Jetstress testing begins ...

9/20/2012 2:12:07 PM -- Prepare testing begins ...

9/20/2012 2:12:14 PM -- Attaching databases ...

9/20/2012 2:12:14 PM -- Prepare testing ends.

9/20/2012 2:12:14 PM -- Dispatching transactions begins ...

9/20/2012 2:12:14 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:14 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:21 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:21 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:33 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:33 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:33 PM -- Attaining prerequisites:

9/20/2012 2:15:40 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1454862000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:40 PM -- Performance logging ends.

9/21/2012 7:04:30 PM -- JetInterop batch transaction stats: 285393, 286213, 285002, 286154, 286087 and 285683.

9/21/2012 7:04:30 PM -- Dispatching transactions ends.

9/21/2012 7:04:30 PM -- Shutting down databases ...

9/21/2012 7:04:37 PM -- Instance2488.1 (complete), Instance2488.2 (complete), Instance2488.3 (complete), Instance2488.4 (complete), Instance2488.5 (complete) and Instance2488.6 (complete)

9/21/2012 7:04:37 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_21.blg has 5763 samples.

9/21/2012 7:04:37 PM -- Creating test report ...

9/21/2012 7:05:28 PM -- Instance2488.1 has 18.3 for I/O Database Reads Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.1 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.1 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.2 has 18.7 for I/O Database Reads Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.2 has 7.5 for I/O Log Writes Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.2 has 7.5 for I/O Log Reads Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.3 has 18.7 for I/O Database Reads Average Latency.

9/21/2012 7:05:28 PM -- Instance2488.3 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.3 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.4 has 18.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.4 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.4 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.5 has 18.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.5 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.5 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.6 has 18.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.6 has 7.5 for I/O Log Writes Average Latency.
9/21/2012 7:05:28 PM -- Instance2488.6 has 7.5 for I/O Log Reads Average Latency.
9/21/2012 7:05:28 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:28 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:28 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_21.xml has 5750 samples queried.

Server 10 – EX05B

Test Summary

Overall Test Result	Pass
Machine Name	EX05B
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:10 PM
Test End Time	9/21/2012 7:04:40 PM
Collection Start Time	9/20/2012 2:15:47 PM
Collection End Time	9/21/2012 2:15:34 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_24.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	608.008
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9026728755200
Final Database Size (bytes)	9052501704704
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2704.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2704.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2704.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2704.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2704.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2704.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.290	11.607	63.021	38.780	34722.953	35064.800	0.000	7.200	0.000	26.286	0.000	5588.636
Instance2704.2	17.736	11.527	62.541	38.452	34601.527	35075.206	0.000	7.196	0.000	26.157	0.000	5577.395
Instance2704.3	17.754	11.351	62.702	38.554	34606.954	35078.888	0.000	7.218	0.000	26.161	0.000	5585.474
Instance2704.4	17.747	10.762	62.829	38.660	34588.683	35072.883	0.000	7.208	0.000	26.207	0.000	5574.917
Instance2704.5	17.754	10.391	62.814	38.641	34567.696	35074.015	0.000	7.214	0.000	26.260	0.000	5596.229
Instance2704.6	17.763	9.868	62.540	38.473	34607.103	35095.796	0.000	7.208	0.000	26.216	0.000	5584.835

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2704.1	23.490	261843.195
Instance2704.2	23.138	261866.131
Instance2704.3	23.117	261865.049
Instance2704.4	23.116	261868.337
Instance2704.5	23.139	261881.473
Instance2704.6	23.142	261868.476

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2704.1	0.606	213410.557
Instance2704.2	0.601	211868.414
Instance2704.3	0.603	213306.697
Instance2704.4	0.602	212277.941
Instance2704.5	0.606	212337.758
Instance2704.6	0.604	213663.954

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.290	11.607	86.512	38.780	96392.520	35064.800	15.882	7.200	0.606	26.286	213410.557	5588.636
Instance2704.2	17.736	11.527	85.679	38.452	95975.612	35075.206	15.743	7.196	0.601	26.157	211868.414	5577.395
Instance2704.3	17.754	11.351	85.818	38.554	95822.663	35078.888	16.105	7.218	0.603	26.161	213306.697	5585.474
Instance2704.4	17.747	10.762	85.946	38.660	95718.908	35072.883	15.963	7.208	0.602	26.207	212277.941	5574.917
Instance2704.5	17.754	10.391	85.953	38.641	95762.435	35074.015	15.882	7.214	0.606	26.260	212337.758	5596.229
Instance2704.6	17.763	9.868	85.682	38.473	95987.493	35095.796	15.959	7.208	0.604	26.216	213663.954	5584.835

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.978	0.850	8.153
Available MBytes	44485.374	44467.000	44618.000
Free System Page Table Entries	33555608.789	33555596.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34745351.656	34664448.000	34803712.000
Pool Paged Bytes	134511389.335	132534272.000	137863168.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:15 PM -- Jetstress testing begins ...
9/14/2012 1:50:16 PM -- Prepare testing begins ...
9/14/2012 1:50:23 PM -- Attaching databases ...
9/14/2012 1:50:23 PM -- Prepare testing ends.
9/14/2012 1:50:23 PM -- Dispatching transactions begins ...
9/14/2012 1:50:23 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:23 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:36 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:36 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:46 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:46 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:46 PM -- Attaining prerequisites:
9/14/2012 1:58:05 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458070000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:58:05 PM -- Performance logging ends.
9/17/2012 9:51:45 AM -- JetInterop batch transaction stats: 673795, 673943, 674237, 673838, 673704 and 673564.
9/17/2012 9:51:45 AM -- Dispatching transactions ends.
9/17/2012 9:51:45 AM -- Shutting down databases ...
9/17/2012 9:51:56 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)
9/17/2012 9:51:56 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.blg has 508 samples.
9/17/2012 9:51:56 AM -- Creating test report ...
9/17/2012 9:52:21 AM -- Instance2704.1 has 22.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 24.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 23.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.6 has 23.5 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:21 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.xml has 479 samples queried.

9/17/2012 9:52:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.html is saved.

9/17/2012 9:52:27 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:27 AM -- Verifying database checksums ...

9/17/2012 9:54:43 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:43 AM -- Verifying log checksums ...

9/17/2012 9:54:43 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_43.xml is saved.

9/17/2012 9:54:43 AM -- Jetstress testing ends.

9/17/2012 2:45:08 PM -- Jetstress testing begins ...

9/17/2012 2:45:08 PM -- Prepare testing begins ...

9/17/2012 2:45:15 PM -- Attaching databases ...

9/17/2012 2:45:15 PM -- Prepare testing ends.

9/17/2012 2:45:15 PM -- Dispatching transactions begins ...

9/17/2012 2:45:15 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:15 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:34 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:34 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:34 PM -- Attaining prerequisites:

9/17/2012 2:49:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450586000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:49 PM -- Performance logging ends.

9/18/2012 10:43:07 AM -- JetInterop batch transaction stats: 143941, 143618, 143948, 143457, 143738 and 143709.

9/18/2012 10:43:07 AM -- Dispatching transactions ends.

9/18/2012 10:43:07 AM -- Shutting down databases ...

9/18/2012 10:43:23 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/18/2012 10:43:23 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.blg has 496 samples.

9/18/2012 10:43:23 AM -- Creating test report ...

9/18/2012 10:43:41 AM -- Instance2704.1 has 22.4 for I/O Database Reads Average Latency.

9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:41 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.xml has 479 samples queried.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.html is saved.
9/18/2012 10:43:42 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:42 AM -- Verifying database checksums …
9/18/2012 10:44:48 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:49 AM -- Verifying log checksums …
9/18/2012 10:44:49 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_49.xml is saved.
9/18/2012 10:44:49 AM -- Jetstress testing ends.
9/19/2012 5:15:30 PM -- Jetstress testing begins …
9/19/2012 5:15:30 PM -- Prepare testing begins …
9/19/2012 5:15:37 PM -- Attaching databases …
9/19/2012 5:15:37 PM -- Prepare testing ends.
9/19/2012 5:15:37 PM -- Dispatching transactions begins …
9/19/2012 5:15:37 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:37 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:44 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:44 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:56 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:56 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:56 PM -- Attaining prerequisites:

9/19/2012 5:19:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456464000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:03 PM -- Performance logging ends.

9/19/2012 8:42:38 PM -- JetInterop batch transaction stats: 35677, 35625, 35637, 35819, 35781 and 35739.

9/19/2012 8:42:39 PM -- Dispatching transactions ends.

9/19/2012 8:42:39 PM -- Shutting down databases ...

9/19/2012 8:42:54 PM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/19/2012 8:42:54 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.blg has 491 samples.

9/19/2012 8:42:54 PM -- Creating test report ...

9/19/2012 8:43:06 PM -- Instance2704.1 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:06 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:06 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.xml has 478 samples queried.

9/19/2012 8:43:06 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.html is saved.

9/19/2012 8:43:08 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:08 PM -- Verifying database checksums ...

9/20/2012 3:40:39 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 3:40:39 AM -- Performance logging ends.

9/20/2012 3:40:39 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_6.blg has 834 samples.

9/20/2012 3:41:06 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_6.html is saved.

9/20/2012 3:41:06 AM -- Verifying log checksums ...

9/20/2012 3:41:07 AM -- C:\LOG\LOG1 (7 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (9 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (6 log(s) processed) and C:\LOG\LOG6 (7 log(s) processed)

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_3_41_7.evt is saved.

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_3_41_7.evt is saved.

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_3_41_7.xml is saved.

9/20/2012 3:41:07 AM -- Jetstress testing ends.

9/20/2012 2:12:10 PM -- Jetstress testing begins ...

9/20/2012 2:12:10 PM -- Prepare testing begins ...

9/20/2012 2:12:17 PM -- Attaching databases ...

9/20/2012 2:12:17 PM -- Prepare testing ends.

9/20/2012 2:12:17 PM -- Dispatching transactions begins ...

9/20/2012 2:12:17 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:17 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:36 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:36 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:36 PM -- Attaining prerequisites:

9/20/2012 2:15:47 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1455079000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:47 PM -- Performance logging ends.

9/21/2012 7:04:34 PM -- JetInterop batch transaction stats: 303578, 302342, 302842, 303081, 303178 and 302729.

9/21/2012 7:04:34 PM -- Dispatching transactions ends.

9/21/2012 7:04:34 PM -- Shutting down databases ...

9/21/2012 7:04:40 PM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/21/2012 7:04:40 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_24.blg has 5763 samples.

9/21/2012 7:04:40 PM -- Creating test report ...

9/21/2012 7:05:38 PM -- Instance2704.1 has 17.3 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.1 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.1 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 17.7 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.3 has 17.8 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 17.8 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 17.8 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:38 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:38 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_24.xml has 5750 samples queried.

Server 11 – EX06A

Test Summary

Overall Test Result	Pass
Machine Name	EX06A
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:13 PM
Test End Time	9/21/2012 7:04:44 PM
Collection Start Time	9/20/2012 2:15:43 PM
Collection End Time	9/21/2012 2:15:38 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_28.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	576.532
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9024816152576
Final Database Size (bytes)	9049288867840
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2704.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2704.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2704.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2704.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2704.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2704.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.290	11.607	63.021	38.780	34722.953	35064.800	0.000	7.200	0.000	26.286	0.000	5588.636
Instance2704.2	17.736	11.527	62.541	38.452	34601.527	35075.206	0.000	7.196	0.000	26.157	0.000	5577.395
Instance2704.3	17.754	11.351	62.702	38.554	34606.954	35078.888	0.000	7.218	0.000	26.161	0.000	5585.474
Instance2704.4	17.747	10.762	62.829	38.660	34588.683	35072.883	0.000	7.208	0.000	26.207	0.000	5574.917
Instance2704.5	17.754	10.391	62.814	38.641	34567.696	35074.015	0.000	7.214	0.000	26.260	0.000	5596.229
Instance2704.6	17.763	9.868	62.540	38.473	34607.103	35095.796	0.000	7.208	0.000	26.216	0.000	5584.835

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2704.1	23.490	261843.195
Instance2704.2	23.138	261866.131
Instance2704.3	23.117	261865.049
Instance2704.4	23.116	261868.337
Instance2704.5	23.139	261881.473
Instance2704.6	23.142	261868.476

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2704.1	0.606	213410.557
Instance2704.2	0.601	211868.414
Instance2704.3	0.603	213306.697
Instance2704.4	0.602	212277.941
Instance2704.5	0.606	212337.758
Instance2704.6	0.604	213663.954

Dell Compellent Storage Center SC8000 50,000 Mailbox Exchange 2010 Resiliency Storage Solution – Virtualized with VMWare ESXi 5.0

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	17.290	11.607	86.512	38.780	96392.520	35064.800	15.882	7.200	0.606	26.286	213410.557	5588.636
Instance2704.2	17.736	11.527	85.679	38.452	95975.612	35075.206	15.743	7.196	0.601	26.157	211868.414	5577.395
Instance2704.3	17.754	11.351	85.818	38.554	95822.663	35078.888	16.105	7.218	0.603	26.161	213306.697	5585.474
Instance2704.4	17.747	10.762	85.946	38.660	95718.908	35072.883	15.963	7.208	0.602	26.207	212277.941	5574.917
Instance2704.5	17.754	10.391	85.953	38.641	95762.435	35074.015	15.882	7.214	0.606	26.260	212337.758	5596.229
Instance2704.6	17.763	9.868	85.682	38.473	95987.493	35095.796	15.959	7.208	0.604	26.216	213663.954	5584.835

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.978	0.850	8.153
Available MBytes	44485.374	44467.000	44618.000
Free System Page Table Entries	33555608.789	33555596.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34745351.656	34664448.000	34803712.000
Pool Paged Bytes	134511389.335	132534272.000	137863168.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:15 PM -- Jetstress testing begins …
9/14/2012 1:50:16 PM -- Prepare testing begins …
9/14/2012 1:50:23 PM -- Attaching databases …
9/14/2012 1:50:23 PM -- Prepare testing ends.
9/14/2012 1:50:23 PM -- Dispatching transactions begins …
9/14/2012 1:50:23 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/14/2012 1:50:23 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/14/2012 1:50:36 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/14/2012 1:50:36 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/14/2012 1:50:46 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/14/2012 1:50:46 PM -- Performance logging begins (interval: 15000 ms).
9/14/2012 1:50:46 PM -- Attaining prerequisites:
9/14/2012 1:58:05 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1458070000.0 (lower bound: 1449551000.0, upper bound: none)
9/14/2012 3:58:05 PM -- Performance logging ends.
9/17/2012 9:51:45 AM -- JetInterop batch transaction stats: 673795, 673943, 674237, 673838, 673704 and 673564.
9/17/2012 9:51:45 AM -- Dispatching transactions ends.
9/17/2012 9:51:45 AM -- Shutting down databases …
9/17/2012 9:51:56 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)
9/17/2012 9:51:56 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.blg has 508 samples.
9/17/2012 9:51:56 AM -- Creating test report …
9/17/2012 9:52:21 AM -- Instance2704.1 has 22.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.1 has 11.6 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.2 has 12.8 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 23.1 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.3 has 21.4 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 24.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.4 has 18.9 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 23.8 for I/O Database Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Writes Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.5 has 30.3 for I/O Log Reads Average Latency.
9/17/2012 9:52:21 AM -- Instance2704.6 has 23.5 for I/O Database Reads Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:21 AM -- Instance2704.6 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:21 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:21 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:21 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.xml has 479 samples queried.

9/17/2012 9:52:25 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_36.html is saved.

9/17/2012 9:52:27 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:27 AM -- Verifying database checksums ...

9/17/2012 9:54:43 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:43 AM -- Verifying log checksums ...

9/17/2012 9:54:43 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_43.evt is saved.

9/17/2012 9:54:43 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_43.xml is saved.

9/17/2012 9:54:43 AM -- Jetstress testing ends.

9/17/2012 2:45:08 PM -- Jetstress testing begins ...

9/17/2012 2:45:08 PM -- Prepare testing begins ...

9/17/2012 2:45:15 PM -- Attaching databases ...

9/17/2012 2:45:15 PM -- Prepare testing ends.

9/17/2012 2:45:15 PM -- Dispatching transactions begins ...

9/17/2012 2:45:15 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:15 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:34 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:34 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:34 PM -- Attaining prerequisites:

9/17/2012 2:49:48 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450586000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:49:49 PM -- Performance logging ends.

9/18/2012 10:43:07 AM -- JetInterop batch transaction stats: 143941, 143618, 143948, 143457, 143738 and 143709.

9/18/2012 10:43:07 AM -- Dispatching transactions ends.

9/18/2012 10:43:07 AM -- Shutting down databases ...

9/18/2012 10:43:23 AM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/18/2012 10:43:23 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.blg has 496 samples.

9/18/2012 10:43:23 AM -- Creating test report ...

9/18/2012 10:43:41 AM -- Instance2704.1 has 22.4 for I/O Database Reads Average Latency.

9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.1 has 13.3 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 22.5 for I/O Database Reads Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:41 AM -- Instance2704.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:41 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:41 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.xml has 479 samples queried.
9/18/2012 10:43:41 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_24.html is saved.
9/18/2012 10:43:42 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:42 AM -- Verifying database checksums …
9/18/2012 10:44:48 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:49 AM -- Verifying log checksums …
9/18/2012 10:44:49 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_49.evt is saved.
9/18/2012 10:44:49 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_49.xml is saved.
9/18/2012 10:44:49 AM -- Jetstress testing ends.
9/19/2012 5:15:30 PM -- Jetstress testing begins …
9/19/2012 5:15:30 PM -- Prepare testing begins …
9/19/2012 5:15:37 PM -- Attaching databases …
9/19/2012 5:15:37 PM -- Prepare testing ends.
9/19/2012 5:15:37 PM -- Dispatching transactions begins …
9/19/2012 5:15:37 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:37 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:44 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:44 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:15:56 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:15:56 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:15:56 PM -- Attaining prerequisites:

9/19/2012 5:19:03 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456464000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:03 PM -- Performance logging ends.

9/19/2012 8:42:38 PM -- JetInterop batch transaction stats: 35677, 35625, 35637, 35819, 35781 and 35739.

9/19/2012 8:42:39 PM -- Dispatching transactions ends.

9/19/2012 8:42:39 PM -- Shutting down databases ...

9/19/2012 8:42:54 PM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/19/2012 8:42:54 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.blg has 491 samples.

9/19/2012 8:42:54 PM -- Creating test report ...

9/19/2012 8:43:06 PM -- Instance2704.1 has 17.6 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.3 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.4 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 17.9 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 18.0 for I/O Database Reads Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Writes Average Latency.

9/19/2012 8:43:06 PM -- Instance2704.6 has 6.4 for I/O Log Reads Average Latency.

9/19/2012 8:43:06 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:06 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:06 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.xml has 478 samples queried.

9/19/2012 8:43:06 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_44.html is saved.

9/19/2012 8:43:08 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:08 PM -- Verifying database checksums ...

9/20/2012 3:40:39 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)

9/20/2012 3:40:39 AM -- Performance logging ends.

9/20/2012 3:40:39 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_6.blg has 834 samples.

9/20/2012 3:41:06 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_6.html is saved.

9/20/2012 3:41:06 AM -- Verifying log checksums …

9/20/2012 3:41:07 AM -- C:\LOG\LOG1 (7 log(s) processed), C:\LOG\LOG2 (7 log(s) processed), C:\LOG\LOG3 (9 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (6 log(s) processed) and C:\LOG\LOG6 (7 log(s) processed)

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_3_41_7.evt is saved.

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_3_41_7.evt is saved.

9/20/2012 3:41:07 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_3_41_7.xml is saved.

9/20/2012 3:41:07 AM -- Jetstress testing ends.

9/20/2012 2:12:10 PM -- Jetstress testing begins …

9/20/2012 2:12:10 PM -- Prepare testing begins …

9/20/2012 2:12:17 PM -- Attaching databases …

9/20/2012 2:12:17 PM -- Prepare testing ends.

9/20/2012 2:12:17 PM -- Dispatching transactions begins …

9/20/2012 2:12:17 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/20/2012 2:12:17 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/20/2012 2:12:24 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).

9/20/2012 2:12:24 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).

9/20/2012 2:12:36 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/20/2012 2:12:36 PM -- Performance logging begins (interval: 15000 ms).

9/20/2012 2:12:36 PM -- Attaining prerequisites:

9/20/2012 2:15:47 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1455079000.0 (lower bound: 1449551000.0, upper bound: none)

9/21/2012 2:15:47 PM -- Performance logging ends.

9/21/2012 7:04:34 PM -- JetInterop batch transaction stats: 303578, 302342, 302842, 303081, 303178 and 302729.

9/21/2012 7:04:34 PM -- Dispatching transactions ends.

9/21/2012 7:04:34 PM -- Shutting down databases …

9/21/2012 7:04:40 PM -- Instance2704.1 (complete), Instance2704.2 (complete), Instance2704.3 (complete), Instance2704.4 (complete), Instance2704.5 (complete) and Instance2704.6 (complete)

9/21/2012 7:04:40 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_24.blg has 5763 samples.

9/21/2012 7:04:40 PM -- Creating test report …

9/21/2012 7:05:38 PM -- Instance2704.1 has 17.3 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.1 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.1 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 17.7 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 7.2 for I/O Log Writes Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.2 has 7.2 for I/O Log Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.3 has 17.8 for I/O Database Reads Average Latency.

9/21/2012 7:05:38 PM -- Instance2704.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 17.8 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 17.8 for I/O Database Reads Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:38 PM -- Instance2704.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:38 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:38 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:38 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_24.xml has 5750 samples queried.

Server 12 – EX06B

Test Summary

Overall Test Result	Pass
Machine Name	EX06B
Test Description	4166 users/server 12 servers 2GB mailboxes .12 IOPS/user 6 dbs per server 2000GB db volumes 60GB log volumes 2 copies 4 threads/db
Test Start Time	9/20/2012 2:12:16 PM
Test End Time	9/21/2012 7:04:47 PM
Collection Start Time	9/20/2012 2:15:46 PM
Collection End Time	9/21/2012 2:15:38 PM
Jetstress Version	14.01.0180.003
Ese Version	14.02.0283.000
Operating System	Windows Server 2008 R2 Enterprise Service Pack 1 (6.1.7601.65536)
Performance Log	C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_31.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	610.122
Target Transactional I/O per Second	499.92
Initial Database Size (bytes)	9026879750144
Final Database Size (bytes)	9052686254080
Database Files (Count)	6

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%
Run Background Database Maintenance	True
Number of Copies per Database	2

Database Configuration

Instance2512.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2512.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2512.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2512.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2512.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2512.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	16.861	11.946	62.911	38.672	34741.274	35056.721	0.000	7.258	0.000	26.102	0.000	5594.159
Instance2512.2	17.684	11.706	62.813	38.642	34632.324	35080.559	0.000	7.236	0.000	26.227	0.000	5603.997
Instance2512.3	17.692	11.517	62.932	38.724	34647.713	35090.757	0.000	7.240	0.000	26.282	0.000	5600.671
Instance2512.4	17.709	10.890	62.818	38.640	34633.347	35088.284	0.000	7.222	0.000	26.274	0.000	5582.383
Instance2512.5	17.701	10.498	63.107	38.819	34619.062	35070.270	0.000	7.230	0.000	26.272	0.000	5587.238
Instance2512.6	17.710	9.925	63.183	38.862	34607.122	35069.035	0.000	7.225	0.000	26.330	0.000	5570.17

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2512.1	23.882	261874.425
Instance2512.2	23.113	261866.987
Instance2512.3	23.099	261868.884
Instance2512.4	23.098	261864.755
Instance2512.5	23.097	261860.194
Instance2512.6	23.111	261876.774

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance2512.1	0.602	211994.296
Instance2512.2	0.606	213677.568
Instance2512.3	0.607	212867.966
Instance2512.4	0.605	213076.541
Instance2512.5	0.605	212880.626
Instance2512.6	0.605	213555.846

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	16.861	11.946	86.793	38.672	97240.492	35056.721	16.139	7.258	0.602	26.102	211994.296	5594.159
Instance2512.2	17.684	11.706	85.926	38.642	95755.313	35080.559	16.306	7.236	0.606	26.227	213677.568	5603.997
Instance2512.3	17.692	11.517	86.031	38.724	95655.999	35090.757	16.339	7.240	0.607	26.282	212867.966	5600.671
Instance2512.4	17.709	10.890	85.916	38.640	95722.829	35088.284	15.945	7.222	0.605	26.274	213076.541	5582.383
Instance2512.5	17.701	10.498	86.204	38.819	95505.885	35070.270	16.202	7.230	0.605	26.272	212880.626	5587.238
Instance2512.6	17.710	9.925	86.293	38.862	95473.733	35069.035	15.737	7.225	0.605	26.330	213555.846	5570.173

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.016	0.902	8.053
Available MBytes	44455.304	44433.000	44568.000
Free System Page Table Entries	33555608.800	33555593.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35892395.468	35823616.000	35954688.000
Pool Paged Bytes	144676073.788	142807040.000	146034688.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/14/2012 1:50:23 PM -- Jetstress testing begins …

9/14/2012 1:50:24 PM -- Prepare testing begins …

9/14/2012 1:50:31 PM -- Attaching databases …

9/14/2012 1:50:31 PM -- Prepare testing ends.

9/14/2012 1:50:31 PM -- Dispatching transactions begins …

9/14/2012 1:50:32 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/14/2012 1:50:32 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/14/2012 1:50:45 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/14/2012 1:50:45 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/14/2012 1:50:57 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/14/2012 1:50:57 PM -- Performance logging begins (interval: 15000 ms).

9/14/2012 1:50:57 PM -- Attaining prerequisites:

9/14/2012 1:58:16 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1459106000.0 (lower bound: 1449551000.0, upper bound: none)

9/14/2012 3:58:17 PM -- Performance logging ends.

9/17/2012 9:51:55 AM -- JetInterop batch transaction stats: 677579, 676340, 676486, 677319, 676070 and 676386.

9/17/2012 9:51:55 AM -- Dispatching transactions ends.

9/17/2012 9:51:55 AM -- Shutting down databases …

9/17/2012 9:52:03 AM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)

9/17/2012 9:52:03 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.blg has 508 samples.

9/17/2012 9:52:03 AM -- Creating test report …

9/17/2012 9:52:33 AM -- Instance2512.1 has 23.0 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.1 has 11.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.1 has 11.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.2 has 23.8 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.2 has 28.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.2 has 28.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.3 has 25.1 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.3 has 27.8 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.3 has 27.8 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.4 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.4 has 60.7 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.4 has 60.7 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.5 has 23.6 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.5 has 28.4 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.5 has 28.4 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.6 has 24.7 for I/O Database Reads Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.6 has 28.6 for I/O Log Writes Average Latency.

9/17/2012 9:52:33 AM -- Instance2512.6 has 28.6 for I/O Log Reads Average Latency.

9/17/2012 9:52:33 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/17/2012 9:52:33 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/17/2012 9:52:33 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.xml has 479 samples queried.

9/17/2012 9:52:38 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_14_13_50_45.html is saved.

9/17/2012 9:52:40 AM -- Performance logging begins (interval: 30000 ms).

9/17/2012 9:52:40 AM -- Verifying database checksums ...

9/17/2012 9:54:49 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)

9/17/2012 9:54:49 AM -- Verifying log checksums ...

9/17/2012 9:54:49 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_17_9_54_49.evt is saved.

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_17_9_54_49.evt is saved.

9/17/2012 9:54:50 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_17_9_54_50.xml is saved.

9/17/2012 9:54:50 AM -- Jetstress testing ends.

9/17/2012 2:45:13 PM -- Jetstress testing begins ...

9/17/2012 2:45:13 PM -- Prepare testing begins ...

9/17/2012 2:45:20 PM -- Attaching databases ...

9/17/2012 2:45:20 PM -- Prepare testing ends.

9/17/2012 2:45:20 PM -- Dispatching transactions begins ...

9/17/2012 2:45:20 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)

9/17/2012 2:45:20 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/17/2012 2:45:29 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/17/2012 2:45:29 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/17/2012 2:45:41 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/17/2012 2:45:41 PM -- Performance logging begins (interval: 15000 ms).

9/17/2012 2:45:41 PM -- Attaining prerequisites:

9/17/2012 2:50:00 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1452794000.0 (lower bound: 1449551000.0, upper bound: none)

9/17/2012 4:50:00 PM -- Performance logging ends.

9/18/2012 10:43:22 AM -- JetInterop batch transaction stats: 143636, 143475, 143347, 143452, 143791 and 143450.

9/18/2012 10:43:22 AM -- Dispatching transactions ends.

9/18/2012 10:43:22 AM -- Shutting down databases ...

9/18/2012 10:43:35 AM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)

9/18/2012 10:43:35 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.blg has 496 samples.

9/18/2012 10:43:35 AM -- Creating test report ...

9/18/2012 10:43:44 AM -- Instance2512.1 has 22.2 for I/O Database Reads Average Latency.

9/18/2012 10:43:44 AM -- Instance2512.1 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.1 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.2 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 22.8 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.3 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.4 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 22.9 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.5 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 23.0 for I/O Database Reads Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 13.2 for I/O Log Writes Average Latency.
9/18/2012 10:43:44 AM -- Instance2512.6 has 13.2 for I/O Log Reads Average Latency.
9/18/2012 10:43:44 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/18/2012 10:43:44 AM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/18/2012 10:43:44 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.xml has 478 samples queried.
9/18/2012 10:43:45 AM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_17_14_45_29.html is saved.
9/18/2012 10:43:46 AM -- Performance logging begins (interval: 30000 ms).
9/18/2012 10:43:46 AM -- Verifying database checksums …
9/18/2012 10:44:33 AM -- C:\DB\DB1 (0% processed), C:\DB\DB2 (0% processed), C:\DB\DB3 (0% processed), C:\DB\DB4 (0% processed), C:\DB\DB5 (0% processed) and C:\DB\DB6 (0% processed)
9/18/2012 10:44:34 AM -- Verifying log checksums …
9/18/2012 10:44:34 AM -- C:\LOG\LOG1 (0 log(s) processed), C:\LOG\LOG2 (0 log(s) processed), C:\LOG\LOG3 (0 log(s) processed), C:\LOG\LOG4 (0 log(s) processed), C:\LOG\LOG5 (0 log(s) processed) and C:\LOG\LOG6 (0 log(s) processed)
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_18_10_44_34.evt is saved.
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_18_10_44_34.evt is saved.
9/18/2012 10:44:34 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_18_10_44_34.xml is saved.
9/18/2012 10:44:34 AM -- Jetstress testing ends.
9/19/2012 5:15:37 PM -- Jetstress testing begins …
9/19/2012 5:15:37 PM -- Prepare testing begins …
9/19/2012 5:15:44 PM -- Attaching databases …
9/19/2012 5:15:44 PM -- Prepare testing ends.
9/19/2012 5:15:44 PM -- Dispatching transactions begins …
9/19/2012 5:15:44 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/19/2012 5:15:44 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)

9/19/2012 5:15:52 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).

9/19/2012 5:15:52 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).

9/19/2012 5:16:04 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.

9/19/2012 5:16:04 PM -- Performance logging begins (interval: 15000 ms).

9/19/2012 5:16:04 PM -- Attaining prerequisites:

9/19/2012 5:19:08 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1456062000.0 (lower bound: 1449551000.0, upper bound: none)

9/19/2012 7:19:08 PM -- Performance logging ends.

9/19/2012 8:42:46 PM -- JetInterop batch transaction stats: 35699, 35492, 35715, 35939, 35580 and 35803.

9/19/2012 8:42:46 PM -- Dispatching transactions ends.

9/19/2012 8:42:46 PM -- Shutting down databases ...

9/19/2012 8:42:57 PM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)

9/19/2012 8:42:57 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.blg has 491 samples.

9/19/2012 8:42:57 PM -- Creating test report ...

9/19/2012 8:43:02 PM -- Instance2512.1 has 16.7 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.1 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.1 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.2 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.3 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.4 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.5 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 17.5 for I/O Database Reads Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 6.5 for I/O Log Writes Average Latency.

9/19/2012 8:43:02 PM -- Instance2512.6 has 6.5 for I/O Log Reads Average Latency.

9/19/2012 8:43:02 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.

9/19/2012 8:43:02 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.

9/19/2012 8:43:02 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.xml has 478 samples queried.

9/19/2012 8:43:02 PM -- C:\Program Files\Exchange Jetstress\Performance_2012_9_19_17_15_52.html is saved.

9/19/2012 8:43:04 PM -- Performance logging begins (interval: 30000 ms).

9/19/2012 8:43:04 PM -- Verifying database checksums ...

9/20/2012 3:41:03 AM -- C:\DB\DB1 (100% processed), C:\DB\DB2 (100% processed), C:\DB\DB3 (100% processed), C:\DB\DB4 (100% processed), C:\DB\DB5 (100%

processed) and C:\DB\DB6 (100% processed)
9/20/2012 3:41:03 AM -- Performance logging ends.
9/20/2012 3:41:03 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_2.blg has 835 samples.
9/20/2012 3:41:11 AM -- C:\Program Files\Exchange Jetstress\DBChecksum_2012_9_19_20_43_2.html is saved.
9/20/2012 3:41:11 AM -- Verifying log checksums …
9/20/2012 3:41:12 AM -- C:\LOG\LOG1 (7 log(s) processed), C:\LOG\LOG2 (8 log(s) processed), C:\LOG\LOG3 (7 log(s) processed), C:\LOG\LOG4 (7 log(s) processed), C:\LOG\LOG5 (7 log(s) processed) and C:\LOG\LOG6 (7 log(s) processed)
9/20/2012 3:41:12 AM -- C:\Program Files\Exchange Jetstress\Application_2012_9_20_3_41_12.evt is saved.
9/20/2012 3:41:13 AM -- C:\Program Files\Exchange Jetstress\System_2012_9_20_3_41_12.evt is saved.
9/20/2012 3:41:13 AM -- C:\Program Files\Exchange Jetstress\XmlConfig_2012_9_20_3_41_13.xml is saved.
9/20/2012 3:41:13 AM -- Jetstress testing ends.
9/20/2012 2:12:16 PM -- Jetstress testing begins …
9/20/2012 2:12:16 PM -- Prepare testing begins …
9/20/2012 2:12:23 PM -- Attaching databases …
9/20/2012 2:12:23 PM -- Prepare testing ends.
9/20/2012 2:12:23 PM -- Dispatching transactions begins …
9/20/2012 2:12:23 PM -- Database cache settings: (minimum: 192.0 MB, maximum: 1.5 GB)
9/20/2012 2:12:23 PM -- Database flush thresholds: (start: 15.3 MB, stop: 30.7 MB)
9/20/2012 2:12:31 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).
9/20/2012 2:12:31 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).
9/20/2012 2:12:41 PM -- Operation mix: Sessions 4, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/20/2012 2:12:41 PM -- Performance logging begins (interval: 15000 ms).
9/20/2012 2:12:41 PM -- Attaining prerequisites:
9/20/2012 2:15:46 PM -- \MSExchange Database(JetstressWin)\Database Cache Size, Last: 1450553000.0 (lower bound: 1449551000.0, upper bound: none)
9/21/2012 2:15:47 PM -- Performance logging ends.
9/21/2012 7:04:42 PM -- JetInterop batch transaction stats: 303134, 302570, 303865, 302886, 303299 and 303903.
9/21/2012 7:04:42 PM -- Dispatching transactions ends.
9/21/2012 7:04:42 PM -- Shutting down databases …
9/21/2012 7:04:47 PM -- Instance2512.1 (complete), Instance2512.2 (complete), Instance2512.3 (complete), Instance2512.4 (complete), Instance2512.5 (complete) and Instance2512.6 (complete)
9/21/2012 7:04:47 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_31.blg has 5763 samples.
9/21/2012 7:04:47 PM -- Creating test report …
9/21/2012 7:05:35 PM -- Instance2512.1 has 16.9 for I/O Database Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.1 has 7.3 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.1 has 7.3 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.2 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.2 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.2 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.3 has 17.7 for I/O Database Reads Average Latency.

9/21/2012 7:05:35 PM -- Instance2512.3 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.3 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.4 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.4 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.4 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.5 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.5 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.5 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.6 has 17.7 for I/O Database Reads Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.6 has 7.2 for I/O Log Writes Average Latency.
9/21/2012 7:05:35 PM -- Instance2512.6 has 7.2 for I/O Log Reads Average Latency.
9/21/2012 7:05:35 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
9/21/2012 7:05:35 PM -- Test has 0 Database Page Fault Stalls/sec samples higher than 0.
9/21/2012 7:05:35 PM -- C:\Program Files\Exchange Jetstress\Stress_2012_9_20_14_12_31.xml has 5750 samples queried.

Appendix C: Backup Testing

Server 1 – EX01A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance1744.1	1438235.09	09:42:01	41.18
Instance1744.2	1438187.09	10:44:37	37.18
Instance1744.3	1438227.09	10:47:03	37.05
Instance1744.4	1438211.09	10:55:00	36.60
Instance1744.5	1438243.09	10:37:34	37.60
Instance1744.6	1438187.09	10:42:14	37.32

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance1744.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1744.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1744.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1744.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1744.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1744.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	10.027	0.000	164.800	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1744.2	12.750	0.000	148.678	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1744.3	12.894	0.000	147.973	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1744.4	13.709	0.000	145.996	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1744.5	12.665	0.000	150.391	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1744.6	12.704	0.000	149.273	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.781	1.976	5.058
Available MBytes	46107.063	46096.000	46111.000
Free System Page Table Entries	33555605.196	33555603.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34961696.098	34947072.000	35037184.000
Pool Paged Bytes	138796874.373	136847360.000	140206080.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:28:42 AM -- Jetstress testing begins ...
10/1/2012 9:28:42 AM -- Prepare testing begins ...
10/1/2012 9:28:49 AM -- Attaching databases ...
10/1/2012 9:28:49 AM -- Prepare testing ends.
10/1/2012 9:29:00 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:29:00 AM -- Backing up databases ...
10/1/2012 8:24:00 PM -- Performance logging ends.
10/1/2012 8:24:00 PM -- Instance1744.1 (100% processed), Instance1744.2 (100% processed), Instance1744.3 (100% processed), Instance1744.4 (100% processed), Instance1744.5 (100% processed) and Instance1744.6 (100% processed)
10/1/2012 8:24:00 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_28_49.blg has 1308 samples.
10/1/2012 8:24:00 PM -- Creating test report ..

Server 2 – EX01B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2060.1	1439419.09	07:28:46	53.46
Instance2060.2	1439411.09	09:15:55	43.15
Instance2060.3	1439483.09	09:20:01	42.84
Instance2060.4	1439403.09	09:30:45	42.03
Instance2060.5	1439403.09	09:18:08	42.98
Instance2060.6	1439419.09	09:10:08	43.61

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2060.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2060.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2060.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2060.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2060.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2060.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	8.324	0.000	213.950	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2060.2	11.105	0.000	172.598	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2060.3	11.172	0.000	171.183	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2060.4	12.192	0.000	167.941	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2060.5	11.167	0.000	171.965	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2060.6	11.087	0.000	174.450	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.132	1.821	4.080
Available MBytes	46050.968	46043.000	46056.000
Free System Page Table Entries	33555604.758	33555604.000	33555608.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35264997.053	35254272.000	35336192.000
Pool Paged Bytes	139165419.340	136769536.000	139939840.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:58 AM -- Jetstress testing begins …

10/1/2012 9:27:58 AM -- Prepare testing begins …

10/1/2012 9:28:05 AM -- Attaching databases …

10/1/2012 9:28:05 AM -- Prepare testing ends.

10/1/2012 9:28:15 AM -- Performance logging begins (interval: 30000 ms).

10/1/2012 9:28:15 AM -- Backing up databases …

10/1/2012 6:59:01 PM -- Performance logging ends.

10/1/2012 6:59:01 PM -- Instance2060.1 (100% processed), Instance2060.2 (100% processed), Instance2060.3 (100% processed), Instance2060.4 (100% processed), Instance2060.5 (100% processed) and Instance2060.6 (100% processed)

10/1/2012 6:59:01 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_28_5.blg has 1140 samples.

10/1/2012 6:59:01 PM -- Creating test report …

Server 3 – EX02A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2988.1	1438251.09	09:46:05	40.90
Instance2988.2	1438203.09	10:12:30	39.13
Instance2988.3	1438203.09	10:14:45	38.99
Instance2988.4	1438251.09	10:30:56	37.99
Instance2988.5	1438251.09	10:13:00	39.10
Instance2988.6	1438219.09	10:09:59	39.30
Instance2988.6	1438219.09	10:09:59	39.30

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	9.589	0.000	163.634	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.2	12.228	0.000	156.495	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.3	12.357	0.000	155.909	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.4	13.704	0.000	151.705	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.5	12.366	0.000	156.373	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.6	12.230	0.000	157.182	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.904	1.898	5.638
Available MBytes	46064.682	46058.000	46069.000
Free System Page Table Entries	33555094.063	33555093.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35013085.867	34996224.000	35069952.000
Pool Paged Bytes	139205449.956	137019392.000	140353536.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:49 AM -- Jetstress testing begins ...

10/1/2012 9:27:49 AM -- Prepare testing begins ...

10/1/2012 9:27:56 AM -- Attaching databases ...

10/1/2012 9:27:56 AM -- Prepare testing ends.

10/1/2012 9:28:06 AM -- Performance logging begins (interval: 30000 ms).

10/1/2012 9:28:06 AM -- Backing up databases ...

10/1/2012 7:59:02 PM -- Performance logging ends.

10/1/2012 7:59:02 PM -- Instance2988.1 (100% processed), Instance2988.2 (100% processed), Instance2988.3 (100% processed), Instance2988.4 (100% processed), Instance2988.5 (100% processed) and Instance2988.6 (100% processed)

10/1/2012 7:59:03 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_56.blg has 1260 samples.

10/1/2012 7:59:03 PM -- Creating test report ..

Server 4 – EX02B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance1720.1	1439459.09	08:55:04	44.84
Instance1720.2	1439515.09	09:50:15	40.65
Instance1720.3	1439491.09	09:51:26	40.56
Instance1720.4	1439475.09	10:03:20	39.76
Instance1720.5	1439483.09	09:46:19	40.92
Instance1720.6	1439483.09	09:51:11	40.58

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance1720.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1720.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1720.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1720.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1720.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1720.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	8.726	0.000	179.363	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1720.2	11.595	0.000	162.581	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1720.3	11.657	0.000	162.137	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1720.4	12.856	0.000	158.749	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1720.5	11.529	0.000	163.675	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance1720.6	11.605	0.000	162.268	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.883	1.785	4.746
Available MBytes	46039.686	46026.000	46044.000
Free System Page Table Entries	33555609.006	33555608.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35031446.201	35020800.000	35086336.000
Pool Paged Bytes	138986960.837	136691712.000	139821056.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:45 AM -- Prepare testing begins ...
10/1/2012 9:27:52 AM -- Attaching databases ...
10/1/2012 9:27:52 AM -- Prepare testing ends.
10/1/2012 9:28:02 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:28:02 AM -- Backing up databases ...
10/1/2012 7:31:23 PM -- Performance logging ends.
10/1/2012 7:31:23 PM -- Instance1720.1 (100% processed), Instance1720.2 (100% processed), Instance1720.3 (100% processed), Instance1720.4 (100% processed), Instance1720.5 (100% processed) and Instance1720.6 (100% processed)
10/1/2012 7:31:23 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_52.blg has 1205 samples.
10/1/2012 7:31:23 PM -- Creating test report ...

Server 5 – EX03A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance496.1	1438275.09	10:35:26	37.72
Instance496.2	1438227.09	10:54:52	36.60
Instance496.3	1438251.09	10:46:49	37.06
Instance496.4	1438251.09	11:07:33	35.91
Instance496.5	1438235.09	11:01:32	36.23
Instance496.6	1438251.09	10:49:46	36.89

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance496.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance496.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance496.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance496.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance496.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance496.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	12.428	0.000	150.846	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance496.2	12.954	0.000	146.275	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance496.3	12.895	0.000	148.183	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance496.4	13.999	0.000	143.103	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance496.5	13.253	0.000	144.695	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance496.6	12.885	0.000	147.493	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.684	1.845	5.093
Available MBytes	46104.875	46091.000	46109.000
Free System Page Table Entries	33555094.226	33555093.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35000052.669	34988032.000	35074048.000
Pool Paged Bytes	137866197.749	135720960.000	139055104.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:40 AM -- Jetstress testing begins ...
10/1/2012 9:27:40 AM -- Prepare testing begins ...
10/1/2012 9:27:47 AM -- Attaching databases ...
10/1/2012 9:27:47 AM -- Prepare testing ends.
10/1/2012 9:27:57 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:27:57 AM -- Backing up databases ...
10/1/2012 8:35:30 PM -- Performance logging ends.
10/1/2012 8:35:30 PM -- Instance496.1 (100% processed), Instance496.2 (100% processed), Instance496.3 (100% processed), Instance496.4 (100% processed), Instance496.5 (100% processed) and Instance496.6 (100% processed)
10/1/2012 8:35:30 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_47.blg has 1333 samples.
10/1/2012 8:35:30 PM -- Creating test report ...

Server 6 – EX03B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2988.1	1439515.09	09:21:05	42.76
Instance2988.2	1439523.09	09:40:52	41.30
Instance2988.3	1439507.09	09:31:59	41.94
Instance2988.4	1439523.09	09:54:05	40.38
Instance2988.5	1439491.09	09:14:41	43.25
Instance2988.6	1439531.09	09:28:17	42.22

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	10.835	0.000	170.825	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.2	11.900	0.000	165.100	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.3	11.484	0.000	167.689	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.4	13.053	0.000	160.956	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.5	11.154	0.000	173.003	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2988.6	11.431	0.000	168.823	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.018	1.968	4.236
Available MBytes	46053.916	46045.000	46058.000
Free System Page Table Entries	33555093.874	33555093.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34811113.120	34803712.000	34861056.000
Pool Paged Bytes	137669613.005	135372800.000	138629120.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:36 AM -- Jetstress testing begins ...
10/1/2012 9:27:36 AM -- Prepare testing begins ...
10/1/2012 9:27:43 AM -- Attaching databases ...
10/1/2012 9:27:43 AM -- Prepare testing ends.
10/1/2012 9:27:54 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:27:54 AM -- Backing up databases ...
10/1/2012 7:21:59 PM -- Performance logging ends.
10/1/2012 7:21:59 PM -- Instance2988.1 (100% processed), Instance2988.2 (100% processed), Instance2988.3 (100% processed), Instance2988.4 (100% processed), Instance2988.5 (100% processed) and Instance2988.6 (100% processed)
10/1/2012 7:21:59 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_43.blg has 1186 samples.
10/1/2012 7:21:59 PM -- Creating test report ...

Server 7 – EX04A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2296.1	1438547.09	08:54:46	44.83
Instance2296.2	1438603.09	11:05:28	36.03
Instance2296.3	1438555.09	11:02:21	36.20
Instance2296.4	1438539.09	11:04:01	36.11
Instance2296.5	1438499.09	11:03:58	36.11
Instance2296.6	1438515.09	11:05:17	36.04

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2296.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2296.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2296.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2296.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2296.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2296.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	9.164	0.000	179.329	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2296.2	12.966	0.000	143.804	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2296.3	12.864	0.000	144.762	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2296.4	12.921	0.000	144.318	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2296.5	12.904	0.000	144.338	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2296.6	12.940	0.000	144.055	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.759	1.543	5.803
Available MBytes	46052.885	46046.000	46057.000
Free System Page Table Entries	33555606.216	33555605.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35278888.066	35266560.000	35328000.000
Pool Paged Bytes	139251693.508	136957952.000	140529664.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:32 AM -- Jetstress testing begins ...
10/1/2012 9:27:32 AM -- Prepare testing begins ...
10/1/2012 9:27:38 AM -- Attaching databases ...
10/1/2012 9:27:38 AM -- Prepare testing ends.
10/1/2012 9:27:49 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:27:49 AM -- Backing up databases ...
10/1/2012 8:33:17 PM -- Performance logging ends.
10/1/2012 8:33:17 PM -- Instance2296.1 (100% processed), Instance2296.2 (100% processed), Instance2296.3 (100% processed), Instance2296.4 (100% processed), Instance2296.5 (100% processed) and Instance2296.6 (100% processed)
10/1/2012 8:33:17 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_38.blg has 1329 samples.
10/1/2012 8:33:17 PM -- Creating test report ...

Server 8 – EX04B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance3784.1	2005363.59	06:28:14	86.09
Instance3784.2	2005355.59	06:06:45	91.13
Instance3784.3	2005371.59	06:15:15	89.07
Instance3784.4	2005379.59	06:05:29	91.45
Instance3784.5	2005371.59	06:12:46	89.66
Instance2868.6	1439539.09	09:46:27	40.91

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2868.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2868.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2868.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2868.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2868.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2868.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	9.852	0.000	182.500	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2868.2	11.469	0.000	163.723	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2868.3	11.440	0.000	164.183	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2868.4	11.428	0.000	164.676	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2868.5	11.537	0.000	163.063	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2868.6	11.478	0.000	163.435	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.017	1.621	4.218
Available MBytes	46066.597	46059.000	46071.000
Free System Page Table Entries	33555093.843	33555093.000	33555097.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35100216.307	35086336.000	35155968.000
Pool Paged Bytes	137910141.054	135536640.000	138747904.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:28:06 AM -- Prepare testing begins ...
10/1/2012 9:28:13 AM -- Attaching databases ...
10/1/2012 9:28:13 AM -- Prepare testing ends.
10/1/2012 9:28:24 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:28:24 AM -- Backing up databases ...
10/1/2012 7:15:47 PM -- Performance logging ends.
10/1/2012 7:15:47 PM -- Instance2868.1 (100% processed), Instance2868.2 (100% processed), Instance2868.3 (100% processed), Instance2868.4 (100% processed), Instance2868.5 (100% processed) and Instance2868.6 (100% processed)
10/1/2012 7:15:47 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_28_13.blg has 1173 samples.
10/1/2012 7:15:47 PM -- Creating test report ...

Server 9 – EX05A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2488.1	1438219.09	10:08:45	39.38
Instance2488.2	1438235.09	11:18:30	35.33
Instance2488.3	1438219.09	11:18:17	35.34
Instance2488.4	1438291.09	11:16:00	35.46
Instance2488.5	1438251.09	11:15:26	35.49
Instance2488.6	1438307.09	11:17:25	35.39

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2488.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2488.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2488.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2488.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2488.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2488.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	9.797	0.000	157.405	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2488.2	13.308	0.000	140.791	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2488.3	13.276	0.000	141.231	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2488.4	13.249	0.000	141.622	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2488.5	13.238	0.000	141.795	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2488.6	13.271	0.000	141.354	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.651	1.534	5.326
Available MBytes	46063.710	46051.000	46069.000
Free System Page Table Entries	33555094.276	33555092.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35080601.600	35069952.000	35135488.000
Pool Paged Bytes	138763242.084	136757248.000	139935744.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:22 AM -- Jetstress testing begins ...

10/1/2012 9:27:22 AM -- Prepare testing begins ...

10/1/2012 9:27:29 AM -- Attaching databases ...

10/1/2012 9:27:29 AM -- Prepare testing ends.

10/1/2012 9:27:39 AM -- Performance logging begins (interval: 30000 ms).

10/1/2012 9:27:39 AM -- Backing up databases ...

10/1/2012 8:46:10 PM -- Performance logging ends.

10/1/2012 8:46:10 PM -- Instance2488.1 (100% processed), Instance2488.2 (100% processed), Instance2488.3 (100% processed), Instance2488.4 (100% processed), Instance2488.5 (100% processed) and Instance2488.6 (100% processed)

10/1/2012 8:46:10 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_29.blg has 1355 samples.

10/1/2012 8:46:10 PM -- Creating test report ...

Server 10 – EX05B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2704.1	1438883.09	08:06:12	49.32
Instance2704.2	1438843.09	09:46:30	40.89
Instance2704.3	1438819.09	09:47:26	40.82
Instance2704.4	1438827.09	09:47:31	40.82
Instance2704.5	1438883.09	09:48:03	40.78
Instance2704.6	1438835.09	09:47:44	40.80

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2704.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2704.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2704.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2704.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2704.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2704.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

SExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	7.984	0.000	197.337	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2704.2	11.456	0.000	163.511	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2704.3	11.456	0.000	163.227	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2704.4	11.458	0.000	163.159	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2704.5	11.470	0.000	162.610	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2704.6	11.462	0.000	163.077	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	3.025	1.708	5.794
Available MBytes	46042.281	46036.000	46045.000
Free System Page Table Entries	33555605.846	33555604.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35197828.143	35180544.000	35241984.000
Pool Paged Bytes	139074418.698	136617984.000	140034048.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:17 AM -- Jetstress testing begins ...
10/1/2012 9:27:17 AM -- Prepare testing begins ...
10/1/2012 9:27:23 AM -- Attaching databases ...
10/1/2012 9:27:23 AM -- Prepare testing ends.
10/1/2012 9:27:34 AM -- Performance logging begins (interval: 30000 ms).
10/1/2012 9:27:34 AM -- Backing up databases ...
10/1/2012 7:15:37 PM -- Performance logging ends.
10/1/2012 7:15:37 PM -- Instance2704.1 (100% processed), Instance2704.2 (100% processed), Instance2704.3 (100% processed), Instance2704.4 (100% processed), Instance2704.5 (100% processed) and Instance2704.6 (100% processed)
10/1/2012 7:15:37 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_23.blg has 1174 samples.
10/1/2012 7:15:37 PM -- Creating test report ...

Server 11 – EX06A

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2356.1	1438331.09	08:56:29	44.68
Instance2356.2	1438339.09	11:07:54	35.89
Instance2356.3	1438315.09	11:08:37	35.85
Instance2356.4	1438347.09	11:08:31	35.86
Instance2356.5	1438339.09	11:08:41	35.85
Instance2356.6	1438355.09	11:08:54	35.84

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2356.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2356.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2356.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2356.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2356.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2356.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2356.1	9.256	0.000	178.746	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2356.2	12.977	0.000	143.519	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2356.3	12.980	0.000	143.254	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2356.4	12.983	0.000	143.279	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2356.5	12.998	0.000	143.351	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2356.6	13.027	0.000	142.995	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.780	1.578	6.088
Available MBytes	46058.706	46047.000	46065.000
Free System Page Table Entries	33555605.228	33555603.000	33555608.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35229754.251	35217408.000	35311616.000
Pool Paged Bytes	137589514.731	135737344.000	138813440.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:11 AM -- Jetstress testing begins …

10/1/2012 9:27:11 AM -- Prepare testing begins …

10/1/2012 9:27:17 AM -- Attaching databases …

10/1/2012 9:27:17 AM -- Prepare testing ends.

10/1/2012 9:27:28 AM -- Performance logging begins (interval: 30000 ms).

10/1/2012 9:27:28 AM -- Backing up databases …

10/1/2012 8:36:23 PM -- Performance logging ends.

10/1/2012 8:36:23 PM -- Instance2356.1 (100% processed), Instance2356.2 (100% processed), Instance2356.3 (100% processed), Instance2356.4 (100% processed), Instance2356.5 (100% processed) and Instance2356.6 (100% processed)

10/1/2012 8:36:23 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_17.blg has 1336 samples.

10/1/2012 8:36:23 PM -- Creating test report …

Server 12 – EX06B

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2512.1	1438875.09	07:35:48	52.61
Instance2512.2	1438915.09	09:49:29	40.68
Instance2512.3	1438859.09	09:47:02	40.85
Instance2512.4	1438899.09	09:49:59	40.65
Instance2512.5	1438835.09	09:49:05	40.71
Instance2512.6	1438883.09	09:47:28	40.82

Jetstress System Parameters

Thread Count	4 (per database)
Minimum Database Cache	192.0 MB
Maximum Database Cache	1536.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance2512.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2512.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2512.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2512.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2512.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2512.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	7.885	0.000	210.490	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2512.2	11.476	0.000	162.451	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2512.3	11.425	0.000	163.342	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2512.4	11.515	0.000	161.977	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2512.5	11.451	0.000	162.644	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2512.6	11.453	0.000	163.157	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	2.953	1.604	5.889
Available MBytes	46028.397	46017.000	46034.000
Free System Page Table Entries	33555605.859	33555605.000	33555609.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	36284708.075	36274176.000	36339712.000
Pool Paged Bytes	149083464.584	146980864.000	150044672.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/1/2012 9:27:07 AM -- Jetstress testing begins …

10/1/2012 9:27:07 AM -- Prepare testing begins …

10/1/2012 9:27:13 AM -- Attaching databases …

10/1/2012 9:27:13 AM -- Prepare testing ends.

10/1/2012 9:27:24 AM -- Performance logging begins (interval: 30000 ms).

10/1/2012 9:27:24 AM -- Backing up databases …

10/1/2012 7:17:24 PM -- Performance logging ends.

10/1/2012 7:17:24 PM -- Instance2512.1 (100% processed), Instance2512.2 (100% processed), Instance2512.3 (100% processed), Instance2512.4 (100% processed), Instance2512.5 (100% processed) and Instance2512.6 (100% processed)

10/1/2012 7:17:24 PM -- C:\Program Files\Exchange Jetstress\DatabaseBackup_2012_10_1_9_27_13.blg has 1178 samples.

10/1/2012 7:17:24 PM -- Creating test report …

Appendix D: Recovery Testing

Server 1 – EX01A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance1744.1	503	1142.2456876
Instance1744.2	503	1131.6374156
Instance1744.3	503	1123.6812116
Instance1744.4	503	1164.257852
Instance1744.5	501	1096.3649112
Instance1744.6	502	1108.2992172

Database Configuration

Instance1744.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1744.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1744.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1744.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1744.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1744.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	15.066	9.880	407.496	2.643	41084.455	32651.801	17.962	0.000	3.965	0.000	230726.357	0.000
Instance1744.2	14.728	9.961	410.770	2.667	41178.908	32768.000	18.168	0.025	4.001	0.003	232522.585	1.829
Instance1744.3	14.779	10.019	410.580	2.686	41163.990	32768.000	17.818	0.049	4.030	0.003	232466.914	1.842
Instance1744.4	15.090	9.659	390.596	2.593	41064.101	32199.111	17.701	0.036	3.890	0.003	228440.718	1.778
Instance1744.5	14.703	9.831	415.056	2.736	41267.762	32768.000	17.681	0.000	4.105	0.000	232298.567	0.000
Instance1744.6	14.758	9.990	412.792	2.709	41350.643	32768.000	17.726	0.000	4.064	0.000	232472.746	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1744.1	21.090	262034.216
Instance1744.2	23.680	261924.070
Instance1744.3	23.625	261898.079
Instance1744.4	23.718	261938.775
Instance1744.5	23.678	261809.483
Instance1744.6	23.737	261922.818

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1744.1	15.066	9.880	428.586	2.643	51957.190	32651.801	17.962	0.000	3.965	0.000	230726.357	0.000
Instance1744.2	14.728	9.961	434.450	2.667	53210.904	32768.000	18.168	0.025	4.001	0.003	232522.585	1.829
Instance1744.3	14.779	10.019	434.205	2.686	53174.285	32768.000	17.818	0.049	4.030	0.003	232466.914	1.842
Instance1744.4	15.090	9.659	414.314	2.593	53708.526	32199.111	17.701	0.036	3.890	0.003	228440.718	1.778
Instance1744.5	14.703	9.831	438.734	2.736	53170.278	32768.000	17.681	0.000	4.105	0.000	232298.567	0.000
Instance1744.6	14.758	9.990	436.530	2.709	53344.741	32768.000	17.726	0.000	4.064	0.000	232472.746	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.648	0.648	19.058
Available MBytes	44475.882	44447.000	45869.000
Free System Page Table Entries	33555608.066	33555604.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35243883.183	35229696.000	35282944.000
Pool Paged Bytes	141619384.249	141557760.000	141746176.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:39:16 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:39:16 PM -- Recovering databases ...

10/2/2012 4:58:40 PM -- Performance logging ends.

10/2/2012 4:58:40 PM -- Instance1744.1 (1142.2456876), Instance1744.2 (1131.6374156), Instance1744.3 (1123.6812116), Instance1744.4 (1164.257852), Instance1744.5 (1096.3649112) and Instance1744.6 (1108.2992172)

10/2/2012 4:58:41 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_39_11.blg has 289 samples.

10/2/2012 4:58:41 PM -- Creating test report ...

Server 2 – EX01B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2060.1	501	1288.469178
Instance2060.2	512	1272.2982
Instance2060.3	508	1265.67075
Instance2060.4	501	1294.83153
Instance2060.5	510	1256.127222
Instance2060.6	505	1246.053498

Database Configuration

Instance2060.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2060.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2060.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2060.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2060.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2060.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	15.526	10.436	361.110	2.332	40409.087	32768.000	17.876	0.026	3.498	0.002	232611.905	1.605
Instance2060.2	15.293	10.453	370.643	2.414	40453.398	32663.975	18.361	0.029	3.620	0.002	230826.036	1.625
Instance2060.3	15.398	10.490	367.538	2.405	40425.923	32768.000	18.717	0.000	3.608	0.000	231668.446	0.000
Instance2060.4	15.708	10.445	358.540	2.315	40427.476	32563.200	18.188	0.000	3.473	0.000	231097.704	0.000
Instance2060.5	15.462	10.335	365.932	2.435	40500.748	32557.273	18.585	0.028	3.653	0.002	230907.820	1.646
Instance2060.6	15.238	10.403	373.088	2.431	40472.961	32661.610	18.109	0.000	3.645	0.000	231704.478	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2060.1	23.267	261969.607
Instance2060.2	23.231	261800.146
Instance2060.3	22.737	261918.939
Instance2060.4	23.325	261999.005
Instance2060.5	22.809	261820.672
Instance2060.6	23.233	262042.655

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2060.1	15.526	10.436	384.377	2.332	53820.516	32768.000	17.876	0.026	3.498	0.002	232611.905	1.605
Instance2060.2	15.293	10.453	393.875	2.414	53508.666	32663.975	18.361	0.029	3.620	0.002	230826.036	1.625
Instance2060.3	15.398	10.490	390.275	2.405	53329.646	32768.000	18.717	0.000	3.608	0.000	231668.446	0.000
Instance2060.4	15.708	10.445	381.865	2.315	53961.291	32563.200	18.188	0.000	3.473	0.000	231097.704	0.000
Instance2060.5	15.462	10.335	388.741	2.435	53486.221	32557.273	18.585	0.028	3.653	0.002	230907.820	1.646
Instance2060.6	15.238	10.403	396.322	2.431	53461.823	32661.610	18.109	0.000	3.645	0.000	231704.478	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.105	1.124	14.408
Available MBytes	44424.692	44398.000	45823.000
Free System Page Table Entries	33555608.000	33555605.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35354757.981	35348480.000	35385344.000
Pool Paged Bytes	140494127.053	140455936.000	140673024.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:39:35 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:39:35 PM -- Recovering databases ...

10/2/2012 5:01:10 PM -- Performance logging ends.

10/2/2012 5:01:10 PM -- Instance2060.1 (1288.469178), Instance2060.2 (1272.2982), Instance2060.3 (1265.67075), Instance2060.4 (1294.83153), Instance2060.5 (1256.127222) and Instance2060.6 (1246.053498)

10/2/2012 5:01:11 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_39_31.blg has 321 samples.

10/2/2012 5:01:11 PM -- Creating test report ...

Server 3 – EX02A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2988.1	519	1265.514394
Instance2988.2	509	1222.0433404
Instance2988.3	510	1226.2844188
Instance2988.4	509	1262.86372
Instance2988.5	501	1220.452936
Instance2988.6	507	1214.6214532

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	15.224	10.407	364.948	2.458	40429.911	32768.000	18.204	0.000	3.686	0.000	231748.745	0.000
Instance2988.2	14.980	10.453	381.832	2.498	40274.977	32768.000	18.327	0.000	3.747	0.000	232486.417	0.000
Instance2988.3	14.969	10.422	382.593	2.494	40328.806	32768.000	17.361	0.000	3.742	0.000	232428.406	0.000
Instance2988.4	15.544	10.319	360.218	2.413	40380.312	32662.974	18.593	0.000	3.619	0.000	231701.887	0.000
Instance2988.5	14.999	10.542	378.545	2.458	40355.822	32768.000	18.698	0.000	3.687	0.000	232316.825	0.000
Instance2988.6	15.027	10.436	377.908	2.499	40365.611	32658.773	18.357	0.000	3.749	0.000	231670.148	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2988.1	23.145	261952.659
Instance2988.2	23.129	261861.255
Instance2988.3	22.944	261949.408
Instance2988.4	21.196	261929.647
Instance2988.5	23.177	261873.467
Instance2988.6	23.159	261895.835

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	15.224	10.407	388.094	2.458	53641.260	32768.000	18.204	0.000	3.686	0.000	231748.745	0.000
Instance2988.2	14.980	10.453	404.961	2.498	52930.548	32768.000	18.327	0.000	3.747	0.000	232486.417	0.000
Instance2988.3	14.969	10.422	405.537	2.494	52867.493	32768.000	17.361	0.000	3.742	0.000	232428.406	0.000
Instance2988.4	15.544	10.319	381.415	2.413	52692.334	32662.974	18.593	0.000	3.619	0.000	231701.887	0.000
Instance2988.5	14.999	10.542	401.722	2.458	53136.248	32768.000	18.698	0.000	3.687	0.000	232316.825	0.000
Instance2988.6	15.027	10.436	401.066	2.499	53157.390	32658.773	18.357	0.000	3.749	0.000	231670.148	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.248	1.501	11.823
Available MBytes	44437.118	44404.000	45819.000
Free System Page Table Entries	33555097.236	33555095.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35075652.484	35069952.000	35094528.000
Pool Paged Bytes	140989798.726	140959744.000	141070336.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:39:41 PM -- Performance logging begins (interval: 4000 ms).
10/2/2012 4:39:41 PM -- Recovering databases ...
10/2/2012 5:00:47 PM -- Performance logging ends.
10/2/2012 5:00:47 PM -- Instance2988.1 (1265.514394), Instance2988.2 (1222.0433404), Instance2988.3 (1226.2844188), Instance2988.4 (1262.86372), Instance2988.5 (1220.452936) and Instance2988.6 (1214.6214532)
10/2/2012 5:00:48 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_39_36.blg has 314 samples.
10/2/2012 5:00:48 PM -- Creating test report ...

Server 4 – EX02B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance1720.1	501	1302.3660196
Instance1720.2	507	1278.775021
Instance1720.3	507	1286.4619756
Instance1720.4	502	1301.0406826
Instance1720.5	508	1278.775021
Instance1720.6	506	1279.3051558

Database Configuration

Instance1720.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance1720.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance1720.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance1720.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance1720.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance1720.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	15.673	10.526	354.976	2.296	40338.202	32768.000	18.430	0.000	3.444	0.000	231059.864	0.000
Instance1720.2	15.529	10.777	359.177	2.373	40341.509	32768.000	18.735	0.000	3.559	0.000	232533.887	0.000
Instance1720.3	15.574	10.583	359.559	2.358	40299.940	32768.000	18.494	0.000	3.537	0.000	230958.139	0.000
Instance1720.4	15.874	10.431	347.991	2.312	40376.550	32564.472	18.975	0.000	3.465	0.000	230821.464	0.000
Instance1720.5	15.457	10.526	360.046	2.382	40285.626	32768.000	18.804	0.000	3.574	0.000	232464.596	0.000
Instance1720.6	15.556	10.638	359.726	2.372	40291.904	32561.262	18.760	0.011	3.562	0.009	230883.474	1.615

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1720.1	22.833	261902.977
Instance1720.2	23.055	261946.562
Instance1720.3	22.542	261956.451
Instance1720.4	23.120	261817.281
Instance1720.5	23.080	261909.085
Instance1720.6	22.947	261861.239

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance1720.1	15.673	10.526	377.808	2.296	53728.325	32768.000	18.430	0.000	3.444	0.000	231059.864	0.000
Instance1720.2	15.529	10.777	382.231	2.373	53707.817	32768.000	18.735	0.000	3.559	0.000	232533.887	0.000
Instance1720.3	15.574	10.583	382.100	2.358	53376.346	32768.000	18.494	0.000	3.537	0.000	230958.139	0.000
Instance1720.4	15.874	10.431	371.110	2.312	54171.984	32564.472	18.975	0.000	3.465	0.000	230821.464	0.000
Instance1720.5	15.457	10.526	383.126	2.382	53636.381	32768.000	18.804	0.000	3.574	0.000	232464.596	0.000
Instance1720.6	15.556	10.638	382.673	2.372	53578.539	32561.262	18.760	0.011	3.562	0.009	230883.474	1.615

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	5.900	3.569	9.692
Available MBytes	44418.916	44389.000	45815.000
Free System Page Table Entries	33555609.037	33555607.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35090026.204	35086336.000	35119104.000
Pool Paged Bytes	140545299.814	140505088.000	140648448.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:13 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:13 PM -- Recovering databases ...

10/2/2012 5:01:55 PM -- Performance logging ends.

10/2/2012 5:01:55 PM -- Instance1720.1 (1302.3660196), Instance1720.2 (1278.775021), Instance1720.3 (1286.4619756), Instance1720.4 (1301.0406826), Instance1720.5 (1278.775021) and Instance1720.6 (1279.3051558)

10/2/2012 5:01:56 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_8.blg has 323 samples.

10/2/2012 5:01:56 PM -- Creating test report ...

Server 5 – EX03A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance496.1	502	1287.3678228
Instance496.2	508	1243.6151523
Instance496.3	502	1230.621935
Instance496.4	508	1278.8824564
Instance496.5	511	1255.0173634
Instance496.6	501	1239.3724691

Database Configuration

Instance496.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance496.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance496.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance496.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance496.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance496.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	15.371	10.631	358.098	2.325	40504.996	32561.912	18.817	0.000	3.488	0.000	230916.234	0.000
Instance496.2	15.122	10.386	370.577	2.449	40253.121	32768.000	18.400	0.024	3.676	0.002	232358.991	1.662
Instance496.3	15.157	10.449	372.656	2.442	40494.904	32444.632	18.349	0.000	3.663	0.000	229444.711	0.000
Instance496.4	15.307	10.551	362.496	2.378	40313.435	32664.304	17.769	0.000	3.566	0.000	231818.813	0.000
Instance496.5	15.188	10.425	366.520	2.438	40484.047	32662.297	18.409	0.000	3.657	0.000	231765.093	0.000
Instance496.6	15.066	10.625	370.904	2.423	40353.936	32768.000	18.124	0.022	3.642	0.010	231738.139	1.668

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance496.1	23.129	261945.288
Instance496.2	23.231	261967.713
Instance496.3	23.033	261844.340
Instance496.4	23.289	261974.297
Instance496.5	22.992	261924.109
Instance496.6	23.210	261969.748

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance496.1	15.371	10.631	381.227	2.325	53939.681	32561.912	18.817	0.000	3.488	0.000	230916.234	0.000
Instance496.2	15.122	10.386	393.808	2.449	53332.359	32768.000	18.400	0.024	3.676	0.002	232358.991	1.662
Instance496.3	15.157	10.449	395.689	2.442	53379.868	32444.632	18.349	0.000	3.663	0.000	229444.711	0.000
Instance496.4	15.307	10.551	385.785	2.378	53694.861	32664.304	17.769	0.000	3.566	0.000	231818.813	0.000
Instance496.5	15.188	10.425	389.512	2.438	53554.934	32662.297	18.409	0.000	3.657	0.000	231765.093	0.000
Instance496.6	15.066	10.625	394.114	2.423	53405.138	32768.000	18.124	0.022	3.642	0.010	231738.139	1.668

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.069	2.184	9.369
Available MBytes	44490.213	44458.000	45877.000
Free System Page Table Entries	33555097.088	33555096.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35022713.179	35016704.000	35041280.000
Pool Paged Bytes	139679609.179	139616256.000	139825152.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:19 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:19 PM -- Recovering databases ...

10/2/2012 5:01:46 PM -- Performance logging ends.

10/2/2012 5:01:46 PM -- Instance496.1 (1287.3678228), Instance496.2 (1243.6151523), Instance496.3 (1230.621935), Instance496.4 (1278.8824564), Instance496.5 (1255.0173634) and Instance496.6 (1239.3724691)

10/2/2012 5:01:47 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_14.blg has 319 samples.

10/2/2012 5:01:47 PM -- Creating test report ...

Server 6 – EX03B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2988.1	513	1313.8856186
Instance2988.2	505	1279.6789853
Instance2988.3	501	1262.1779171
Instance2988.4	511	1314.1507863
Instance2988.5	516	1266.1554326
Instance2988.6	506	1280.4744884

Database Configuration

Instance2988.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2988.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2988.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2988.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2988.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2988.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	15.840	10.383	351.386	2.335	40443.859	32566.351	18.310	0.000	3.502	0.000	231145.118	0.000
Instance2988.2	15.689	10.639	360.588	2.365	40326.371	32664.631	19.197	0.013	3.554	0.005	231004.550	1.615
Instance2988.3	15.600	10.801	361.114	2.375	40237.222	32768.000	19.618	0.000	3.562	0.000	232366.577	0.000
Instance2988.4	15.842	10.428	347.595	2.326	40428.356	32465.526	18.344	0.000	3.488	0.000	228930.956	0.000
Instance2988.5	15.481	10.841	363.925	2.443	40366.644	32663.310	18.755	0.000	3.665	0.000	231811.723	0.000
Instance2988.6	15.540	10.726	360.912	2.365	40301.114	32561.262	18.771	0.000	3.548	0.000	230318.119	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2988.1	22.908	261880.728
Instance2988.2	21.813	261980.844
Instance2988.3	22.242	261890.977
Instance2988.4	23.137	261967.708
Instance2988.5	22.923	261906.689
Instance2988.6	22.945	261894.225

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2988.1	15.840	10.383	374.294	2.335	53996.374	32566.351	18.310	0.000	3.502	0.000	231145.118	0.000
Instance2988.2	15.689	10.639	382.401	2.365	52970.198	32664.631	19.197	0.013	3.554	0.005	231004.550	1.615
Instance2988.3	15.600	10.801	383.357	2.375	53097.649	32768.000	19.618	0.000	3.562	0.000	232366.577	0.000
Instance2988.4	15.842	10.428	370.732	2.326	54254.441	32465.526	18.344	0.000	3.488	0.000	228930.956	0.000
Instance2988.5	15.481	10.841	386.848	2.443	53494.264	32663.310	18.755	0.000	3.665	0.000	231811.723	0.000
Instance2988.6	15.540	10.726	383.857	2.365	53546.859	32561.262	18.771	0.000	3.548	0.000	230318.119	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	5.824	3.476	10.144
Available MBytes	44434.264	44402.000	45824.000
Free System Page Table Entries	33555097.117	33555095.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	34901123.926	34893824.000	34926592.000
Pool Paged Bytes	139346761.816	139309056.000	139427840.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:26 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:26 PM -- Recovering databases ...

10/2/2012 5:02:20 PM -- Performance logging ends.

10/2/2012 5:02:20 PM -- Instance2988.1 (1313.8856186), Instance2988.2 (1279.6789853), Instance2988.3 (1262.1779171), Instance2988.4 (1314.1507863), Instance2988.5 (1266.1554326) and Instance2988.6 (1280.4744884)

10/2/2012 5:02:21 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_20.blg has 326 samples.

10/2/2012 5:02:21 PM -- Creating test report ...

Server 7 – EX04A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2296.1	515	1241.6611128
Instance2296.2	501	1243.7816656
Instance2296.3	508	1245.3720802
Instance2296.4	517	1241.6611128
Instance2296.5	503	1230.2631415
Instance2296.6	507	1236.0946617

Database Configuration

Instance2296.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2296.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2296.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2296.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2296.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2296.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	14.828	10.956	381.221	2.486	40468.573	32661.264	18.639	0.000	3.729	0.000	231781.499	0.000
Instance2296.2	15.007	10.622	373.574	2.412	40335.550	32661.610	18.641	0.000	3.616	0.000	231803.132	0.000
Instance2296.3	14.957	10.721	375.428	2.443	40410.762	32661.610	18.439	0.000	3.666	0.000	231731.583	0.000
Instance2296.4	15.016	10.725	373.245	2.496	40447.015	32661.264	18.209	0.000	3.744	0.000	231630.596	0.000
Instance2296.5	15.047	10.604	370.142	2.452	40334.298	32660.211	18.727	0.000	3.678	0.000	231708.786	0.000
Instance2296.6	15.066	10.899	370.869	2.455	40416.240	32768.000	19.321	0.000	3.683	0.000	232528.382	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2296.1	22.582	261908.024
Instance2296.2	23.170	261907.280
Instance2296.3	23.188	261791.053
Instance2296.4	23.204	261851.574
Instance2296.5	23.185	261898.474
Instance2296.6	23.222	261875.414

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2296.1	14.828	10.956	403.803	2.486	52852.256	32661.264	18.639	0.000	3.729	0.000	231781.499	0.000
Instance2296.2	15.007	10.622	396.744	2.412	53275.555	32661.610	18.641	0.000	3.616	0.000	231803.132	0.000
Instance2296.3	14.957	10.721	398.616	2.443	53288.746	32661.610	18.439	0.000	3.666	0.000	231731.583	0.000
Instance2296.4	15.016	10.725	396.449	2.496	53405.967	32661.264	18.209	0.000	3.744	0.000	231630.596	0.000
Instance2296.5	15.047	10.604	393.327	2.452	53394.591	32660.211	18.727	0.000	3.678	0.000	231708.786	0.000
Instance2296.6	15.066	10.899	394.091	2.455	53465.727	32768.000	19.321	0.000	3.683	0.000	232528.382	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.234	2.576	9.257
Available MBytes	44434.990	44397.000	45821.000
Free System Page Table Entries	33555609.036	33555607.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35337756.168	35332096.000	35368960.000
Pool Paged Bytes	140910485.955	140881920.000	141062144.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:32 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:32 PM -- Recovering databases ...

10/2/2012 5:01:18 PM -- Performance logging ends.

10/2/2012 5:01:18 PM -- Instance2296.1 (1241.6611128), Instance2296.2 (1243.7816656), Instance2296.3 (1245.3720802), Instance2296.4 (1241.6611128), Instance2296.5 (1230.2631415) and Instance2296.6 (1236.0946617)

10/2/2012 5:01:18 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_27.blg has 309 samples.

10/2/2012 5:01:18 PM -- Creating test report ...

Server 8 – EX04B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2868.1	501	1264.1777033
Instance2868.2	511	1292.5515783
Instance2868.3	519	1305.0150195
Instance2868.4	513	1292.2863987
Instance2868.5	506	1288.0435251
Instance2868.6	510	1292.2863987

Database Configuration

Instance2868.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2868.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2868.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2868.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2868.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2868.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	15.432	10.717	367.208	2.373	40257.149	32768.000	18.757	0.000	3.559	0.000	231761.201	0.000
Instance2868.2	15.487	10.563	361.019	2.371	40428.969	32665.600	19.291	0.003	3.557	0.002	230968.744	1.600
Instance2868.3	15.413	10.396	363.424	2.382	40475.711	32666.551	18.128	0.000	3.572	0.000	230887.067	0.000
Instance2868.4	15.492	10.359	361.706	2.381	40364.280	32358.400	18.495	0.005	3.571	0.002	229553.295	1.600
Instance2868.5	15.558	10.525	356.643	2.355	40394.692	32562.558	19.035	0.013	3.533	0.002	230669.826	1.605
Instance2868.6	15.534	10.572	359.884	2.367	40382.005	32665.600	18.520	0.010	3.550	0.002	231832.513	1.600

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2868.1	22.549	261921.030
Instance2868.2	23.050	261954.142
Instance2868.3	23.279	261873.226
Instance2868.4	23.190	261898.000
Instance2868.5	23.112	261948.292
Instance2868.6	23.140	261973.460

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2868.1	15.432	10.717	389.757	2.373	53081.446	32768.000	18.757	0.000	3.559	0.000	231761.201	0.000
Instance2868.2	15.487	10.563	384.069	2.371	53723.783	32665.600	19.291	0.003	3.557	0.002	230968.744	1.600
Instance2868.3	15.413	10.396	386.704	2.382	53803.648	32666.551	18.128	0.000	3.572	0.000	230887.067	0.000
Instance2868.4	15.492	10.359	384.895	2.381	53711.507	32358.400	18.495	0.005	3.571	0.002	229553.295	1.600
Instance2868.5	15.558	10.525	379.755	2.355	53878.528	32562.558	19.035	0.013	3.533	0.002	230669.826	1.605
Instance2868.6	15.534	10.572	383.024	2.367	53769.186	32665.600	18.520	0.010	3.550	0.002	231832.513	1.600

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	5.941	1.801	10.458
Available MBytes	44458.071	44418.000	45839.000
Free System Page Table Entries	33555097.046	33555095.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35162516.543	35155968.000	35188736.000
Pool Paged Bytes	139073738.272	139042816.000	139157504.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:41:19 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:41:19 PM -- Recovering databases ...

10/2/2012 5:03:04 PM -- Performance logging ends.

10/2/2012 5:03:04 PM -- Instance2868.1 (1264.1777033), Instance2868.2 (1292.5515783), Instance2868.3 (1305.0150195), Instance2868.4 (1292.2863987), Instance2868.5 (1288.0435251) and Instance2868.6 (1292.2863987)

10/2/2012 5:03:04 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_41_14.blg has 324 samples.

10/2/2012 5:03:04 PM -- Creating test report ...

Server 9 – EX05A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2488.1	510	1228.3756409
Instance2488.2	501	1254.0959184
Instance2488.3	505	1247.4669809
Instance2488.4	501	1255.6868634
Instance2488.5	506	1256.7474934
Instance2488.6	505	1250.3837134

Database Configuration

Instance2488.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2488.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2488.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2488.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2488.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2488.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.ed

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	15.098	10.745	371.372	2.491	40429.701	32660.211	18.534	0.018	3.737	0.002	231770.884	1.684
Instance2488.2	15.139	10.566	369.247	2.390	40722.295	32345.187	18.591	0.000	3.585	0.000	228797.198	0.000
Instance2488.3	15.201	10.590	367.255	2.427	40450.468	32555.909	18.748	0.015	3.645	0.005	230296.444	1.657
Instance2488.4	15.091	10.732	373.018	2.392	40561.237	32662.637	18.386	0.009	3.588	0.002	231855.723	1.646
Instance2488.5	15.133	10.586	370.515	2.411	40563.089	32662.637	18.185	0.000	3.617	0.000	231833.634	0.000
Instance2488.6	15.238	10.599	366.980	2.417	40726.823	32661.955	18.254	0.000	3.626	0.000	231628.041	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2488.1	22.688	262004.233
Instance2488.2	23.333	261782.962
Instance2488.3	23.412	261823.909
Instance2488.4	23.318	261909.921
Instance2488.5	23.312	261907.053
Instance2488.6	23.295	261882.627

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2488.1	15.098	10.745	394.061	2.491	53186.877	32660.211	18.534	0.018	3.737	0.002	231770.884	1.684
Instance2488.2	15.139	10.566	392.581	2.390	53861.213	32345.187	18.591	0.000	3.585	0.000	228797.198	0.000
Instance2488.3	15.201	10.590	390.667	2.427	53717.036	32555.909	18.748	0.015	3.645	0.005	230296.444	1.657
Instance2488.4	15.091	10.732	396.336	2.392	53584.166	32662.637	18.386	0.009	3.588	0.002	231855.723	1.646
Instance2488.5	15.133	10.586	393.827	2.411	53665.129	32662.637	18.185	0.000	3.617	0.000	231833.634	0.000
Instance2488.6	15.238	10.599	390.275	2.417	53927.150	32661.955	18.254	0.000	3.626	0.000	231628.041	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.061	1.546	9.610
Available MBytes	44456.228	44415.000	45850.000
Free System Page Table Entries	33555097.228	33555095.000	33555099.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35128136.205	35119104.000	35147776.000
Pool Paged Bytes	140555565.949	140529664.000	140636160.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:44 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:44 PM -- Recovering databases ...

10/2/2012 5:01:41 PM -- Performance logging ends.

10/2/2012 5:01:41 PM -- Instance2488.1 (1228.3756409), Instance2488.2 (1254.0959184), Instance2488.3 (1247.4669809), Instance2488.4 (1255.6868634), Instance2488.5 (1256.7474934) and Instance2488.6 (1250.3837134)

10/2/2012 5:01:41 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_39.blg has 312 samples.

10/2/2012 5:01:41 PM -- Creating test report ...

Server 10 – EX05B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2704.1	504	1251.5108892
Instance2704.2	501	1280.948844
Instance2704.3	508	1288.905048
Instance2704.4	512	1285.7225664
Instance2704.5	501	1280.4184304
Instance2704.6	504	1279.8880168

Database Configuration

Instance2704.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2704.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2704.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2704.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2704.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2704.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	15.548	10.836	362.657	2.416	40523.956	32662.297	19.627	0.017	3.628	0.013	231700.488	1.652
Instance2704.2	15.565	10.556	357.746	2.342	40477.123	32664.631	18.615	0.000	3.513	0.000	230936.478	0.000
Instance2704.3	15.476	10.678	361.736	2.360	40507.791	32459.837	17.726	0.000	3.540	0.000	230267.827	0.000
Instance2704.4	15.562	10.704	359.860	2.381	40698.228	32561.912	18.444	0.000	3.572	0.000	231136.752	0.000
Instance2704.5	15.604	10.618	361.265	2.347	40511.337	32664.631	18.604	0.009	3.520	0.002	231735.085	1.615
Instance2704.6	15.604	10.606	357.848	2.363	40526.682	32664.631	18.044	0.006	3.548	0.009	231745.707	1.615

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2704.1	22.297	261941.165
Instance2704.2	23.173	261916.945
Instance2704.3	23.103	261914.414
Instance2704.4	23.139	261893.706
Instance2704.5	23.125	261861.507
Instance2704.6	23.136	261924.464

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2704.1	15.548	10.836	384.954	2.416	53348.745	32662.297	19.627	0.017	3.628	0.013	231700.488	1.652
Instance2704.2	15.565	10.556	380.919	2.342	53948.387	32664.631	18.615	0.000	3.513	0.000	230936.478	0.000
Instance2704.3	15.476	10.678	384.839	2.360	53799.300	32459.837	17.726	0.000	3.540	0.000	230267.827	0.000
Instance2704.4	15.562	10.704	382.999	2.381	54062.031	32561.912	18.444	0.000	3.572	0.000	231136.752	0.000
Instance2704.5	15.604	10.618	384.390	2.347	53828.032	32664.631	18.604	0.009	3.520	0.002	231735.085	1.615
Instance2704.6	15.604	10.606	380.984	2.363	53971.247	32664.631	18.044	0.006	3.548	0.009	231745.707	1.615

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	5.909	1.932	10.208
Available MBytes	44434.809	44394.000	45832.000
Free System Page Table Entries	33555609.031	33555605.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35185395.200	35176448.000	35213312.000
Pool Paged Bytes	140324800.000	140283904.000	140406784.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:52 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:52 PM -- Recovering databases ...

10/2/2012 5:02:21 PM -- Performance logging ends.

10/2/2012 5:02:21 PM -- Instance2704.1 (1251.5108892), Instance2704.2 (1280.948844), Instance2704.3 (1288.905048), Instance2704.4 (1285.7225664), Instance2704.5 (1280.4184304) and Instance2704.6 (1279.8880168)

10/2/2012 5:02:21 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_47.blg has 320 samples.

10/2/2012 5:02:21 PM -- Creating test report ...

Server 11 – EX06A

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2356.1	513	1206.3968688
Instance2356.2	507	1248.5470275
Instance2356.3	517	1252.2592563
Instance2356.4	513	1258.0927587
Instance2356.5	516	1253.5850523
Instance2356.6	501	1241.3877291

Database Configuration

Instance2356.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2356.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2356.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2356.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2356.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2356.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2356.1	14.948	10.852	372.892	2.550	40481.867	32548.081	18.738	0.000	3.827	0.000	231022.771	0.000
Instance2356.2	15.128	10.488	373.747	2.432	40606.999	32555.909	18.410	0.000	3.647	0.000	230819.575	0.000
Instance2356.3	15.094	10.610	372.343	2.472	40493.162	32768.000	19.030	0.000	3.708	0.000	232173.421	0.000
Instance2356.4	15.066	10.486	374.148	2.435	40649.497	32662.637	17.900	0.000	3.653	0.000	231793.486	0.000
Instance2356.5	15.094	10.733	375.667	2.462	40677.636	32556.594	17.844	0.000	3.693	0.000	230149.619	0.000
Instance2356.6	15.176	10.616	372.712	2.413	40502.021	32661.264	18.601	0.000	3.620	0.000	231613.987	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2356.1	23.068	261979.971
Instance2356.2	23.468	261897.569
Instance2356.3	23.418	261966.783
Instance2356.4	23.390	261808.078
Instance2356.5	23.406	261924.257
Instance2356.6	23.355	261985.356

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2356.1	14.948	10.852	395.960	2.550	53386.099	32548.081	18.738	0.000	3.827	0.000	231022.771	0.000
Instance2356.2	15.128	10.488	397.214	2.432	53680.934	32555.909	18.410	0.000	3.647	0.000	230819.575	0.000
Instance2356.3	15.094	10.610	395.762	2.472	53598.367	32768.000	19.030	0.000	3.708	0.000	232173.421	0.000
Instance2356.4	15.066	10.486	397.538	2.435	53661.934	32662.637	17.900	0.000	3.653	0.000	231793.486	0.000
Instance2356.5	15.094	10.733	399.072	2.462	53653.707	32556.594	17.844	0.000	3.693	0.000	230149.619	0.000
Instance2356.6	15.176	10.616	396.067	2.413	53562.293	32661.264	18.601	0.000	3.620	0.000	231613.987	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.299	2.125	10.886
Available MBytes	44454.231	44412.000	45860.000
Free System Page Table Entries	33555608.032	33555607.000	33555610.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	35282471.385	35274752.000	35315712.000
Pool Paged Bytes	139515575.795	139481088.000	139628544.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:40:58 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:40:58 PM -- Recovering databases ...

10/2/2012 5:01:56 PM -- Performance logging ends.

10/2/2012 5:01:56 PM -- Instance2356.1 (1206.3968688), Instance2356.2 (1248.5470275), Instance2356.3 (1252.2592563), Instance2356.4 (1258.0927587), Instance2356.5 (1253.5850523) and Instance2356.6 (1241.3877291)

10/2/2012 5:01:57 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_53.blg has 312 samples.

10/2/2012 5:01:57 PM -- Creating test report ...

Server 12 – EX06B

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance2512.1	511	1234.2724472
Instance2512.2	501	1274.0534672
Instance2512.3	507	1278.8271896
Instance2512.4	504	1279.8880168
Instance2512.5	501	1275.3795012
Instance2512.6	508	1278.8271896

Database Configuration

Instance2512.1	Log Path: C:\LOG\LOG1 Database: C:\DB\DB1\Jetstress001001.edb
Instance2512.2	Log Path: C:\LOG\LOG2 Database: C:\DB\DB2\Jetstress002001.edb
Instance2512.3	Log Path: C:\LOG\LOG3 Database: C:\DB\DB3\Jetstress003001.edb
Instance2512.4	Log Path: C:\LOG\LOG4 Database: C:\DB\DB4\Jetstress004001.edb
Instance2512.5	Log Path: C:\LOG\LOG5 Database: C:\DB\DB5\Jetstress005001.edb
Instance2512.6	Log Path: C:\LOG\LOG6 Database: C:\DB\DB6\Jetstress006001.edb

Transactional I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	15.514	11.142	365.538	2.488	40475.410	32553.128	18.675	0.011	3.732	0.002	230226.800	1.679
Instance2512.2	15.622	10.616	360.957	2.352	40417.470	32663.975	18.149	0.000	3.528	0.000	231561.376	0.000
Instance2512.3	15.578	10.769	361.246	2.373	40580.397	32560.608	18.838	0.000	3.559	0.000	230916.300	0.000
Instance2512.4	15.502	10.738	362.083	2.349	40496.495	32664.304	18.571	0.000	3.524	0.000	230978.802	0.000
Instance2512.5	15.600	10.742	361.658	2.347	40756.754	32559.949	18.052	0.000	3.521	0.000	230811.687	0.000
Instance2512.6	15.572	10.706	363.498	2.373	40663.952	32560.608	18.699	0.000	3.559	0.000	231037.356	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance2512.1	21.425	261851.727
Instance2512.2	23.219	261925.741
Instance2512.3	23.277	261859.846
Instance2512.4	23.272	262009.407
Instance2512.5	23.227	261999.826
Instance2512.6	23.198	261980.568

Total I/O Performance

MSExchange Database ==> Instances	I/O Database Reads Average Latency (msec)	I/O Database Writes Average Latency (msec)	I/O Database Reads/sec	I/O Database Writes/sec	I/O Database Reads Average Bytes	I/O Database Writes Average Bytes	I/O Log Reads Average Latency (msec)	I/O Log Writes Average Latency (msec)	I/O Log Reads/sec	I/O Log Writes/sec	I/O Log Reads Average Bytes	I/O Log Writes Average Bytes
Instance2512.1	15.514	11.142	386.963	2.488	52732.488	32553.128	18.675	0.011	3.732	0.002	230226.800	1.679
Instance2512.2	15.622	10.616	384.177	2.352	53805.276	32663.975	18.149	0.000	3.528	0.000	231561.376	0.000
Instance2512.3	15.578	10.769	384.523	2.373	53975.596	32560.608	18.838	0.000	3.559	0.000	230916.300	0.000
Instance2512.4	15.502	10.738	385.355	2.349	53873.717	32664.304	18.571	0.000	3.524	0.000	230978.802	0.000
Instance2512.5	15.600	10.742	384.885	2.347	54108.459	32559.949	18.052	0.000	3.521	0.000	230811.687	0.000
Instance2512.6	15.572	10.706	386.696	2.373	53940.684	32560.608	18.699	0.000	3.559	0.000	231037.356	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	6.234	2.833	10.919
Available MBytes	44422.120	44379.000	45831.000
Free System Page Table Entries	33555609.025	33555608.000	33555611.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	36312680.984	36306944.000	36339712.000
Pool Paged Bytes	150585692.871	150401024.000	152788992.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

10/2/2012 4:41:04 PM -- Performance logging begins (interval: 4000 ms).

10/2/2012 4:41:04 PM -- Recovering databases ...

10/2/2012 5:02:24 PM -- Performance logging ends.

10/2/2012 5:02:24 PM -- Instance2512.1 (1234.2724472), Instance2512.2 (1274.0534672), Instance2512.3 (1278.8271896), Instance2512.4 (1279.8880168), Instance2512.5 (1275.3795012) and Instance2512.6 (1278.8271896)

10/2/2012 5:02:25 PM -- C:\Program Files\Exchange Jetstress\SoftRecovery_2012_10_2_16_40_58.blg has 317 samples.

10/2/2012 5:02:25 PM -- Creating test report ...