



Dell PowerEdge R730xd 12,500 Mailbox Resiliency Microsoft Exchange 2013 Storage Solution

Tested with ESRP – Storage Version 4.0
Tested Date: September 2014

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1 Overview

This document provides information about Dell's storage solution for Microsoft® Exchange Server. This solution is based on the *Microsoft Exchange Solution Reviewed Program (ESRP) – Storage program v4.0*. For any questions or comments regarding the contents of this document, see [Additional Information](#).

The ESRP – Storage program was developed by Microsoft Corporation to provide a common storage testing framework for vendors to provide storage solutions for Microsoft Exchange Server. For more information about the Microsoft ESRP – Storage program, see <http://technet.microsoft.com/en-us/exchange/ff182054.aspx>.

This technical white paper discusses Dell's solution for 12,500 Exchange mailboxes with 5GB mailbox size supporting up to 150 messages per day in a three-copy DAG. The solution uses the internal storage of the Dell™ PowerEdge R730xd™ server along with the attached storage of the Dell™ Storage MD1400™ server for storing the Exchange mailbox databases and transaction logs.

1.1 Disclaimer

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

2 Features

This technical white paper describes a tested and validated storage solution for a 12,500 mailbox Exchange 2013 site-resilient environment using Database Availability Group (DAG). A DAG is a high-availability (HA) mechanism in Microsoft Exchange 2013 that supports multiple copies (up to 16) of Exchange database. There can be only one active copy of a given Exchange 2013 database at any given time. Mail clients access the active copy, and changes to the active copy are synchronized to the passive copies (including the copies located at remote sites) in the form of transaction logs. All hosts within a DAG are configured to be identical in terms of storage resources for Exchange 2013 databases and logs. The active and passive copies do not share any storage resources and reside on their own dedicated storage resources.

This mailbox resiliency solution includes a single DAG and three copies of each database, spanning two sites: Local and Remote. The local site has both database copies—active and passive—while the remote site has only a passive copy of the database. The tested environment simulates up to 12,500 users with 5GB Mailbox size and 150 messages a day or 0.121 IO operations per second (IOPS) per user including a 20% IO headroom.

In this solution, the PowerEdge R730xd server attached to a Dell Storage MD1400 direct-attached storage (DAS) with 3.5-inch drives is configured for the Mailbox Server role. The 3.5-inch chassis of PowerEdge R730xd server has a distinct configuration mode where four 3.5-inch drives could be placed in the internal hard-drive tray of the chassis with twelve 3.5-inch drives placed in the front of the chassis. Thus, PowerEdge R730xd server provides extra storage compared to PowerEdge R720xd server. At the local site, each PowerEdge R730xd server and its attached storage host one active copy of an Exchange 2013 database and transaction logs and one passive copy of the peer node's databases. Passive copies of databases for the local site are hosted at the remote site. The following are the major features of the server/storage system:

- Capable of hosting up to sixteen 3.5-inch Large Form Factor (LFF) SAS/Nearline (NL) SAS/SATA drives of up to 4 TB¹ including the four drives in the internal hard-drive tray of the chassis, plus two additional 2.5-inch disk drives in the back of the system (The 3.5-inch LFF configuration of the PowerEdge R730xd server is used as part of this solution.); or up to twenty-six 2.5-inch Small Form Factor (SFF) SAS/NL SAS/SATA drives of up to 1.2TB¹ capacity (including the two 2.5-inch back-accessible disk drives) or up to eighteen 1.8-inch hard drives of up to 960GB in addition to eight 3.5-inch Large Form Factor drives
- Host-based RAID options with Dell PowerEdge RAID Controller H730P Mini for internal drives
- Host-based RAID options with Dell PowerEdge RAID Controller H830 for external drives

The Dell Storage MD1400 used here as an expansion for the PowerEdge R730xd with the PERC H830 HostRAID adapter with 3.5-inch SAS HDDs.

¹ This information is accurate as of the date written.

3 Solution Components

The solution employs Dell PowerEdge R730xd server/storage attached to Dell Storage MD1400 combination building blocks, which are capable of meeting the high performance requirements of messaging deployments. The solution is for up to 12,500 mailboxes of size 5GB each. The following subsections describe the hardware components that are part of this Exchange solution:

Figure 1 Dell PowerEdge R730xd 3.5-inch Server



3.1 Dell PowerEdge R730xd Server

Dell PowerEdge R730xd is a 2-socket, 2U, rack server with highly expandable memory, dense storage capacity and impressive I/O capabilities. PowerEdge R730xd server can readily handle data-intensive applications that require large storage capacity and I/O performance, such as email. It delivers the performance and availability required for mission-critical email and is a great hardware building block for midsize or large businesses.

The internal RAID controller enables a range of RAID levels for improved storage reliability. Following are the major features of the server or storage system:

- Intel® Xeon® processor E5-2600 product family
- Dual processor sockets
- With 24 slots, up to 768GB of Memory for RDIMMS and 1536GB for LRDIMMs
- Up to 64TB Maximum Raw Internal Storage
- Choice of chassis configuration with sixteen 3.5-inch LFF disk drives, twenty-four 2.5-inch SFF disk drives or eighteen 1.8-inch disk drives along with eight 3.5-inch LFF disk drives
- Front loading drive bays plus two 2.5-inch SFF back-accessible drives
- Integrated RAID support through PERC S130, H330, PERC H730, PERC H730P & External JBOD RAID support through PERC H830
- Six PCIe 3.0 expansion slots
- Choice of NIC technologies
- Dell OpenManage™ Essentials and Dell Management Console, Dell OpenManage Power Center and Dell OpenManage Connections

The PowerEdge R730xd chassis configured with the 3.5-inch large form factor drives is used as part of this solution. For more information, see [Dell PowerEdge R730xd Server product page](#).

3.2 Dell Storage MD1400 Features

The Dell Storage MD1400 direct-attached storage (DAS) enclosure with 12 Gb SAS throughput has been specifically engineered to work with the 13th generation of PowerEdge servers using the PowerEdge RAID Controller 9 (PERC9) 12 Gb SAS cards. Scaling capacity behind innovative next-generation servers enables end-to-end 12 Gb solutions with exceptional storage flexibility and IO performance for such applications as High-performance databases, Streaming digital media and Storage-intensive applications.

The Dell Storage MD1400 direct-attached storage offers seamless expansion for PowerEdge servers with the PERC H830 HostRAID adapter. It provides customers the flexibility to expand storage as their business grows. You can easily expand your server capacity with twelve 3.5-inch SAS HDDs in a 2U array and up to 8 arrays with a single PERC H830 Host-RAID adapter. Table 1 lists the features of the Dell Storage MD1400 direct-attached storage.

Table 1 Dell Storage MD1400 Features

Feature	Specification
Drives	Up to 12 hot-pluggable 3.5" and 2.5" drives (2.5" available with adapter)
Drive Performance and Capacities	3.5" SAS 6 Gb HDD (7.2K): 1TB, 2TB, 4TB 2.5" SAS 6 Gb HDD (7.2K): 500GB 2.5" SAS 6 Gb HDD (10K): 300GB, 600GB, 1.2TB 2.5" SAS 6 Gb HDD (15K): 300GB 2.5" SAS 12 Gb SSD: 200GB, 400GB, 800GB (WI); 400 GB, 800GB, 1.6TB (MU); 800GB, 1.6TB (RI)
Maximum Capacity (per enclosure)	Up to 48TB when using 12 x 4TB 7.2K RPM 3.5" SAS HDDs
Expansion Capabilities	PERC H830 HBA enables expansion to 8 enclosures, PCIe 3.0, 12 Gbps SAS, dual-port, 4 ports per enclosure
Host Connectivity Unified Mode	Unified mode (single path) for daisy chaining of up to 8 enclosures per PERC H830 (4 enclosures per port, single path) Unified mode (recommended redundant path) for daisy chaining up to 4 enclosures per PERC H830 (4 enclosures connected to both ports via redundant path cabling)
Host Connectivity Split-Mode/Dual-Host Access	Split mode with dual Enclosure Management Modules (EEM) providing direct connectivity to drives 0 through 5 and a separate connectivity to drives 6 through 11
Enclosure Management Modules (EMM)	2 EMM provide redundant enclosure management capability
RAID Levels	0, 1, 5, 6, 10, 50 and 60
Service Management	USB mini b connector (for factory use only)
Connectivity per EMM	4 mini-SAS HD connector for connection to the host or expansion

3.3 PowerEdge RAID Controller H730P Mini and H830

PowerEdge RAID Controller (PERC) H730P Mini is used in the PowerEdge R730xd server that hosts the Exchange Server. PERC H730P Mini is the internal host-based RAID Controller cards from the PERC Series 8 family. These PERC cards, built on the LSI SAS-3 3108 dual-core PowerPC RAID-on-Chip (ROC), offer unmatched I/O performance for databases, applications, and streaming digital media environments.

Table 2 and Table 3 show the technical specifications of PERC H730P Mini and PERC H830. For more information, see [Dell PowerEdge RAID Controller product page](#).

Table 2 Dell PowerEdge RAID Controller H730P Mini Technical Specifications

Feature	Specification
Solution	Eight port internal SATA+SAS solution supporting up to 32 hard disk drives (HDDs) and solid-state drives (SSDs)
Physical dimension	167.6mm (6.6in) x 64.4mm (2.5-inch) (MD2 low profile)
Connectors	Two internal mini-SAS HD SFF8643
Device support	Up to 32 SAS or SATA devices
Host bus type	8-lane, PCI Express 3.0 compliant
Data transfer rate	Up to 12 Gb/s per port
SAS controller	LSISAS3108 dual-core PowerPC ROC
Cache size	2 GB
RAID management	Dell OpenManage Storage Services & Additional management through UEFI (HII) & CEM
Optional SSD optimization	Dell FastPath™ software: delivers high passive performance on SSD arrays

Table 3 Dell PowerEdge RAID Controller H830 Technical Specifications

Feature	Specification
Solution	Eight-port external SAS solution for performance-hungry external storage environments

Physical dimension	167.6 mm (6.6 in) x 64.4 mm (2.5 in) (MD2 low profile)
Connectors	Two internal HD mini-SAS SFF8644
Device support	Up to 32 SAS or SATA devices
Host bus type	8-lane, PCI Express 3.0 compliant
Data transfer rate	Up to 12 Gbps per port
SAS controller	LSI SAS 3108 1200MT/s PowerPC 476 dual-core 12Gbps ROC
Cache memory	2GB 1866MT/s DDR3 SDRAM
RAID management	Dell OpenManage Storage Services & Additional management through UEFI (HII) & CEM
Optional SSD optimization	Dell FastPath™ firmware feature: delivers high IOPs performance on SSD arrays

For more information about recommended hardware specifications, see [Section 4.3](#).

4 Solution Description

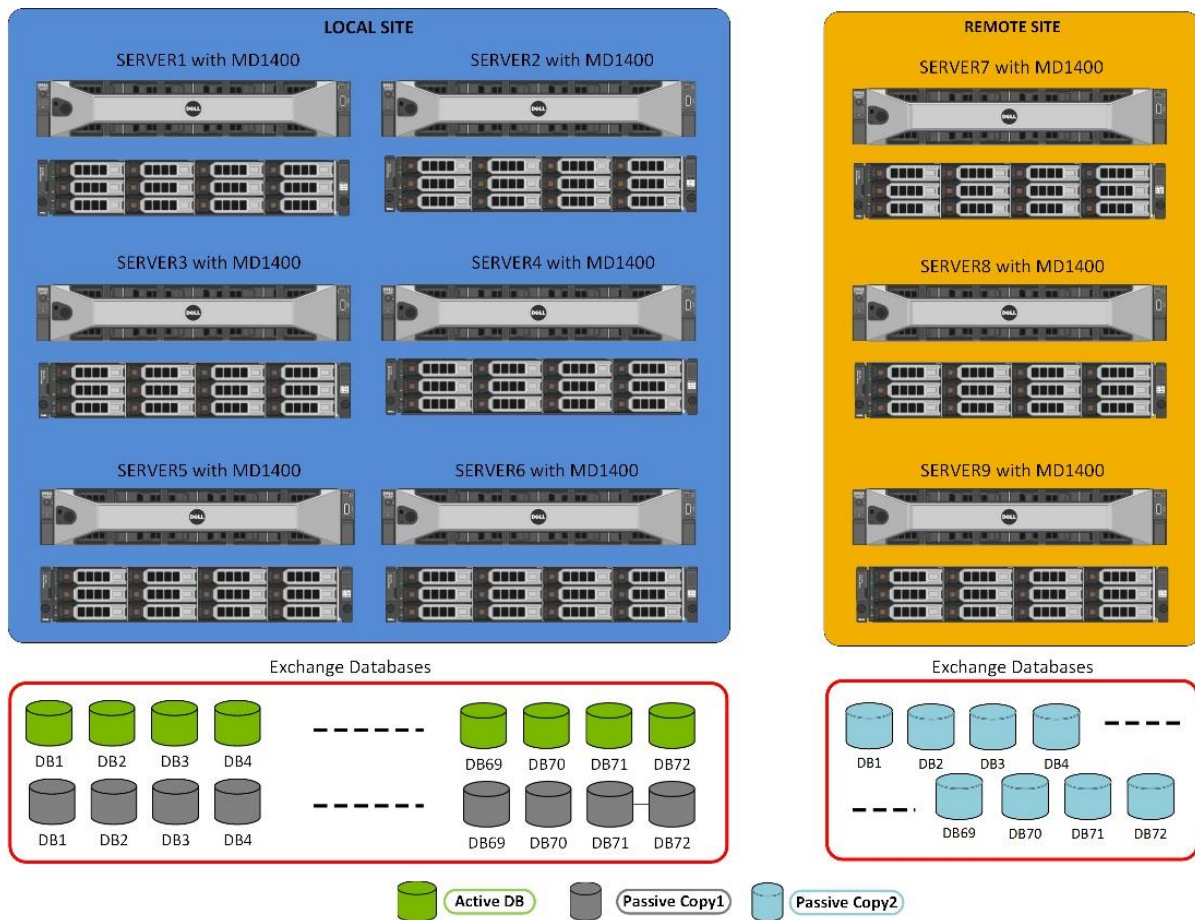
In this solution, the PowerEdge R730xd server attached to Dell Storage MD1400 (both with 3.5-inch LFF drives) is used as the Mailbox Server. PowerEdge R730xd server provides SAS-based internal storage with RAID. The add-on PCIe PERC H830 RAID controller provides access to external storage in Dell Storage MD1400. The solution uses sixteen 3.5-inch LFF 7.2KRPM NL-SAS disks and back-accessible 2.5-inch disks drives in the PowerEdge R730xd server along with the twelve 3.5-inch LFF 7.2KRPM NL-SAS disks in the attached Dell Storage MD1400 direct-attached storage in the following layout:

- Two back-accessible disk drives (in RAID 1 container) for the operating system plus application files and Exchange Transport database
- Fourteen disk drives (in Seven RAID 1 containers) for the Exchange database and its transaction logs
- Ten drives (in Seven RAID 1 containers) in attached Dell Storage MD1400 for the Exchange database and its transaction logs
- Two disk drives marked for Restore LUN
- Two disk drives configured as a Global Hot-spare

The solution has a 3-copy DAG Layout with Exchange Servers distributed between two sites: Local and Remote. Each server node has 12-RAID 1 LUNs hosting one active and one passive database per LUN. Each of these databases hosts 173 users with 5GB mailbox size. Thus, a single server can accommodate 2083 users during normal operating conditions. Six servers placed in the local site along with the storage building blocks provide Exchange Mailbox Services for 12,500 users. The mailbox user profile that was tested had 150 messages per day or 0.121 IOPS per user, which included a 20% IO overhead.

Figure 2 represents the distribution of database copies across the DAG members. It shows a 3-copy DAG site resiliency solution with Exchange Servers hosted at both local and remote sites. The local site has one active and one passive copy of each database. The remote site holds one passive copy of each database. If a server fails in the local site, the databases are activated on the surviving hosts to provide mailbox service continuity. In case of a local site failure, the databases are activated in the remote site to provide the Exchange Server service.

Figure 2 Database Availability Group architectural diagram



4.1 Failure and Recovery Scenarios

Figure 2 shows the logical diagram of the solution on the local site and remote site. There are a total of six servers on the local site and three servers on the remote site. A single server failure on the local site activates the passive copies of the impacted databases. If there is a complete site failure, then the remote passive copies get activated, and the users connect to their databases on the remote site. This is shown in Figure 3. The condition considered and simulated here is a worst-case failure wherein the local site is completely unavailable and all the databases are activated on the remote site. Thus, each of the hosts is designed in a way that any three servers are capable of holding the entire load. Each server is capable of handling the load for 4,166 users. Therefore, with three servers, all 12,500 users can be managed without compromising on the performance.

Figure 3 With all four Servers being unavailable in the Local Site

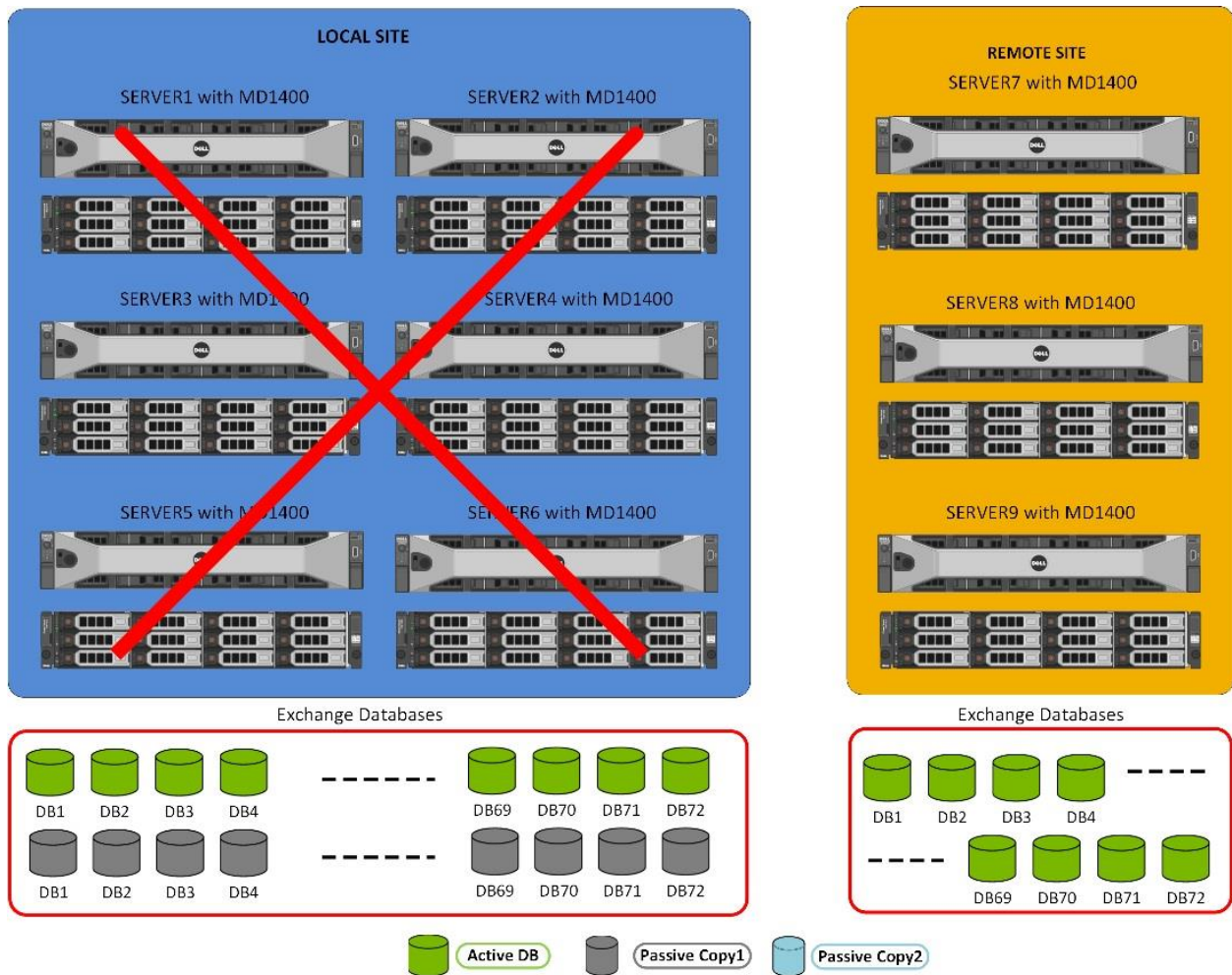


Figure 4 represents the database distribution across servers. The [Microsoft Exchange 2013 Server Role Requirements Calculator](#) can be used to derive the database distribution including the active and passive copies across servers located both in local and remote sites. The database distribution follows a particular pattern to ensure that, if a server fails, the passive copies are activated on the remaining host such that the load on each of the host machines is evenly distributed.

Figure 4 Database/Transaction Log Layout across servers in DAG

LOCAL SITE								REMOTE SITE		
Database Name	Active Server	Server1	Server2	Server3	Server4	Server5	Server6	Server7	Server8	Server9
DB1	Server1	1								
DB2	Server2		1	2						
DB3	Server3			1	2					
DB4	Server4				1	2				
DB5	Server5					1	2			
DB6	Server6	2					1			
DB7	Server1	1		2						
DB8	Server2		1		2					
DB9	Server3			1		2				
DB10	Server4				1		2			
DB11	Server5	2				1				
DB12	Server6		2				1			
DB13	Server1	1			2					
DB14	Server2		1			2				
DB15	Server3			1			2			
DB16	Server4	2			1					
DB17	Server5		2			1				
DB18	Server6			2			1			
DB19	Server1	1				2				
DB20	Server2		1				2			
DB21	Server3	2		1						
DB22	Server4		2		1					
DB23	Server5			2		1				
DB24	Server6				2		1			
DB25	Server1	1					2			
DB26	Server2	2	1							
DB27	Server3		2	1						
DB28	Server4			2	1					
DB29	Server5				2	1				
DB30	Server6					2	1			
DB31	Server1	1	2							
DB32	Server2		1	2						
DB33	Server3			1	2					
DB34	Server4				1	2				
DB35	Server5					1	2			
DB36	Server6	2					1			
DB37	Server1	1		2						
DB38	Server2		1		2					
DB39	Server3			1		2				
DB40	Server4				1		2			
DB41	Server5	2				1				
DB42	Server6		2				1			
DB43	Server1	1			2					
DB44	Server2		1			2				
DB45	Server3			1			2			
DB46	Server4	2			1					
DB47	Server5		2			1				
DB48	Server6			2			1			
DB49	Server1	1				2				
DB50	Server2		1				2			
DB51	Server3	2		1						
DB52	Server4		2		1					
DB53	Server5			2		1				
DB54	Server6				2		1			
DB55	Server1	1					2			
DB56	Server2	2	1							
DB57	Server3		2	1						
DB58	Server4			2	1					
DB59	Server5				2	1				
DB60	Server6					2	1			
DB61	Server1	1	2							
DB62	Server2		1	2						
DB63	Server3			1	2					
DB64	Server4				1	2				
DB65	Server5					1	2			
DB66	Server6	2					1			
DB67	Server1	1		2						
DB68	Server2		1		2					
DB69	Server3			1		2				
DB70	Server4				1		2			
DB71	Server5	2				1				
DB72	Server6		2				1			
1				2				3		
Active Copy				Local Passive Copy				Remote Passive Copy		

4.2 Storage Sizing

The storage sizing process includes the type of RAID, type of disk drives and number of disk drives both from capacity and IOPS perspective. Selecting the right storage is crucial to achieving a balance between cost and performance. The storage design also depends on the actual size of the mailbox on the disk drive, content indexing space, and log space required.

[Microsoft Exchange 2013 Server Role Requirements Calculator](#) can be used to derive the required IOPS for a particular user profile. Figure 5 shows the Mailbox Calculator output for 12,500 users with 150 messages per day profile. The recommended IOPS per server is 503. Microsoft Exchange Jetstress tools verify if the storage subsystem meets the targeted IOPS requirement. For more information, see [Section 5](#).

Figure 5 Recommended IOPS from the Microsoft Exchange 2013 Server Role Requirements Calculator

Host IO and Throughput Requirements	/ Database	/ Server	/ DAG	/ Environment
Total Database Required IOPS	21	502	1507	1507
Total Log Required IOPS	5	111	332	332
Database Read I/O Percentage	60%	--	--	--
Background Database Maintenance Throughput Requirements	1.0 MB/s	24 MB/s	72 MB/s	72 MB/s

4.3 Recommended Hardware Configuration

Based on the solution requirements described in the earlier sections, Table 4, Table 5 and Table 6 provides more information about the server and storage configuration. The firmware and driver versions are also provided for the tested solution.

Table 4 Exchange Server Configuration

Microsoft Exchange Server System	Dell PowerEdge R730xd Server with 3.5" HDD Chassis
CPU	2 x Intel Xeon E5-2660 v3 processor with 10-cores
Memory	Up to 192 GB DDR4
NIC	Broadcom NetXtreme II
RAID Controllers	<p>Dell PowerEdge RAID Controller H730P Mini</p> <p>Firmware version: 25.2.1.0037 Storport Driver Version 6.3.9600.16384 Driver version 6.602.07.00</p> <p>Dell PowerEdge RAID Controller H830P</p> <p>Firmware version: 25.2.1.0037 Storport Driver Version 6.3.9600.16384 Driver version 6.602.07.00</p>

Internal Disks	2 x 1.2 TB SAS 2.5-inch 10K RPM disk drives (Operating System and Application)
----------------	--

Table 5 Storage Subsystem configuration (PowerEdge R730xd server storage)

Storage System	Dell PowerEdge R730xd Internal 3.5-inch drives
Disks	16 x 4 TB 7.2K RPM NL-SAS 3.5-inch disk: <ul style="list-style-type: none"> • 14 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive in 7 x RAID 1 (for DB and Log) • 1 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive (for Restore LUN) • 1 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive (for Global Hot-spare)
RAID Controller	Dell PowerEdge RAID Controller H730P Mini (Firmware version: 25.2.1.0037)

Table 6 Storage Subsystem configuration (Dell Storage MD1400 storage)

Storage System	Dell Storage MD1400 3.5-inch drives
Disks	12 x 4 TB 7.2K RPM NL-SAS 3.5-inch disk: <ul style="list-style-type: none"> • 10 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive in 5 x RAID 1 (for DB and Log) • 1 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive (for Restore LUN) • 1 x 4 TB 7.2K RPM NL-SAS 3.5-inch drive (for Global Hot-spare)
RAID Controller	Dell PowerEdge RAID Controller H830 (Firmware version: 25.2.1.0037)

5 Targeted Customer Profile

This solution is intended for midsize to large organizations hosting up to 12,500 Exchange 2013 mailboxes. The configuration used for testing was as follows:

- Number of mailboxes: 12,500
- Number of sites: 2 (Local & Remote)
- Number of servers in each site: 6 in Local and 3 in Remote
- User IO profile: 150 messages sent and received or 0.121 IOPS per mailbox (This includes 20% IO overhead factor.)
- 5 GB Mailbox quota per mailbox
- 24x7 Background Database Maintenance enabled
- Database Availability Group (DAG) for Mailbox Resiliency (3 copies simulated--1, 2 Passive)

5.1 Tested User Profile

The tested user profile had 0.121 IOPS per user with a 5 GB mailbox size. This equates to 150 messages (sent or received) per mailbox per day and accounts for an additional 20% I/O overhead. Additional applications such as certain mobile messaging applications can increase the IOPS profile of a user by three or four times.

5.2 Tested Deployment

The tested deployment simulated a failure scenario where up to six members of the local site were completely unavailable and the passive copies on the surviving DAG members at the remote site were activated to provide mailbox service continuity. Therefore, the IOPS simulated 4166 mailboxes on the same Exchange 2013 Server. The target IOPS for the given profile was 503. The achieved IOPS was 1400—much higher than the target—and the solution still maintained read and write latencies well within the recommended thresholds. The following tables summarize the testing environment:

Table 7 Simulated Exchange Configuration

Feature	Specification
Number of Exchange mailboxes simulated	12,500 (at 5 GB mailbox size each)
Number of Database Availability Groups (DAGs)	1
Number of Sites	2 (Local and Remote)

Feature	Specification
Number of servers/DAG	9 (6 Local and 3 Remote) (3 Tested)
Number of active mailboxes/server	2,083 (during normal operations) & 4,166 (during site failure)
Number of databases/server	24 (12 active, 12 passive)
Number of copies/database	3 (2 in Local and 1 in remote site)
Number of mailboxes/database	173
Simulated profile: IOPS/mailbox	0.121 (150 messages/day) This includes 20% IO overhead factor
Database/Log LUN size	3725GB
Number of LUNs per server	12
Number of DBs per LUN	2 (one active, one passive)
Background database maintenance (BDM)	Tested with BDM enabled
Total database size for performance testing	1130GB per DB 26.48TB total
% storage capacity used by Exchange database	26.48 TB / 87.30 TB 30.33%

Table 8 Storage and Server Hardware

Feature	Specification
Storage connectivity (Fiber Channel, SAS, SATA, iSCSI)	SAS
Storage model and OS/firmware revision	Dell PowerEdge R730xd server with PERC H730P Mini attached to internal drives Firmware 25.2.1.0037 Dell Storage MD1400 attached to PERC H830 Firmware 25.2.1.0037
Storage cache	1 GB- PERC H730P Mini 1 GB- PERC H830
Number of storage controllers	1 attached to internal drives 1 attached to external drives in Dell Storage MD1400
Number of storage ports	2 (Two internal mini-SAS HD SFF8643)
Maximum bandwidth of storage connectivity to host	12Gb/s per port
Switch type/model/firmware revision	NA
HBA model and firmware	H730P Mini Firmware 25.2.1.0037 H830 Firmware 25.2.1.0037
Number of HBA's/host	2
Host server type	Dell PowerEdge R730xd 2 x Intel® Xeon® processor 192 GB RAM
Total number of disks tested in solution	Internal to PowerEdge R730xd:42 (14 per server) External connected to MD1400: 30 (10 per server) Total: 72 (24 per Server)
Maximum number of spindles that can be hosted in the storage	16 x 3.5" and 2 x 2.5" per Dell PowerEdge R730xd server 12 x 3.5" per Dell Storage MD1400

Table 9 Storage and Server Software (internal storage)

Feature	Specification
HBA driver	PERC H730P SAS-RAID 6.602.7.0
HBA QueueTarget Setting	N/A
HBA QueueDepth Setting	N/A
Multi-Pathing	N/A
Host OS	Windows Server 2012 R2 Datacenter X64 Edition
ESE.dll file version	15.00.0995.021
Replication solution name/version	N/A

Table 10 Storage and Server Software (external storage)

Feature	Specification
HBA driver	PERC H830 SAS-RAID 6.602.7.0 attached to Dell Storage MD1400
HBA QueueTarget Setting	N/A
HBA QueueDepth Setting	N/A
Multi-Pathing	N/A
Host OS	Windows Server 2012 R2 Datacenter X64 Edition
ESE.dll file version	15.00.0995.021
Replication solution name/version	N/A

Table11 Storage Disk Configuration (Mailbox Store Disks)

Feature	Specification
Disk type, speed and firmware revision	DELL 7.2K 3.5" RPM 4 TB NL-SAS Model – ST4000NM0063
Raw capacity per disk (TB)	4 TB

Feature	Specification
Number of physical disks in test	72 (24 per Server)
Total raw storage capacity (TB)	288 TB(96 TB per Server)
Raid level	RAID 1 pairs
Number of disks per LUN	2
Total formatted capacity	3725 GB per LUN 87.30 TB total
Storage capacity utilization	$87.30/288=30.31\%$ Formatted capacity/Total raw capacity
Database capacity utilization	$26.48 \text{ TB} / 87.30 \text{ TB}=30.33\%$ Database size / Total formatted capacity

5.3 Best Practices

Exchange Server 2007, 2010 and 2013 overcome the memory limitations of earlier Exchange versions by providing support as a 64-bit application. On Windows Server 2012 x64 Edition, about 4 TB of addressable memory is available for kernel mode and user mode applications. Both the application and kernel have sufficient memory for operations, allowing the Extensible Storage Engine (ESE) in Exchange Server 2013 to utilize more memory to buffer data pages. The result is a reduction in the number of I/O, specifically the read operations required to the disk subsystem. The total number of database disk I/O operations for a given user load depends on the available system memory. For a given load, the total database disk I/O operations required per second (IOPS) decreases over a period with increase in system memory. This decrease in database IOPS is primarily caused by a decrease in database reads.

Even with the decrease in database IOPS using larger server memory, it is essential to size the Exchange Storage subsystem accurately to make sure that there are no I/O bottlenecks from an IOPS and disk latency perspective. The disk subsystem should be capable of supporting both the capacity and I/O throughput demands of the application. The following best practices are recommended to improve the I/O subsystem performance:

- For Exchange 2013 database, it is recommended that the size of elements within a RAID stripe be set to 512K for best performance.
- Windows NTFS allocation unit size for Exchange 2013 database partitions should be set to 64K for best performance. If log partitions are separated from the database, the default allocation unit size should be used. While formatting the windows partitions, GUID partition table (GPT) should be used.

- Average database read latencies (Avg. Disk sec/Read) should not exceed 20 ms. Exchange Server 2013 storage latencies are most often related to the number of disk drives available for a given workload. Windows Performance Monitor may be used to monitor Exchange Server 2013 database counters.
- Sharing Exchange 2013 storage resources with other applications may negatively affect the performance of Exchange 2013 deployment. Therefore, sharing the spindles hosting the Exchange Database and log with any other application or operating system is not recommended.

For Exchange 2013 best practices on storage design, see:

[http://technet.microsoft.com/en-us/library/ee832792\(v=exchg.150\).aspx](http://technet.microsoft.com/en-us/library/ee832792(v=exchg.150).aspx)

5.4 Backup Strategy

To protect email data from potential disasters, having a well designed and implemented backup solution is critical. Depending on environmental requirements, different backup strategies may be implemented, such as backup to tape or LAN/SAN-based backup. In this solution, DAG is used to maintain a passive database copy on a separate storage system. This passive copy of the database may be used to back up to tape or disk drive.

The log replay test was used to measure the maximum rate at which the log files can be replayed on the passive copies. This was used to determine the restore times and the database write throughput that can be achieved during a log recovery.

6 Test Result Summary

This section provides a high-level summary of the test data from Microsoft Exchange Jetstress as part of the ESRP requirements and the link to the detailed HTML reports, which are generated by the ESRP testing framework.

6.1 Reliability

Reliability tests run for 24 hours and the goal is to verify if the storage can handle a high I/O load for a long period. After the stress test, both log and database files are analyzed for integrity to make sure that there is no database/log corruption.

The following list provides a summary of errors reported during testing:

- Any errors reported in the saved event log file? No
- Any errors reported during the database and log checksum process? No

6.2 Storage Performance Test Result Report

The storage performance test is designed to exercise the storage with maximum sustainable Exchange I/O for two hours. The test shows how long it takes the storage to respond to an I/O under load. The data here is the sum of all of the logical disks I/O and average of all the logical disks I/O latency in the two hour test duration. The achieved IOPS was around 4000.

As part of the ESRP framework, the Stress Test was also performed. The duration of the test was 24 hours with a target IOPS of 0.121 per user or 503 IOPS per server. The achieved IOPS was around 1400 per server. This was well above the target IOPS. The Stress Test Result Report

6.2.1 Individual Server Metrics

Table 8 shows the sum of I/O across Mailbox databases and the average latency across all databases on a per server basis.

Table 12 Individual Server Metrics
Server 1:

Database I/O	
Target Disk Transfers/sec	504
Database Disks Transfers/sec	1427
Database Disks Reads/sec	991.182
Database Disks Writes/sec	436.146
Average Database Disk Read Latency (ms)	12.01

Database I/O	
Average Database Disk Write Latency (ms)	1.86
Transaction Log I/O	
Log Disks Writes/sec	104.11
Average Log Disk Write Latency (ms)	0.076

Server 2:

Database I/O	
Target Disk Transfers/sec	504
Database Disks Transfers/sec	1492
Database Disks Reads/sec	1008.632
Database Disks Writes/sec	483.384
Average Database Disk Read Latency (ms)	12.41
Average Database Disk Write Latency (ms)	2.29
Transaction Log I/O	
Log Disks Writes/sec	120.373
Average Log Disk Write Latency (ms)	0.130

Server 3:

Database I/O	
Target Disk Transfers/sec	504
Database Disks Transfers/sec	1432
Database Disks Reads/sec	990.733
Database Disks Writes/sec	441.881
Average Database Disk Read Latency (ms)	12.26
Average Database Disk Write Latency (ms)	1.89
Transaction Log I/O	
Log Disks Writes/sec	102.312

Database I/O	
Average Log Disk Write Latency (ms)	0.074

6.2.1 Aggregate Performance across all servers/DAGs Metrics

Table 13 shows the aggregated results of I/O and the average latency across all servers in the solution.

Table 13 Aggregated Performance Metrics across all Servers

Database I/O	
Database Disks Transfers/sec	4351
Database Disks Reads/sec	2990.547
Database Disks Writes/sec	1361.411
Average Database Disk Read Latency (ms)	12.23
Average Database Disk Write Latency (ms)	2.013
Transaction Log I/O	
Log Disks Writes/sec	326.795
Average Log Disk Write Latency (ms)	0.093

6.3 Database Backup/Recovery Performance

There are two test reports in this section. The database backup test measures the sequential read rate of the database files, and the soft recovery test measures the recovery/replay performance (playing transaction logs in to the database).

6.3.1 Database Backup Test Result Report

The test measures the maximum rate at which databases could be backed up through VSS. The following table shows the average rate for a single database file:

Table 14 Database Backup Test Metrics

MB read/sec per database	142.06
MB read/sec total per server	3409.44

6.3.2 Soft Recovery test Result Report

The test measures the maximum rate at which the log files can be played on the passive copies. The following table shows the average rate for 505 log files played in a single storage group. Each log file is 1 MB in size.

Table 15 Soft Recovery Test metrics

Average number of log files played	508
Average time to play one Log file (sec)	2.835

7 Conclusion

This ESRP document presents a tested and validated Exchange solution for 12,500 mailboxes with 5GB mailbox size supporting up to 150 messages per day in a three-copy DAG. The solution uses the PowerEdge R730xd server for the Exchange mailbox server role and uses the internal storage of PowerEdge R730xd server along with the external storage in Dell Storage MD1400 for storing the Exchange mailbox databases and transactional logs.

Testing was carried out as part of the ESRP test framework using Microsoft Exchange Server 2013 Jetstress. The test results showed that the proposed solution is capable of delivering the IOPS and meeting the capacity requirements to support 12,500 mailboxes with the set mailbox profile.

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. However, customers should not quote the data directly for 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 and the tests are not designed to obtain the maximum throughput for a given solution. Rather, the tests focus on obtaining recommendations from vendors for Exchange application. The data presented in this document should not be used for direct comparisons among solutions.

8 Additional Information

1. **Support.dell.com** is focused on meeting customer requirements with proven services.
2. **DellTechCenter.com** is an IT Community where you can connect with Dell Customers and Dell employees for sharing knowledge, best practices and information about Dell products and installations.
3. Referenced or recommended Dell publications:
 - a. [Dell Unified Communications and Collaboration website](#)
 - b. [Dell PowerEdge R730xd](#)
 - c. [Dell Storage MD1400](#)
 - d. [Dell PowerEdge RAID Controller \(PERC\) H730P User Guide](#)

A Performance Test Result Report

A.1 Server1

Microsoft Exchange Jetstress 2013

Performance Test Result Report

Test Summary

Overall Test Result	Pass
Machine Name	EXCH1
Test Description	Exchange Mailbox Profile-Performance Host: exch1 28*4TB 7.2KRPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/20/2014 7:01:36 AM
Test End Time	9/20/2014 11:08:18 AM
Collection Start Time	9/20/2014 7:07:53 AM
Collection End Time	9/20/2014 11:07:44 AM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\28T-4 hrs\Performance 2014 9 20 7 2 26.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	1427.33
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	38434303377408
Final Database Size (bytes)	38441291087872
Database Files (Count)	24

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance5380.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance5380.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance5380.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance5380.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance5380.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance5380.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance5380.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance5380.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance5380.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance5380.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance5380.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance5380.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance5380.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance5380.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance5380.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance5380.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance5380.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance5380.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance5380.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance5380.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance5380.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance5380.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance5380.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance5380.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance5380.1	11.722	2.894	41.242	18.117	33249.969	35606.838	0.000	0.081	0.000	4.326	0.000	20649.842
Instance5380.2	12.833	2.926	41.473	18.381	33242.529	35562.681	0.000	0.080	0.000	4.366	0.000	20617.781
Instance5380.3	13.181	2.605	41.327	18.164	33225.788	35623.543	0.000	0.080	0.000	4.361	0.000	20443.224
Instance5380.4	13.482	2.600	41.367	18.321	33243.086	35597.812	0.000	0.078	0.000	4.386	0.000	20619.802
Instance5380.5	12.533	2.242	41.333	18.226	33226.090	35609.325	0.000	0.082	0.000	4.326	0.000	20692.992
Instance5380.6	13.963	2.238	41.274	18.223	33252.484	35579.327	0.000	0.082	0.000	4.345	0.000	20751.544
Instance5380.7	11.510	1.904	41.474	18.350	33221.225	35541.159	0.000	0.077	0.000	4.372	0.000	20398.245
Instance5380.8	11.702	1.916	41.404	18.131	33203.006	35608.779	0.000	0.076	0.000	4.293	0.000	20593.799
Instance5380.9	11.794	1.550	41.059	18.060	33214.864	35634.340	0.000	0.077	0.000	4.328	0.000	20807.091
Instance5380.10	12.207	1.569	41.164	18.105	33236.070	35646.734	0.000	0.076	0.000	4.372	0.000	20689.705
Instance5380.11	11.746	1.277	41.342	18.070	33253.218	35611.261	0.000	0.079	0.000	4.282	0.000	20728.761
Instance5380.12	12.171	1.309	41.366	18.249	33261.579	35608.701	0.000	0.080	0.000	4.351	0.000	20682.686
Instance5380.13	11.655	1.121	41.243	18.038	33241.324	35604.196	0.000	0.074	0.000	4.326	0.000	20549.201
Instance5380.14	11.980	1.122	41.380	18.276	33272.397	35614.674	0.000	0.079	0.000	4.328	0.000	20842.303
Instance5380.15	11.093	2.080	41.422	18.202	33249.055	35569.198	0.000	0.071	0.000	4.328	0.000	20576.608
Instance5380.16	12.173	2.083	41.194	18.058	33261.145	35644.012	0.000	0.074	0.000	4.318	0.000	20672.306
Instance5380.17	10.970	1.859	41.075	17.940	33274.653	35656.457	0.000	0.072	0.000	4.315	0.000	20825.419
Instance5380.18	12.093	1.888	41.449	18.295	33267.809	35588.257	0.000	0.077	0.000	4.350	0.000	20579.124
Instance5380.19	11.021	1.661	41.274	18.061	33222.550	35608.178	0.000	0.069	0.000	4.326	0.000	20553.966
Instance5380.20	12.097	1.653	41.331	18.234	33241.255	35598.495	0.000	0.074	0.000	4.356	0.000	20561.178
Instance5380.21	10.993	1.550	41.388	18.342	33208.108	35560.841	0.000	0.070	0.000	4.362	0.000	20613.530
Instance5380.22	12.043	1.550	41.185	18.129	33247.862	35624.970	0.000	0.072	0.000	4.319	0.000	20890.000
Instance5380.23	11.075	1.576	41.211	18.057	33266.103	35618.251	0.000	0.071	0.000	4.314	0.000	20831.829
Instance5380.24	12.215	1.581	41.205	18.117	33228.794	35604.103	0.000	0.071	0.000	4.358	0.000	20623.840

Background Database Maintenance I/O Performance		
MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance5380.1	8.867	261868.291
Instance5380.2	8.623	261854.928
Instance5380.3	8.766	261901.842
Instance5380.4	8.801	261861.256
Instance5380.5	8.831	261888.052
Instance5380.6	8.588	261836.935
Instance5380.7	8.879	261845.290
Instance5380.8	8.867	261859.326
Instance5380.9	8.857	261852.217
Instance5380.10	8.851	261881.678
Instance5380.11	8.866	261883.640
Instance5380.12	8.855	261860.224
Instance5380.13	8.876	261878.272
Instance5380.14	8.861	261898.016
Instance5380.15	8.893	261914.575
Instance5380.16	8.691	261847.898
Instance5380.17	8.899	261820.469
Instance5380.18	8.695	261840.115
Instance5380.19	8.890	261875.631
Instance5380.20	8.692	261853.792
Instance5380.21	8.899	261882.180
Instance5380.22	8.703	261822.312
Instance5380.23	8.893	261896.876
Instance5380.24	8.685	261898.813

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance5380.1	0.758	147853.202
Instance5380.2	0.763	148391.929
Instance5380.3	0.758	147636.035
Instance5380.4	0.766	149247.877
Instance5380.5	0.761	147905.398
Instance5380.6	0.763	148645.781
Instance5380.7	0.757	147175.602
Instance5380.8	0.751	146176.442
Instance5380.9	0.765	149156.860
Instance5380.10	0.768	149999.872
Instance5380.11	0.752	146202.540
Instance5380.12	0.762	148365.831
Instance5380.13	0.756	147167.846
Instance5380.14	0.763	148852.362
Instance5380.15	0.756	147128.377
Instance5380.16	0.758	147832.724
Instance5380.17	0.762	148365.831
Instance5380.18	0.758	147418.868
Instance5380.19	0.755	146662.973
Instance5380.20	0.760	147923.386
Instance5380.21	0.763	148391.929
Instance5380.22	0.766	149095.628
Instance5380.23	0.761	147662.133
Instance5380.24	0.762	148148.664

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
Instance5380.1	11.722	2.894	50.109	18.117	73703.729	35606.838	0.900	0.081	0.758	4.326	147853.202	20649.842
Instance5380.2	12.833	2.926	50.095	18.381	72593.547	35562.681	0.973	0.080	0.763	4.366	148391.929	20617.781
Instance5380.3	13.181	2.605	50.094	18.164	73244.076	35623.543	0.925	0.080	0.758	4.361	147636.035	20443.224
Instance5380.4	13.482	2.600	50.168	18.321	73349.836	35597.812	1.019	0.078	0.766	4.386	149247.877	20619.802
Instance5380.5	12.533	2.242	50.164	18.226	73479.411	35609.325	1.736	0.082	0.761	4.326	147905.398	20692.992
Instance5380.6	13.963	2.238	49.862	18.223	72621.323	35579.327	1.684	0.082	0.763	4.345	148645.781	20751.544
Instance5380.7	11.510	1.904	50.354	18.350	73536.420	35541.159	0.825	0.077	0.757	4.372	147175.602	20398.245
Instance5380.8	11.702	1.916	50.271	18.131	73534.125	35608.779	0.774	0.076	0.751	4.293	146176.442	20593.799
Instance5380.9	11.794	1.550	49.917	18.060	73784.538	35634.340	1.398	0.077	0.765	4.328	149156.860	20807.091
Instance5380.10	12.207	1.569	50.014	18.105	73697.146	35646.734	1.331	0.076	0.768	4.372	149999.872	20689.705
Instance5380.11	11.746	1.277	50.209	18.070	73627.210	35611.261	1.075	0.079	0.752	4.282	146202.540	20728.761
Instance5380.12	12.171	1.309	50.221	18.249	73568.699	35608.701	1.049	0.080	0.762	4.351	148365.831	20682.686
Instance5380.13	11.655	1.121	50.118	18.038	73731.827	35604.196	1.028	0.074	0.756	4.326	147167.846	20549.201
Instance5380.14	11.980	1.122	50.241	18.276	73593.978	35614.674	1.035	0.079	0.763	4.328	148852.362	20842.303
Instance5380.15	11.093	2.080	50.315	18.202	73663.699	35569.198	0.520	0.071	0.756	4.328	147128.377	20576.608
Instance5380.16	12.173	2.083	49.885	18.058	73087.752	35644.012	0.590	0.074	0.758	4.318	147832.724	20672.306
Instance5380.17	10.970	1.859	49.973	17.940	73971.324	35656.457	0.625	0.072	0.762	4.315	148365.831	20825.419
Instance5380.18	12.093	1.888	50.144	18.295	72902.475	35588.257	0.578	0.077	0.758	4.350	147418.868	20579.124
Instance5380.19	11.021	1.661	50.164	18.061	73742.360	35608.178	0.543	0.069	0.755	4.326	146662.973	20553.966
Instance5380.20	12.097	1.653	50.023	18.234	72966.982	35598.495	0.537	0.074	0.760	4.356	147923.386	20561.178
Instance5380.21	10.993	1.550	50.286	18.342	73674.137	35560.841	0.558	0.070	0.763	4.362	148391.929	20613.530
Instance5380.22	12.043	1.550	49.889	18.129	73124.551	35624.970	0.493	0.072	0.766	4.319	149095.628	20890.000
Instance5380.23	11.075	1.576	50.104	18.057	73847.168	35618.251	0.581	0.071	0.761	4.314	147662.133	20831.829
Instance5380.24	12.215	1.581	49.890	18.117	73035.920	35604.103	0.546	0.071	0.762	4.358	148148.664	20623.840

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.455	0.239	0.706
Available MBytes	149336.507	149312.000	149770.000
Free System Page Table Entries	16510902.153	16510605.000	16511260.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	128994578.993	128204800.000	129171456.000
Pool Paged Bytes	146188671.064	146120704.000	146231296.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

[illegible]

A.2 Server 2

Microsoft Exchange Jetstress 2013

Performance Test Result Report

Test Summary

Overall Test Result	Pass
Machine Name	EXCH2
Test Description	Exchange Mailbox Profile-Performance Host: exch2 28*4TB 7.2KRPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/13/2014 10:34:42 AM
Test End Time	9/13/2014 2:41:11 PM
Collection Start Time	9/13/2014 10:40:46 AM
Collection End Time	9/13/2014 2:40:38 PM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\28T-4hrs\Performance_2014_9_13_10_35_33.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	1492.015
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	22378323116032
Final Database Size (bytes)	22386367791104
Database Files (Count)	24

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance4308.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance4308.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance4308.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance4308.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance4308.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance4308.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance4308.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance4308.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance4308.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance4308.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance4308.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance4308.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance4308.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance4308.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance4308.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance4308.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance4308.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance4308.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance4308.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance4308.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance4308.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance4308.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance4308.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance4308.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance4308.1	11.908	1.945	42.140	20.221	33107.168	36397.719	0.000	0.137	0.000	5.015	0.000	20522.625
Instance4308.2	10.875	1.925	42.086	20.257	33084.728	36414.169	0.000	0.130	0.000	5.055	0.000	20553.008
Instance4308.3	10.954	1.782	41.864	19.947	33092.092	36480.213	0.000	0.137	0.000	4.958	0.000	20839.978
Instance4308.4	11.948	1.787	42.244	20.343	33106.319	36374.083	0.000	0.130	0.000	5.065	0.000	20466.339
Instance4308.5	14.816	1.657	42.191	20.308	33124.911	36397.635	0.000	0.145	0.000	5.003	0.000	20583.373
Instance4308.6	14.872	1.644	42.113	20.220	33113.190	36415.935	0.000	0.148	0.000	5.022	0.000	20652.717
Instance4308.7	14.555	1.657	41.835	20.024	33074.822	36432.509	0.000	0.144	0.000	5.040	0.000	20554.149
Instance4308.8	14.698	1.678	42.000	20.161	33094.555	36403.859	0.000	0.143	0.000	5.006	0.000	20547.908
Instance4308.9	13.860	1.795	42.011	20.139	33092.772	36435.097	0.000	0.140	0.000	5.001	0.000	20612.492
Instance4308.10	13.846	1.799	41.946	20.118	33086.619	36476.824	0.000	0.137	0.000	5.010	0.000	20620.880
Instance4308.11	14.707	1.995	42.023	20.051	33101.873	36396.075	0.000	0.147	0.000	4.973	0.000	20614.650
Instance4308.12	15.045	1.998	42.093	20.220	33106.843	36434.994	0.000	0.143	0.000	5.011	0.000	20512.714
Instance4308.13	14.502	2.194	41.743	19.884	33106.751	36518.009	0.000	0.144	0.000	4.981	0.000	20769.202
Instance4308.14	14.696	2.189	42.133	20.252	33100.232	36428.623	0.000	0.142	0.000	5.092	0.000	20281.343
Instance4308.15	10.414	2.589	42.135	20.183	33084.918	36393.236	0.000	0.119	0.000	5.021	0.000	20426.192
Instance4308.16	11.069	2.555	41.869	20.014	33095.736	36467.595	0.000	0.115	0.000	5.011	0.000	20677.253
Instance4308.17	10.057	2.758	42.087	20.074	33109.846	36404.840	0.000	0.118	0.000	4.980	0.000	20671.072
Instance4308.18	10.738	2.709	42.226	20.549	33094.334	36376.199	0.000	0.115	0.000	5.114	0.000	20428.633
Instance4308.19	10.417	2.884	41.927	20.077	33123.164	36470.230	0.000	0.117	0.000	5.039	0.000	20702.097
Instance4308.20	11.123	2.914	42.000	19.989	33124.730	36451.698	0.000	0.116	0.000	4.969	0.000	20694.936
Instance4308.21	10.353	3.063	42.089	20.209	33107.810	36430.081	0.000	0.115	0.000	5.017	0.000	20681.701
Instance4308.22	11.037	3.106	42.028	20.110	33133.620	36430.869	0.000	0.114	0.000	5.032	0.000	20458.615
Instance4308.23	10.295	3.198	41.852	20.031	33117.010	36475.560	0.000	0.114	0.000	4.987	0.000	20977.639
Instance4308.24	11.021	3.256	41.997	20.003	33109.530	36449.450	0.000	0.116	0.000	4.971	0.000	20663.135

Background Database Maintenance I/O Performance

MSEExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance4308.1	8.817	261725.618
Instance4308.2	8.875	261605.699
Instance4308.3	8.871	261668.229
Instance4308.4	8.831	261659.051
Instance4308.5	8.702	261678.402
Instance4308.6	8.539	261653.616
Instance4308.7	8.593	261762.999
Instance4308.8	8.709	261630.906
Instance4308.9	8.616	261716.588
Instance4308.10	8.742	261664.335
Instance4308.11	8.570	261671.406
Instance4308.12	8.691	261651.593
Instance4308.13	8.608	261719.987
Instance4308.14	8.713	261694.397
Instance4308.15	8.929	261671.637
Instance4308.16	8.767	261688.410
Instance4308.17	8.940	261695.304
Instance4308.18	8.790	261666.759
Instance4308.19	8.931	261713.716
Instance4308.20	8.764	261642.612
Instance4308.21	8.930	261692.092
Instance4308.22	8.771	261724.002
Instance4308.23	8.933	261662.811
Instance4308.24	8.778	261712.229

Total I/O Performance

MSEExchange 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
Instance4308.1	11.908	1.945	50.957	20.221	72665.849	36397.719	0.848	0.137	0.876	5.015	171507.401	20522.625
Instance4308.2	10.875	1.925	50.961	20.257	72882.327	36414.169	0.905	0.130	0.885	5.055	172711.320	20553.008
Instance4308.3	10.954	1.782	50.735	19.947	73058.084	36480.213	0.917	0.137	0.878	4.958	171495.882	20839.978
Instance4308.4	11.948	1.787	51.075	20.343	72623.956	36374.083	0.974	0.130	0.881	5.065	171973.677	20466.339
Instance4308.5	14.816	1.657	50.893	20.308	72202.297	36397.635	1.220	0.145	0.873	5.003	170628.025	20583.373
Instance4308.6	14.872	1.644	50.652	20.220	71640.464	36415.935	1.221	0.148	0.880	5.022	171734.170	20652.717
Instance4308.7	14.555	1.657	50.428	20.024	72044.195	36432.509	1.717	0.144	0.880	5.040	171985.116	20554.149
Instance4308.8	14.698	1.678	50.709	20.161	72343.994	36403.859	1.666	0.143	0.875	5.006	170268.444	20547.908
Instance4308.9	13.860	1.795	50.626	20.139	72001.137	36435.097	1.162	0.140	0.876	5.001	170909.908	20612.492
Instance4308.10	13.846	1.799	50.688	20.118	72508.771	36476.824	1.196	0.137	0.878	5.010	172297.011	20620.880
Instance4308.11	14.707	1.995	50.593	20.051	71819.484	36396.075	1.647	0.147	0.871	4.973	169503.477	20614.650
Instance4308.12	15.045	1.998	50.784	20.220	72220.078	36434.994	1.760	0.143	0.875	5.011	170512.732	20512.714
Instance4308.13	14.502	2.194	50.351	19.884	72190.158	36518.009	1.832	0.144	0.878	4.981	171590.356	20769.202
Instance4308.14	14.696	2.189	50.847	20.252	72273.171	36428.623	1.795	0.142	0.880	5.092	171219.387	20281.343
Instance4308.15	10.414	2.589	51.063	20.183	73054.293	36393.236	0.668	0.119	0.873	5.021	170286.864	20426.192
Instance4308.16	11.069	2.555	50.637	20.014	72674.296	36467.595	0.676	0.115	0.882	5.011	172440.825	20677.253
Instance4308.17	10.057	2.758	51.027	20.074	73158.948	36404.840	0.521	0.118	0.875	4.980	170512.732	20671.072
Instance4308.18	10.738	2.709	51.016	20.549	72478.649	36376.199	0.495	0.115	0.888	5.114	173199.895	20428.633
Instance4308.19	10.417	2.884	50.858	20.077	73264.024	36470.230	0.695	0.117	0.886	5.039	172940.559	20702.097
Instance4308.20	11.123	2.914	50.763	19.989	72575.285	36451.698	0.649	0.116	0.875	4.969	170486.524	20694.936
Instance4308.21	10.353	3.063	51.019	20.209	73118.144	36430.081	0.543	0.115	0.882	5.017	171734.170	20681.701
Instance4308.22	11.037	3.106	50.798	20.110	72600.865	36430.869	0.584	0.114	0.875	5.032	170512.732	20458.615
Instance4308.23	10.295	3.198	50.784	20.031	73316.286	36475.560	0.601	0.114	0.890	4.987	173662.263	20977.639
Instance4308.24	11.021	3.256	50.775	20.003	72632.308	36449.450	0.635	0.116	0.873	4.971	170512.732	20663.135

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.766	0.591	0.992
Available MBytes	180834.581	180806.000	181263.000
Free System Page Table Entries	16482570.578	16482185.000	16482886.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	146094172.407	144949248.000	146530304.000
Pool Paged Bytes	120440309.792	120393728.000	120524800.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/13/2014 10:34:42 AM -- Preparing for testing ...
9/13/2014 10:35:07 AM -- Attaching databases ...
9/13/2014 10:35:07 AM -- Preparations for testing are complete.
9/13/2014 10:35:07 AM -- Starting transaction dispatch ..
9/13/2014 10:35:07 AM -- Database cache settings: (minimum: 768.0 MB, maximum: 6.0 GB)
9/13/2014 10:35:07 AM -- Database flush thresholds: (start: 61.4 MB, stop: 122.9 MB)
9/13/2014 10:35:33 AM -- Database read latency thresholds: (average: 20 msec/read, maximum: 100 msec/read).
9/13/2014 10:35:33 AM -- Log write latency thresholds: (average: 10 msec/write, maximum: 100 msec/write).
9/13/2014 10:35:37 AM -- Operation mix: Sessions 28, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/13/2014 10:35:37 AM -- Performance logging started (interval: 15000 ms).
9/13/2014 10:35:37 AM -- Attaining prerequisites:
9/13/2014 10:40:46 AM -- \\MSEXchange Database(JetstressWin)\Database Cache Size, Last: 5811802000.0 (lower bound: 5798205000.0, upper bound: none)
9/13/2014 2:40:47 PM -- Performance logging has ended.
9/13/2014 2:40:47 PM -- JetInterop batch transaction stats: 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24068, 24067, 24067, 24067, 24067, 24067 and 24067.
9/13/2014 2:40:47 PM -- Dispatching transactions ends.
9/13/2014 2:40:47 PM -- Shutting down databases ...
9/13/2014 2:41:11 PM -- Instance4308.1 (complete), Instance4308.2 (complete), Instance4308.3 (complete), Instance4308.4 (complete), Instance4308.5 (complete), Instance4308.6 (complete), Instance4308.7 (complete), Instance4308.8 (complete), Instance4308.9 (complete), Instance4308.10 (complete), Instance4308.11 (complete), Instance4308.12 (complete), Instance4308.13 (complete), Instance4308.14 (complete), Instance4308.15 (complete), Instance4308.16 (complete), Instance4308.17 (complete), Instance4308.18 (complete), Instance4308.19 (complete), Instance4308.20 (complete), Instance4308.21 (complete), Instance4308.22 (complete), Instance4308.23 (complete) and Instance4308.24 (complete)
9/13/2014 2:41:11 PM -- C:\Users\Administrator\Desktop\Aijth\28T-4hrs\Performance 2014 9 13 10 35 33.big has 973 samples.
9/13/2014 2:41:11 PM -- Creating test report ...
9/13/2014 2:41:35 PM -- Instance4308.1 has 11.9 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.1 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.1 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.2 has 10.9 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.2 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.2 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.3 has 11.0 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.3 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.3 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.4 has 11.9 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.4 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.4 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.5 has 14.8 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.5 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.5 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.5 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.5 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.6 has 14.9 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.6 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.6 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.7 has 14.6 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.7 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.7 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.8 has 14.7 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.8 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.8 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.9 has 13.9 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.9 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.9 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.10 has 13.8 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.10 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.10 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.11 has 14.7 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.11 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.11 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.12 has 15.0 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.12 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.12 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.13 has 14.5 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.13 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.13 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.14 has 14.7 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.14 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.14 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.15 has 10.4 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.15 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.15 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.16 has 11.1 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.16 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.16 has 0.1 for I/O Log Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.17 has 10.1 for I/O Database Reads Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.17 has 0.1 for I/O Log Writes Average Latency.
9/13/2014 2:41:35 PM -- Instance4308.17 has 0.1 for I/O Log Reads Average Latency.

9/13/2014 2:41:36 PM -- Instance4308.17 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.17 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.18 has 10.7 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.18 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.18 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.19 has 10.4 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.19 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.19 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.20 has 11.1 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.20 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.20 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.21 has 10.4 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.21 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.21 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.22 has 11.0 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.22 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.22 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.23 has 10.3 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.23 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.23 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.24 has 11.0 for I/O Database Reads Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.24 has 0.1 for I/O Log Writes Average Latency.
 9/13/2014 2:41:36 PM -- Instance4308.24 has 0.1 for I/O Log Reads Average Latency.
 9/13/2014 2:41:36 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 9/13/2014 2:41:36 PM -- The test has 0 Database Page Fault Stalls/sec samples higher than 0.
 9/13/2014 2:41:36 PM -- C:\Users\Administrator\Desktop\Ajith\28T-4hrs\Performance_2014_9_13_10_35_33.xml has 952 samples queried.

A.3 Server 3

Microsoft Exchange Jetstress 2013

Performance Test Result Report

Test Summary	
Overall Test Result	Pass
Machine Name	EXCH3
Test Description	Exchange Mailbox Profile-Performance Test Host: exch3 28*4TB 7.2KRPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/22/2014 12:05:29 PM
Test End Time	9/22/2014 4:12:17 PM
Collection Start Time	9/22/2014 12:11:52 PM
Collection End Time	9/22/2014 4:11:38 PM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\Exch3\28T-4hrs\Performance_2014_9_22_12_6_19.blg

Database Sizing and Throughput	
Achieved Transactional I/O per Second	1432.612
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	38487420043264
Final Database Size (bytes)	38494298701824
Database Files (Count)	24

Jetstress System Parameters	
Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance4312.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance4312.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance4312.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance4312.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance4312.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance4312.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance4312.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance4312.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance4312.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance4312.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance4312.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance4312.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance4312.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance4312.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance4312.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance4312.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance4312.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance4312.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance4312.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance4312.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance4312.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance4312.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance4312.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance4312.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance4312.1	11.544	2.933	41.187	18.235	33181.437	34812.450	0.000	0.078	0.000	4.234	0.000	20754.399
Instance4312.2	12.736	2.953	41.381	18.476	33165.272	34792.232	0.000	0.081	0.000	4.259	0.000	20599.605
Instance4312.3	13.714	2.675	41.410	18.421	33180.128	34771.837	0.000	0.079	0.000	4.283	0.000	20329.786
Instance4312.4	13.747	2.651	41.379	18.528	33142.639	34780.027	0.000	0.082	0.000	4.280	0.000	20544.505
Instance4312.5	12.852	2.269	41.337	18.482	33141.698	34799.589	0.000	0.079	0.000	4.274	0.000	20720.983
Instance4312.6	13.936	2.275	41.223	18.298	33201.012	34795.742	0.000	0.074	0.000	4.210	0.000	20762.183
Instance4312.7	11.744	1.927	41.239	18.417	33173.006	34821.816	0.000	0.076	0.000	4.272	0.000	20815.045
Instance4312.8	11.974	1.949	41.197	18.306	33181.327	34793.666	0.000	0.075	0.000	4.227	0.000	20695.881
Instance4312.9	11.916	1.583	41.370	18.489	33177.283	34777.106	0.000	0.073	0.000	4.282	0.000	20617.435
Instance4312.10	12.298	1.606	41.120	18.188	33141.784	34791.016	0.000	0.076	0.000	4.198	0.000	20860.215
Instance4312.11	12.051	1.291	41.287	18.424	33144.784	34790.623	0.000	0.076	0.000	4.289	0.000	20565.543
Instance4312.12	12.399	1.313	41.188	18.150	33153.426	34800.569	0.000	0.077	0.000	4.215	0.000	20728.929
Instance4312.13	11.654	1.126	41.397	18.614	33133.520	34778.983	0.000	0.073	0.000	4.290	0.000	20571.270
Instance4312.14	12.007	1.132	41.155	18.300	33176.047	34802.431	0.000	0.073	0.000	4.254	0.000	20766.745
Instance4312.15	11.670	2.143	41.284	18.351	33164.461	34820.000	0.000	0.070	0.000	4.243	0.000	20656.290
Instance4312.16	12.482	2.114	41.162	18.369	33172.132	34798.327	0.000	0.070	0.000	4.260	0.000	20841.682
Instance4312.17	11.474	1.905	41.136	18.381	33181.176	34796.124	0.000	0.068	0.000	4.260	0.000	20818.435
Instance4312.18	12.330	1.908	41.264	18.463	33173.643	34816.971	0.000	0.070	0.000	4.275	0.000	20688.171
Instance4312.19	11.474	1.675	41.262	18.406	33168.398	34815.115	0.000	0.073	0.000	4.230	0.000	20757.456
Instance4312.20	12.355	1.681	41.527	18.610	33162.649	34743.302	0.000	0.073	0.000	4.291	0.000	20437.416

Instance4312.21	11.518	1.561	41.286	18.499	33176.709	34793.711	0.000	0.066	0.000	4.295	0.000	20664.778
Instance4312.22	12.343	1.566	41.421	18.548	33179.153	34767.691	0.000	0.070	0.000	4.303	0.000	20522.306
Instance4312.23	11.587	1.579	41.134	18.357	33188.167	34802.551	0.000	0.066	0.000	4.261	0.000	20859.470
Instance4312.24	12.468	1.594	41.387	18.569	33162.239	34769.301	0.000	0.073	0.000	4.327	0.000	20509.501

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance4312.1	8.883	261844.291
Instance4312.2	8.677	261814.128
Instance4312.3	8.693	261928.690
Instance4312.4	8.778	261906.221
Instance4312.5	8.827	261926.704
Instance4312.6	8.627	261806.635
Instance4312.7	8.883	261823.223
Instance4312.8	8.833	261853.062
Instance4312.9	8.866	261881.338
Instance4312.10	8.821	261867.063
Instance4312.11	8.858	261867.488
Instance4312.12	8.808	261874.472
Instance4312.13	8.878	261874.291
Instance4312.14	8.833	261830.735
Instance4312.15	8.877	261836.836
Instance4312.16	8.701	261843.632
Instance4312.17	8.887	261839.081
Instance4312.18	8.715	261913.525
Instance4312.19	8.890	261810.075
Instance4312.20	8.708	261868.339
Instance4312.21	8.887	261802.784
Instance4312.22	8.714	261843.140
Instance4312.23	8.886	261805.676
Instance4312.24	8.710	261869.572

Log Replication I/O Performance

MSExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance4312.1	0.747	145229.478
Instance4312.2	0.742	144934.017
Instance4312.3	0.737	143283.355
Instance4312.4	0.747	145446.646
Instance4312.5	0.749	146241.865
Instance4312.6	0.741	144013.151
Instance4312.7	0.753	146682.440
Instance4312.8	0.742	144256.417
Instance4312.9	0.748	145737.347
Instance4312.10	0.739	143987.053
Instance4312.11	0.748	145864.825
Instance4312.12	0.741	144013.151
Instance4312.13	0.751	145959.275
Instance4312.14	0.749	145716.009
Instance4312.15	0.743	144499.682
Instance4312.16	0.754	146906.238
Instance4312.17	0.753	146445.806
Instance4312.18	0.749	146085.426
Instance4312.19	0.746	145420.548
Instance4312.20	0.744	144960.115
Instance4312.21	0.754	146880.140
Instance4312.22	0.749	146200.055
Instance4312.23	0.754	146924.581
Instance4312.24	0.753	147073.396

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
Instance4312.1	11.544	2.933	50.071	18.235	73749.347	34812.450	0.840	0.078	0.747	4.234	145229.478	20754.399
Instance4312.2	12.736	2.953	50.058	18.476	72799.474	34792.232	0.706	0.081	0.742	4.259	144934.017	20599.605
Instance4312.3	13.714	2.675	50.103	18.421	72868.867	34771.837	1.015	0.079	0.737	4.283	143283.355	20329.786
Instance4312.4	13.747	2.651	50.157	18.528	73179.325	34780.027	1.023	0.082	0.747	4.280	145446.646	20544.505
Instance4312.5	12.852	2.269	50.164	18.482	73399.267	34799.589	2.146	0.079	0.749	4.274	146241.865	20720.983
Instance4312.6	13.936	2.275	49.849	18.298	72762.229	34795.742	2.045	0.074	0.741	4.210	144013.151	20762.183
Instance4312.7	11.744	1.927	50.121	18.417	73695.214	34821.816	1.148	0.076	0.753	4.272	146682.440	20815.045
Instance4312.8	11.974	1.949	50.031	18.306	73555.946	34793.666	1.077	0.075	0.742	4.227	144256.417	20695.881
Instance4312.9	11.916	1.583	50.236	18.489	73541.904	34777.106	1.363	0.073	0.748	4.282	145737.347	20617.435
Instance4312.10	12.298	1.606	49.941	18.188	73540.219	34791.016	1.401	0.076	0.739	4.198	143987.053	20860.215
Instance4312.11	12.051	1.291	50.145	18.424	73546.503	34790.623	1.347	0.076	0.748	4.289	145864.825	20565.543
Instance4312.12	12.399	1.313	49.996	18.150	73448.075	34800.569	1.331	0.077	0.741	4.215	144013.151	20728.929
Instance4312.13	11.654	1.126	50.275	18.614	73527.667	34778.983	1.105	0.073	0.751	4.290	145959.275	20571.270
Instance4312.14	12.007	1.132	49.988	18.300	73580.537	34802.431	1.004	0.073	0.749	4.254	145716.009	20766.745
Instance4312.15	11.670	2.143	50.161	18.351	73633.013	34820.000	0.670	0.070	0.743	4.243	144499.682	20656.290
Instance4312.16	12.482	2.114	49.863	18.369	73076.069	34798.327	0.762	0.070	0.754	4.260	146906.238	20841.682
Instance4312.17	11.474	1.905	50.024	18.381	73804.951	34796.124	0.702	0.068	0.753	4.260	146445.806	20818.435
Instance4312.18	12.330	1.908	49.979	18.463	73061.348	34816.971	0.713	0.070	0.749	4.275	146085.426	20688.171
Instance4312.19	11.474	1.675	50.152	18.406	73698.397	34815.115	0.989	0.073	0.746	4.230	145420.548	20757.456
Instance4312.20	12.355	1.681	50.235	18.610	72806.439	34743.302	0.936	0.073	0.744	4.291	144960.115	20437.416
Instance4312.21	11.518	1.561	50.172	18.499	73671.978	34793.711	1.047	0.066	0.754	4.295	146880.140	20664.778
Instance4312.22	12.343	1.566	50.134	18.548	72922.717	34767.691	0.948	0.070	0.749	4.303	146200.055	20522.306
Instance4312.23	11.587	1.579	50.020	18.357	73802.501	34802.551	0.917	0.066	0.754	4.261	146924.581	20859.470
Instance4312.24	12.468	1.594	50.096	18.569	72925.576	34769.301	1.031	0.073	0.753	4.327	147073.396	20509.501

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.458	0.195	0.771
Available MBytes	149420.022	149396.000	149935.000
Free System Page Table Entries	16511929.098	16510883.000	16512289.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	119653918.495	118288384.000	119906304.000
Pool Paged Bytes	138247832.476	138072064.000	138321920.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

B Stress Test Result Report

B.1 Server 1

Microsoft Exchange Jetstress 2013

Stress Test Result Report

Test Summary

Overall Test Result	Pass
Machine Name	EXCH1
Test Description	Exchange Mailbox Profile-Stress Test Host: exch1 28*4TB 7.2KRPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/20/2014 5:27:33 PM
Test End Time	9/21/2014 5:34:21 PM
Collection Start Time	9/20/2014 5:33:56 PM
Collection End Time	9/21/2014 5:33:55 PM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\28T-Stress\Stress 2014 9 20 17 28 22.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	1426.979
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	38441291087872
Final Database Size (bytes)	38481749344256
Database Files (Count)	24

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance5156.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance5156.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance5156.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance5156.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance5156.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance5156.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance5156.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance5156.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance5156.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance5156.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance5156.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance5156.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance5156.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance5156.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance5156.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance5156.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance5156.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance5156.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance5156.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance5156.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance5156.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance5156.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance5156.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance5156.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.edb

Transactional I/O Performance

MSEExchange 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
Instance5156.1	11.748	2.947	41.171	18.276	33218.882	35152.817	0.000	0.077	0.000	4.291	0.000	20582.097
Instance5156.2	12.704	2.955	41.159	18.286	33231.743	35121.911	0.000	0.076	0.000	4.292	0.000	20658.787
Instance5156.3	13.314	2.648	41.182	18.300	33210.422	35144.117	0.000	0.080	0.000	4.283	0.000	20603.989
Instance5156.4	13.556	2.653	41.236	18.346	33232.746	35126.847	0.000	0.080	0.000	4.294	0.000	20603.754
Instance5156.5	12.716	2.276	41.169	18.246	33234.333	35121.586	0.000	0.080	0.000	4.269	0.000	20627.073
Instance5156.6	13.809	2.278	41.163	18.248	33245.324	35119.023	0.000	0.082	0.000	4.268	0.000	20640.055
Instance5156.7	11.754	1.922	41.173	18.253	33231.453	35127.694	0.000	0.075	0.000	4.267	0.000	20665.322
Instance5156.8	11.701	1.948	41.228	18.361	33234.708	35125.004	0.000	0.075	0.000	4.310	0.000	20572.949
Instance5156.9	11.753	1.570	41.186	18.247	33227.525	35145.846	0.000	0.077	0.000	4.256	0.000	20672.048
Instance5156.10	11.974	1.586	41.140	18.255	33222.005	35129.849	0.000	0.075	0.000	4.275	0.000	20676.765
Instance5156.11	11.765	1.282	41.115	18.217	33246.340	35145.930	0.000	0.076	0.000	4.265	0.000	20730.976
Instance5156.12	12.005	1.300	41.191	18.326	33245.071	35145.808	0.000	0.074	0.000	4.292	0.000	20635.406
Instance5156.13	11.726	1.114	41.163	18.277	33231.617	35143.766	0.000	0.074	0.000	4.279	0.000	20657.505
Instance5156.14	11.858	1.120	41.091	18.192	33233.260	35141.658	0.000	0.074	0.000	4.262	0.000	20706.633
Instance5156.15	11.375	2.111	41.205	18.290	33226.992	35141.522	0.000	0.069	0.000	4.276	0.000	20675.620
Instance5156.16	12.199	2.110	41.139	18.259	33239.447	35148.476	0.000	0.070	0.000	4.271	0.000	20706.403
Instance5156.17	11.324	1.894	41.108	18.235	33221.423	35139.495	0.000	0.071	0.000	4.284	0.000	20683.272
Instance5156.18	12.161	1.902	41.163	18.235	33222.245	35137.484	0.000	0.071	0.000	4.274	0.000	20647.346
Instance5156.19	11.320	1.657	41.212	18.275	33239.926	35127.803	0.000	0.070	0.000	4.274	0.000	20623.444
Instance5156.20	12.134	1.661	41.219	18.328	33241.260	35132.793	0.000	0.069	0.000	4.297	0.000	20587.796
Instance5156.21	11.376	1.548	41.177	18.335	33235.114	35124.763	0.000	0.070	0.000	4.289	0.000	20726.037
Instance5156.22	12.185	1.552	41.157	18.277	33225.661	35142.607	0.000	0.071	0.000	4.287	0.000	20637.799

Instance5156.23	11.258	1.572	41.263	18.412	33221.222	35114.050	0.000	0.070	0.000	4.308	0.000	20611.988
Instance5156.24	12.095	1.578	41.171	18.322	33253.570	35139.164	0.000	0.070	0.000	4.290	0.000	20693.874

Background Database Maintenance I/O Performance

MSEExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance5156.1	8.873	261868.776
Instance5156.2	8.655	261887.368
Instance5156.3	8.745	261882.869
Instance5156.4	8.798	261868.491
Instance5156.5	8.834	261863.680
Instance5156.6	8.625	261869.576
Instance5156.7	8.875	261884.799
Instance5156.8	8.859	261856.879
Instance5156.9	8.864	261867.572
Instance5156.10	8.850	261862.219
Instance5156.11	8.870	261878.433
Instance5156.12	8.851	261843.148
Instance5156.13	8.872	261864.928
Instance5156.14	8.855	261868.239
Instance5156.15	8.885	261857.971
Instance5156.16	8.710	261855.949
Instance5156.17	8.886	261869.095
Instance5156.18	8.712	261885.412
Instance5156.19	8.886	261867.667
Instance5156.20	8.711	261850.577
Instance5156.21	8.889	261881.044
Instance5156.22	8.711	261878.016
Instance5156.23	8.892	261866.577
Instance5156.24	8.714	261854.888

Log Replication I/O Performance

MSEExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance5156.1	0.749	145893.269
Instance5156.2	0.752	146345.733
Instance5156.3	0.749	145846.588
Instance5156.4	0.750	145989.677
Instance5156.5	0.747	145507.719
Instance5156.6	0.747	145763.239
Instance5156.7	0.748	145609.364
Instance5156.8	0.752	146438.005
Instance5156.9	0.747	145580.582
Instance5156.10	0.750	145977.083
Instance5156.11	0.749	145811.361
Instance5156.12	0.752	146304.760
Instance5156.13	0.750	145981.153
Instance5156.14	0.748	145700.051
Instance5156.15	0.750	145987.163
Instance5156.16	0.750	145892.379
Instance5156.17	0.752	146260.369
Instance5156.18	0.748	145616.572
Instance5156.19	0.748	145532.036
Instance5156.20	0.750	145900.135
Instance5156.21	0.753	146620.248
Instance5156.22	0.750	145933.608
Instance5156.23	0.754	146802.405
Instance5156.24	0.753	146316.808

Total I/O Performance

MSEExchange 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
Instance5156.1	11.748	2.947	50.044	18.276	73759.168	35152.817	1.015	0.077	0.749	4.291	145893.269	20582.097
Instance5156.2	12.704	2.955	49.813	18.286	72959.328	35121.911	1.018	0.076	0.752	4.292	146345.733	20658.787
Instance5156.3	13.314	2.648	49.927	18.300	73262.240	35144.117	0.952	0.080	0.749	4.283	145846.588	20603.989
Instance5156.4	13.556	2.653	50.035	18.346	73437.035	35126.847	0.916	0.080	0.750	4.294	145989.677	20603.754
Instance5156.5	12.716	2.276	50.003	18.246	73625.024	35121.586	1.919	0.080	0.747	4.269	145507.719	20627.073
Instance5156.6	13.809	2.278	49.789	18.248	72851.125	35119.023	1.987	0.082	0.747	4.268	145763.239	20640.055
Instance5156.7	11.754	1.922	50.048	18.253	73780.366	35127.694	0.831	0.075	0.748	4.267	145609.364	20665.322
Instance5156.8	11.701	1.948	50.087	18.361	73673.418	35125.004	0.806	0.075	0.752	4.310	146438.005	20572.949
Instance5156.9	11.753	1.570	50.049	18.247	73719.269	35145.846	1.265	0.077	0.747	4.256	145580.582	20672.048
Instance5156.10	11.974	1.586	49.990	18.255	73697.869	35129.849	1.258	0.075	0.750	4.275	145977.083	20676.765
Instance5156.11	11.765	1.282	49.985	18.217	73819.365	35145.930	1.051	0.076	0.749	4.265	145811.361	20730.976
Instance5156.12	12.005	1.300	50.042	18.326	73678.657	35145.808	1.085	0.074	0.752	4.292	146304.760	20635.406
Instance5156.13	11.726	1.114	50.035	18.277	73771.348	35143.766	1.183	0.074	0.750	4.279	145981.153	20657.505
Instance5156.14	11.858	1.120	49.947	18.192	73768.384	35141.658	1.195	0.074	0.748	4.262	145700.051	20706.633
Instance5156.15	11.375	2.111	50.089	18.290	73781.238	35141.522	0.522	0.069	0.750	4.276	145987.163	20675.620
Instance5156.16	12.199	2.110	49.849	18.259	73183.386	35148.476	0.527	0.070	0.750	4.271	145892.379	20706.403
Instance5156.17	11.324	1.894	49.994	18.235	73860.678	35139.495	0.575	0.071	0.752	4.284	146260.369	20683.272
Instance5156.18	12.161	1.902	49.875	18.235	73164.279	35137.484	0.593	0.071	0.748	4.274	145616.572	20647.346
Instance5156.19	11.320	1.657	50.098	18.275	73790.980	35127.803	0.532	0.070	0.748	4.274	145532.036	20623.444
Instance5156.20	12.134	1.661	49.930	18.328	73126.404	35132.793	0.564	0.069	0.750	4.297	145900.135	20587.796
Instance5156.21	11.376	1.548	50.066	18.335	73828.707	35124.763	0.554	0.070	0.753	4.289	146620.248	20726.037
Instance5156.22	12.185	1.552	49.868	18.277	73166.731	35142.607	0.544	0.071	0.750	4.287	145933.608	20637.799
Instance5156.23	11.258	1.572	50.155	18.412	73758.281	35114.050	0.529	0.070	0.754	4.308	146802.405	20611.988
Instance5156.24	12.095	1.578	49.885	18.322	73186.834	35139.164	0.519	0.070	0.753	4.290	146316.808	20693.874

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.451	0.197	0.784
Available MBytes	149228.399	149161.000	149498.000
Free System Page Table Entries	16510772.408	16510177.000	16511187.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	129452841.641	128561152.000	129667072.000
Pool Paged Bytes	148512603.932	148066304.000	148762624.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

B.2 Server 2

Microsoft Exchange Jetstress 2013

Stress Test Result Report

Test Summary

Overall Test Result	Pass
Machine Name	EXCH2
Test Description	Exchange Mailbox Profile-Performance Host: exch2 28*4TB 7.2K RPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/13/2014 9:42:22 PM
Test End Time	9/14/2014 9:49:00 PM
Collection Start Time	9/13/2014 9:48:33 PM
Collection End Time	9/14/2014 9:48:28 PM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\28T-24hrs\Stress_2014_9_13_21_43_12.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	1446.498
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	22386367791104
Final Database Size (bytes)	22430659641344
Database Files (Count)	24

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance4660.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance4660.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance4660.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance4660.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance4660.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance4660.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance4660.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance4660.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance4660.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance4660.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb

Instance4660.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance4660.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance4660.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance4660.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance4660.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance4660.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance4660.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance4660.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance4660.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance4660.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance4660.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance4660.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance4660.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance4660.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance4660.1	11.942	2.085	40.615	19.553	33120.198	35588.506	0.000	0.113	0.000	4.667	0.000	20650.856
Instance4660.2	10.853	2.103	40.732	19.649	33113.740	35556.987	0.000	0.114	0.000	4.686	0.000	20603.519
Instance4660.3	11.161	1.920	40.609	19.549	33119.893	35568.420	0.000	0.114	0.000	4.676	0.000	20684.311
Instance4660.4	11.792	1.908	40.712	19.669	33116.824	35557.097	0.000	0.115	0.000	4.681	0.000	20656.300
Instance4660.5	15.428	1.738	40.752	19.692	33109.812	35551.340	0.000	0.129	0.000	4.692	0.000	20465.906
Instance4660.6	16.084	1.741	40.673	19.644	33108.301	35566.837	0.000	0.130	0.000	4.675	0.000	20573.243
Instance4660.7	15.915	1.694	40.658	19.645	33107.107	35556.039	0.000	0.131	0.000	4.682	0.000	20601.359
Instance4660.8	15.376	1.705	40.647	19.612	33106.701	35557.852	0.000	0.128	0.000	4.669	0.000	20557.778
Instance4660.9	15.370	1.788	40.627	19.631	33117.107	35570.576	0.000	0.127	0.000	4.672	0.000	20718.916
Instance4660.10	14.773	1.803	40.635	19.573	33110.058	35556.263	0.000	0.125	0.000	4.665	0.000	20602.584
Instance4660.11	16.132	1.966	40.660	19.616	33096.756	35547.070	0.000	0.131	0.000	4.676	0.000	20563.441
Instance4660.12	15.749	1.974	40.713	19.694	33114.961	35551.924	0.000	0.131	0.000	4.687	0.000	20551.434
Instance4660.13	16.026	2.154	40.645	19.608	33112.387	35555.868	0.000	0.130	0.000	4.680	0.000	20547.336
Instance4660.14	15.485	2.158	40.665	19.590	33104.231	35565.662	0.000	0.129	0.000	4.666	0.000	20568.379
Instance4660.15	10.280	2.508	40.608	19.589	33118.355	35570.605	0.000	0.111	0.000	4.680	0.000	20746.427
Instance4660.16	10.754	2.529	40.698	19.628	33122.734	35551.564	0.000	0.112	0.000	4.687	0.000	20612.811
Instance4660.17	10.179	2.702	40.556	19.441	33125.465	35572.986	0.000	0.112	0.000	4.653	0.000	20733.797
Instance4660.18	10.691	2.706	40.689	19.592	33126.041	35569.960	0.000	0.111	0.000	4.675	0.000	20645.134
Instance4660.19	10.269	2.865	40.720	19.683	33130.295	35557.693	0.000	0.113	0.000	4.700	0.000	20641.942
Instance4660.20	10.734	2.875	40.639	19.573	33117.112	35563.832	0.000	0.114	0.000	4.675	0.000	20690.955
Instance4660.21	10.264	3.073	40.685	19.590	33124.281	35559.470	0.000	0.114	0.000	4.681	0.000	20598.715

Background Database Maintenance I/O Performance		
MSEExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance4660.1	8.852	261679.285
Instance4660.2	8.893	261659.636
Instance4660.3	8.883	261660.094
Instance4660.4	8.867	261679.712
Instance4660.5	8.705	261672.463
Instance4660.6	8.428	261654.847
Instance4660.7	8.457	261678.881
Instance4660.8	8.708	261674.185
Instance4660.9	8.481	261658.066
Instance4660.10	8.728	261680.397
Instance4660.11	8.437	261698.916
Instance4660.12	8.693	261678.185
Instance4660.13	8.460	261673.232
Instance4660.14	8.708	261657.565
Instance4660.15	8.949	261675.715
Instance4660.16	8.827	261707.730
Instance4660.17	8.952	261677.532
Instance4660.18	8.834	261677.499
Instance4660.19	8.948	261674.389
Instance4660.20	8.828	261677.690
Instance4660.21	8.953	261638.528
Instance4660.22	8.830	261670.342
Instance4660.23	8.958	261661.860
Instance4660.24	8.835	261688.764

Log Replication I/O Performance		
MSEExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance4660.1	0.819	159865.831
Instance4660.2	0.820	160505.206
Instance4660.3	0.821	160383.744
Instance4660.4	0.820	160434.075
Instance4660.5	0.815	159418.910
Instance4660.6	0.817	159400.138
Instance4660.7	0.819	160115.672
Instance4660.8	0.816	159391.410
Instance4660.9	0.822	160523.111
Instance4660.10	0.816	159421.170
Instance4660.11	0.818	159702.454
Instance4660.12	0.818	159823.005
Instance4660.13	0.816	159319.761
Instance4660.14	0.815	159213.509
Instance4660.15	0.825	161129.179
Instance4660.16	0.820	160316.000
Instance4660.17	0.819	160097.510
Instance4660.18	0.820	159904.740
Instance4660.19	0.824	160997.412
Instance4660.20	0.822	160577.810
Instance4660.21	0.819	160155.460
Instance4660.22	0.823	160758.999
Instance4660.23	0.819	159788.066
Instance4660.24	0.826	161131.942

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	
Instance4660.1	11.942	2.085	49.468	19.553	74020.858	35588.506	0.877	0.113	0.819	4.667	159865.831	20650.856	
Instance4660.2	10.853	2.103	49.625	19.649	74071.570	35556.987	0.907	0.114	0.820	4.686	160505.206	20603.519	
Instance4660.3	11.161	1.920	49.492	19.549	74139.065	35568.420	1.154	0.114	0.821	4.676	160383.744	20684.311	
Instance4660.4	11.792	1.908	49.579	19.669	73992.732	35557.097	1.147	0.115	0.820	4.681	160434.075	20656.300	
Instance4660.5	15.428	1.738	49.457	19.692	73340.961	35551.340	1.305	0.129	0.815	4.692	159418.910	20465.906	
Instance4660.6	16.084	1.741	49.102	19.644	72338.888	35566.837	1.241	0.130	0.817	4.675	159400.138	20573.243	
Instance4660.7	15.915	1.694	49.115	19.645	72465.168	35556.039	1.432	0.131	0.819	4.682	160115.672	20601.359	
Instance4660.8	15.376	1.705	49.355	19.612	73432.724	35557.852	1.405	0.128	0.816	4.669	159391.410	20557.778	
Instance4660.9	15.370	1.788	49.108	19.631	72586.914	35570.576	1.077	0.127	0.822	4.672	160523.111	20718.916	
Instance4660.10	14.773	1.803	49.363	19.573	73523.884	35556.263	1.066	0.125	0.816	4.665	159421.170	20602.584	
Instance4660.11	16.132	1.966	49.098	19.616	72380.795	35547.070	1.362	0.131	0.818	4.676	159702.454	20563.441	
Instance4660.12	15.749	1.974	49.406	19.694	73330.435	35551.924	1.336	0.131	0.818	4.687	159823.005	20551.434	
Instance4660.13	16.026	2.154	49.106	19.608	72490.880	35555.868	1.451	0.130	0.816	4.680	159319.761	20547.336	
Instance4660.14	15.485	2.158	49.373	19.590	73414.364	35565.662	1.493	0.129	0.815	4.666	159213.509	20568.379	
Instance4660.15	10.280	2.508	49.557	19.589	74392.057	35570.605	0.608	0.111	0.825	4.680	161129.179	20746.427	
Instance4660.16	10.754	2.529	49.525	19.628	73865.245	35551.564	0.603	0.112	0.820	4.687	160316.000	20612.811	
Instance4660.17	10.179	2.702	49.508	19.441	74453.706	35572.986	0.661	0.112	0.819	4.653	160097.510	20733.797	
Instance4660.18	10.691	2.706	49.523	19.592	73895.662	35569.960	0.625	0.111	0.820	4.675	159904.740	20645.134	
Instance4660.19	10.269	2.865	49.668	19.683	74303.063	35557.693	0.586	0.113	0.824	4.700	160997.412	20641.942	
Instance4660.20	10.734	2.875	49.467	19.573	73905.773	35563.832	0.599	0.114	0.822	4.675	160577.810	20690.955	
Instance4660.21	10.264	3.073	49.638	19.590	74340.639	35559.470	0.626	0.114	0.819	4.681	160155.460	20598.715	
Instance4660.22	10.776	3.051	49.457	19.607	73937.081	35570.317	0.627	0.112	0.823	4.690	160758.999	20683.522	

Instance4660.23	10.158	3.272	49.612	19.554	74391.013	35551.362	0.606	0.111	0.819	4.657	159788.066	20705.306	
Instance4660.24	10.704	3.246	49.492	19.640	73928.184	35574.343	0.609	0.112	0.826	4.705	161131.942	20679.952	

Host System Performance			
Counter	Average	Minimum	Maximum
% Processor Time	0.722	0.504	1.085
Available MBytes	180826.812	180778.000	181139.000
Free System Page Table Entries	16482522.094	16482063.000	16482954.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	145002975.944	144842752.000	145383424.000
Pool Paged Bytes	122496057.665	122372096.000	127438848.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/13/2014 9:42:22 PM -- Preparing for testing ...
9/13/2014 9:42:47 PM -- Attaching databases ...
9/13/2014 9:42:47 PM -- Preparations for testing are complete.
9/13/2014 9:42:47 PM -- Starting transaction dispatch ..
9/13/2014 9:42:47 PM -- Database cache settings: (minimum: 768.0 MB, maximum: 6.0 GB)
9/13/2014 9:42:47 PM -- Database flush thresholds: (start: 61.4 MB, stop: 122.9 MB)
9/13/2014 9:43:12 PM -- Database read latency thresholds: (average: 20 msec/read, maximum: 200 msec/read).
9/13/2014 9:43:12 PM -- Log write latency thresholds: (average: 10 msec/write, maximum: 200 msec/write).
9/13/2014 9:43:15 PM -- Operation mix: Sessions 28, Inserts 40%, Deletes 20%, Replaces 5%, Reads 35%, Lazy Commits 70%.
9/13/2014 9:43:15 PM -- Performance logging started (Interval: 15000 ms).
9/13/2014 9:43:15 PM -- Attaining prerequisites:
9/13/2014 9:48:33 PM -- \\MSExchange Database\\(JetstressWin)\\Database Cache Size, Last: 5810684000.0 (lower bound: 5798205000.0, upper bound: none)
9/14/2014 9:48:34 PM -- Performance logging has ended.
9/14/2014 9:48:34 PM -- JetInterop batch transaction stats: 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132354, 132353, 132353, 132353, 132353, 132353, 132353, 132353 and 132353.
9/14/2014 9:48:34 PM -- Dispatching transactions ends.
9/14/2014 9:48:34 PM -- Shutting down databases ...
9/14/2014 9:49:00 PM -- Instance4660.1 (complete), Instance4660.2 (complete), Instance4660.3 (complete), Instance4660.4 (complete), Instance4660.5 (complete), Instance4660.6 (complete), Instance4660.7 (complete), Instance4660.8 (complete), Instance4660.9 (complete), Instance4660.10 (complete), Instance4660.11 (complete), Instance4660.12 (complete), Instance4660.13 (complete), Instance4660.14 (complete), Instance4660.15 (complete), Instance4660.16 (complete), Instance4660.17 (complete), Instance4660.18 (complete), Instance4660.19 (complete), Instance4660.20 (complete), Instance4660.21 (complete), Instance4660.22 (complete), Instance4660.23 (complete) and Instance4660.24 (complete)
9/14/2014 9:49:00 PM -- C:\\Users\\Administrator\\Desktop\\Ajith\\28T-24hrs\\Stress_2014_9_13_21_43_12.blg has 5739 samples.
9/14/2014 9:49:00 PM -- Creating test report ...
9/14/2014 9:51:37 PM -- Instance4660.1 has 11.9 for I/O Database Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.1 has 0.1 for I/O Log Writes Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.1 has 0.1 for I/O Log Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.2 has 10.9 for I/O Database Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.2 has 0.1 for I/O Log Writes Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.2 has 0.1 for I/O Log Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.3 has 11.2 for I/O Database Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.3 has 0.1 for I/O Log Writes Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.3 has 0.1 for I/O Log Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.4 has 11.8 for I/O Database Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.4 has 0.1 for I/O Log Writes Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.4 has 0.1 for I/O Log Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.5 has 15.4 for I/O Database Reads Average Latency.
9/14/2014 9:51:37 PM -- Instance4660.5 has 0.1 for I/O Log Writes Average Latency.

9/14/2014 9:51:37 PM -- Instance4660.4 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.4 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.5 has 15.4 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.5 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.5 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.6 has 16.1 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.6 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.6 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.7 has 15.9 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.7 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.7 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.8 has 15.4 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.8 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.8 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.9 has 15.4 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.9 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.9 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.10 has 14.8 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.10 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.10 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.11 has 16.1 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.11 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.11 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.12 has 15.7 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.12 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.12 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.13 has 16.0 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.13 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.13 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.14 has 15.5 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.14 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.14 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.15 has 10.3 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.15 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.15 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.16 has 10.8 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.16 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.19 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.19 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.20 has 10.7 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.20 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.20 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.21 has 10.3 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.21 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.21 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.22 has 10.8 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.22 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.22 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.23 has 10.2 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.23 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.23 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.24 has 10.7 for I/O Database Reads Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.24 has 0.1 for I/O Log Writes Average Latency.
 9/14/2014 9:51:37 PM -- Instance4660.24 has 0.1 for I/O Log Reads Average Latency.
 9/14/2014 9:51:37 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 9/14/2014 9:51:37 PM -- The test has 0 Database Page Fault Stalls/sec samples higher than 0.
 9/14/2014 9:51:37 PM -- C:\Users\Administrator\Desktop\Ajith\28T-24hrs\Stress 2014 9 13 21 43 12.xml has 5717 samples queried.

B.3 Server 3

Microsoft Exchange Jetstress 2013

Stress Test Result Report

Test Summary	
Overall Test Result	Pass
Machine Name	EXCH3
Test Description	Exchange Mailbox Profile-Performance Test Host: exch3 28*4TB 7.2KRPM NL-SAS 12 RAID1 Volumes for Exchange 1 RAID1 Volume for OS 2 RAID0 Volumes for RestoreLUNs, 2 HotSpares 4166 users, 150 messages a day and 5GB Mailbox Size
Test Start Time	9/23/2014 10:45:57 AM
Test End Time	9/24/2014 10:52:42 AM
Collection Start Time	9/23/2014 10:52:15 AM
Collection End Time	9/24/2014 10:52:10 AM
Jetstress Version	15.00.0775.000
ESE Version	15.00.0995.021
Operating System	Windows Server 2012 R2 Datacenter (6.2.9200.0)
Performance Log	C:\Users\Administrator\Desktop\Ajith\Exch3\28T-24hrs\Stress 2014 9 23 10 46 46.blg

Database Sizing and Throughput

Achieved Transactional I/O per Second	1414.205
Target Transactional I/O per Second	504.086
Initial Database Size (bytes)	38499977789440
Final Database Size (bytes)	38539647516672
Database Files (Count)	24

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 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	3

Database Configuration

Instance4776.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance4776.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance4776.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance4776.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance4776.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance4776.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance4776.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance4776.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance4776.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance4776.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb
Instance4776.11	Log path: C:\VOL6\DB11 Database: C:\VOL6\DB11\Jetstress011001.edb
Instance4776.12	Log path: C:\VOL6\DB12 Database: C:\VOL6\DB12\Jetstress012001.edb
Instance4776.13	Log path: C:\VOL7\DB13 Database: C:\VOL7\DB13\Jetstress013001.edb
Instance4776.14	Log path: C:\VOL7\DB14 Database: C:\VOL7\DB14\Jetstress014001.edb
Instance4776.15	Log path: C:\VOL8\DB15 Database: C:\VOL8\DB15\Jetstress015001.edb
Instance4776.16	Log path: C:\VOL8\DB16 Database: C:\VOL8\DB16\Jetstress016001.edb
Instance4776.17	Log path: C:\VOL9\DB17 Database: C:\VOL9\DB17\Jetstress017001.edb
Instance4776.18	Log path: C:\VOL9\DB18 Database: C:\VOL9\DB18\Jetstress018001.edb
Instance4776.19	Log path: C:\VOL10\DB19 Database: C:\VOL10\DB19\Jetstress019001.edb
Instance4776.20	Log path: C:\VOL10\DB20 Database: C:\VOL10\DB20\Jetstress020001.edb

Instance4776.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance4776.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance4776.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance4776.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.edb

Transactional I/O Performance

MSEExchange 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
Instance4776.1	11.548	2.950	40.619	18.219	33242.922	34607.084	0.000	0.073	0.000	4.175	0.000	20711.319
Instance4776.2	12.168	2.962	40.688	18.269	33254.147	34614.872	0.000	0.074	0.000	4.185	0.000	20659.245
Instance4776.3	14.099	2.655	40.636	18.251	33245.823	34611.823	0.000	0.080	0.000	4.182	0.000	20661.782
Instance4776.4	13.924	2.652	40.637	18.212	33232.223	34625.905	0.000	0.081	0.000	4.170	0.000	20633.535
Instance4776.5	12.927	2.276	40.728	18.312	33238.524	34610.438	0.000	0.080	0.000	4.204	0.000	20578.147
Instance4776.6	13.498	2.287	40.649	18.191	33247.595	34610.877	0.000	0.078	0.000	4.162	0.000	20650.469
Instance4776.7	11.844	1.924	40.759	18.332	33239.497	34607.488	0.000	0.075	0.000	4.186	0.000	20608.183
Instance4776.8	12.104	1.946	40.670	18.267	33251.845	34622.396	0.000	0.073	0.000	4.201	0.000	20603.038
Instance4776.9	11.867	1.573	40.723	18.308	33250.443	34618.208	0.000	0.075	0.000	4.204	0.000	20593.764
Instance4776.10	12.300	1.590	40.749	18.273	33243.208	34597.780	0.000	0.073	0.000	4.183	0.000	20537.718
Instance4776.11	12.043	1.283	40.634	18.219	33230.951	34617.002	0.000	0.074	0.000	4.186	0.000	20642.523
Instance4776.12	12.401	1.299	40.690	18.247	33254.287	34612.858	0.000	0.075	0.000	4.182	0.000	20597.645
Instance4776.13	11.865	1.119	40.664	18.202	33231.856	34613.384	0.000	0.074	0.000	4.182	0.000	20609.221
Instance4776.14	12.193	1.127	40.590	18.237	33237.368	34615.346	0.000	0.073	0.000	4.190	0.000	20714.558
Instance4776.15	11.666	2.115	40.594	18.219	33238.454	34621.928	0.000	0.068	0.000	4.177	0.000	20753.778
Instance4776.16	12.079	2.122	40.737	18.321	33229.882	34605.943	0.000	0.067	0.000	4.191	0.000	20644.576
Instance4776.17	11.621	1.900	40.612	18.158	33251.393	34614.588	0.000	0.067	0.000	4.167	0.000	20729.089
Instance4776.18	12.040	1.903	40.663	18.231	33250.416	34609.932	0.000	0.067	0.000	4.190	0.000	20619.707
Instance4776.19	11.572	1.661	40.723	18.303	33236.229	34606.518	0.000	0.067	0.000	4.186	0.000	20601.103
Instance4776.20	12.094	1.665	40.610	18.235	33243.507	34618.295	0.000	0.067	0.000	4.188	0.000	20737.403
Instance4776.21	11.654	1.558	40.752	18.275	33239.433	34607.577	0.000	0.068	0.000	4.186	0.000	20560.836
Instance4776.22	12.079	1.553	40.647	18.202	33245.763	34612.236	0.000	0.067	0.000	4.184	0.000	20649.128
Instance4776.23	11.615	1.595	40.696	18.284	33253.285	34598.333	0.000	0.069	0.000	4.198	0.000	20623.502
Instance4776.24	12.097	1.590	40.707	18.261	33245.575	34607.901	0.000	0.067	0.000	4.168	0.000	20711.596

Background Database Maintenance I/O Performance

MSEExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance4776.1	8.892	261854.142
Instance4776.2	8.746	261853.564
Instance4776.3	8.652	261881.949
Instance4776.4	8.770	261876.909
Instance4776.5	8.838	261864.755
Instance4776.6	8.675	261872.765
Instance4776.7	8.884	261886.037
Instance4776.8	8.786	261853.075
Instance4776.9	8.874	261890.634
Instance4776.10	8.778	261869.067
Instance4776.11	8.873	261873.112
Instance4776.12	8.774	261865.668
Instance4776.13	8.879	261871.628
Instance4776.14	8.784	261868.646
Instance4776.15	8.888	261861.506
Instance4776.16	8.752	261838.328
Instance4776.17	8.885	261878.789
Instance4776.18	8.754	261877.826
Instance4776.19	8.889	261879.322
Instance4776.20	8.747	261865.075
Instance4776.21	8.889	261873.327
Instance4776.22	8.755	261876.560
Instance4776.23	8.892	261858.859
Instance4776.24	8.752	261882.555

Log Replication I/O Performance

MSEExchange Database ==> Instances	I/O Log Reads/sec	I/O Log Reads Average Bytes
Instance4776.1	0.734	142668.112
Instance4776.2	0.733	142849.701
Instance4776.3	0.733	142675.667
Instance4776.4	0.730	142256.379
Instance4776.5	0.734	142791.972
Instance4776.6	0.729	142089.792
Instance4776.7	0.732	142449.947
Instance4776.8	0.734	142933.455
Instance4776.9	0.734	142817.938
Instance4776.10	0.728	141896.428
Instance4776.11	0.734	142743.493
Instance4776.12	0.731	142436.010
Instance4776.13	0.731	142439.028
Instance4776.14	0.737	143455.270
Instance4776.15	0.734	143024.214
Instance4776.16	0.733	142815.222
Instance4776.17	0.731	142218.168
Instance4776.18	0.732	142543.344
Instance4776.19	0.732	142501.591
Instance4776.20	0.736	143187.933
Instance4776.21	0.730	142083.603
Instance4776.22	0.733	142740.313
Instance4776.23	0.734	143054.207
Instance4776.24	0.732	142642.045

Total I/O Performance

MSEExchange 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
Instance4776.1	11.548	2.950	49.511	18.219	74299.283	34607.084	0.789	0.073	0.734	4.175	142668.112	20711.319
Instance4776.2	12.168	2.962	49.434	18.269	73699.459	34614.872	0.779	0.074	0.733	4.185	142849.701	20659.245
Instance4776.3	14.099	2.655	49.288	18.251	73380.693	34611.823	1.000	0.080	0.733	4.182	142675.667	20661.782
Instance4776.4	13.924	2.652	49.407	18.212	73816.932	34625.905	0.962	0.081	0.730	4.170	142256.379	20633.535
Instance4776.5	12.927	2.276	49.567	18.312	74004.772	34610.438	2.233	0.080	0.734	4.204	142791.972	20578.147
Instance4776.6	13.498	2.287	49.324	18.191	73457.147	34610.877	2.271	0.078	0.729	4.162	142089.792	20650.469
Instance4776.7	11.844	1.924	49.642	18.332	74155.786	34607.488	1.149	0.075	0.732	4.186	142449.947	20608.183
Instance4776.8	12.104	1.946	49.456	18.267	73864.973	34622.396	1.142	0.073	0.734	4.201	142933.455	20603.038
Instance4776.9	11.867	1.573	49.597	18.308	74160.533	34618.208	1.310	0.075	0.734	4.204	142817.938	20593.764
Instance4776.10	12.300	1.590	49.526	18.273	73764.101	34597.780	1.326	0.073	0.728	4.183	141896.428	20537.718
Instance4776.11	12.043	1.283	49.507	18.219	74207.930	34617.002	1.291	0.074	0.734	4.186	142743.493	20642.523
Instance4776.12	12.401	1.299	49.464	18.247	73807.108	34612.858	1.298	0.075	0.731	4.182	142436.010	20597.645
Instance4776.13	11.865	1.119	49.543	18.202	74208.053	34613.384	1.328	0.074	0.731	4.182	142439.028	20609.221
Instance4776.14	12.193	1.127	49.374	18.237	73913.597	34615.346	1.330	0.073	0.737	4.190	143455.270	20714.558
Instance4776.15	11.666	2.115	49.481	18.219	74302.388	34621.928	0.745	0.068	0.734	4.177	143024.214	20753.778
Instance4776.16	12.079	2.122	49.489	18.321	73659.156	34605.943	0.731	0.067	0.733	4.191	142815.222	20644.576
Instance4776.17	11.621	1.900	49.497	18.158	74293.069	34614.588	0.830	0.067	0.731	4.167	142218.168	20729.089
Instance4776.18	12.040	1.903	49.417	18.231	73751.213	34609.932	0.824	0.067	0.732	4.190	142543.344	20619.707
Instance4776.19	11.572	1.661	49.612	18.303	74201.631	34606.518	1.010	0.067	0.732	4.186	142501.591	20601.103
Instance4776.20	12.094	1.665	49.357	18.235	73759.154	34618.295	1.003	0.067	0.736	4.188	143187.933	20737.403
Instance4776.21	11.654	1.558	49.641	18.275	74178.440	34607.577	1.009	0.068	0.730	4.186	142083.603	20560.836
Instance4776.22	12.079	1.553	49.402	18.202	73761.652	34612.236	1.022	0.067	0.733	4.184	142740.313	20649.128
Instance4776.23	11.615	1.595	49.588	18.284	74246.741	34598.333	1.044	0.069	0.734	4.198	143054.207	20623.502
Instance4776.24	12.097	1.590	49.460	18.261	73703.790	34607.901	1.075	0.067	0.732	4.168	142642.045	20711.596

Counter	Average	Minimum	Maximum
% Processor Time	0.453	0.132	0.973
Available MBytes	149335.573	149296.000	149845.000
Free System Page Table Entries	16511078.633	16509896.000	16511404.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	127843412.531	127352832.000	127975424.000
Pool Paged Bytes	150077352.259	143495168.000	150634496.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

[illegible]

9/24/2014 10:55:48 AM -- Instance4776.16 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.16 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.17 has 11.6 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.17 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.17 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.18 has 12.0 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.18 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.18 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.19 has 11.6 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.19 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.19 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.20 has 12.1 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.20 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.20 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.21 has 11.7 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.21 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.21 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.22 has 12.1 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.22 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.22 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.23 has 11.6 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.23 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.23 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.24 has 12.1 for I/O Database Reads Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.24 has 0.1 for I/O Log Writes Average Latency.
 9/24/2014 10:55:48 AM -- Instance4776.24 has 0.1 for I/O Log Reads Average Latency.
 9/24/2014 10:55:48 AM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 9/24/2014 10:55:48 AM -- The test has 0 Database Page Fault Stalls/sec samples higher than 0.
 9/24/2014 10:55:48 AM -- C:\Users\Administrator\Desktop\Ajith\Exch3\28T-24hrs\Stress_2014_9_23_10_46_46.xml has 5741 samples queried.

C Database Backup Test Result Report

C.1 Server 1

Microsoft Exchange Jetstress 2013

Database backup Test Result Report

Database Backup Statistics - All			
Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance2436.1	1529120.03	02:35:34	163.82
Instance2436.2	1529128.03	03:09:04	134.79
Instance2436.3	1529120.03	05:44:21	74.01
Instance2436.4	1529128.03	06:31:09	65.15
Instance2436.5	1529112.03	02:29:19	170.67
Instance2436.6	1529120.03	03:01:30	140.41
Instance2436.7	1529112.03	02:29:57	169.95
Instance2436.8	1529120.03	03:00:29	141.20
Instance2436.9	1529112.03	02:34:09	165.32
Instance2436.10	1529128.03	03:04:40	138.00
Instance2436.11	1529112.03	02:31:04	168.69
Instance2436.12	1529120.03	03:03:53	138.59
Instance2436.13	1529112.03	02:29:21	170.63
Instance2436.14	1529112.03	03:05:02	137.72
Instance2436.15	1529112.03	02:27:28	172.81
Instance2436.16	1529128.03	03:04:13	138.34
Instance2436.17	1529112.03	02:28:17	171.87
Instance2436.18	1529112.03	03:01:02	140.77
Instance2436.19	1529104.03	02:31:53	167.78
Instance2436.20	1529128.03	03:04:21	138.24
Instance2436.21	1529136.03	02:30:17	169.58
Instance2436.22	1529128.03	03:00:42	141.03
Instance2436.23	1529128.03	02:29:01	171.01
Instance2436.24	1529120.03	03:04:47	137.92
Avg			147.01
Sum			3528.31

Jetstress System Parameters	
Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration	
Instance2436.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance2436.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance2436.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance2436.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance2436.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance2436.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance2436.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance2436.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance2436.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance2436.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb
Instance2436.11	Log path: C:\VOL6\DB11 Database: C:\VOL6\DB11\Jetstress011001.edb
Instance2436.12	Log path: C:\VOL6\DB12 Database: C:\VOL6\DB12\Jetstress012001.edb
Instance2436.13	Log path: C:\VOL7\DB13 Database: C:\VOL7\DB13\Jetstress013001.edb
Instance2436.14	Log path: C:\VOL7\DB14 Database: C:\VOL7\DB14\Jetstress014001.edb
Instance2436.15	Log path: C:\VOL8\DB15 Database: C:\VOL8\DB15\Jetstress015001.edb
Instance2436.16	Log path: C:\VOL8\DB16 Database: C:\VOL8\DB16\Jetstress016001.edb
Instance2436.17	Log path: C:\VOL9\DB17 Database: C:\VOL9\DB17\Jetstress017001.edb
Instance2436.18	Log path: C:\VOL9\DB18 Database: C:\VOL9\DB18\Jetstress018001.edb
Instance2436.19	Log path: C:\VOL10\DB19 Database: C:\VOL10\DB19\Jetstress019001.edb
Instance2436.20	Log path: C:\VOL10\DB20 Database: C:\VOL10\DB20\Jetstress020001.edb

Instance2436.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance2436.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance2436.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance2436.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.edb

Transactional I/O Performance

MSEExchange 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
Instance2436.1	2.439	0.000	657.519	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.2	2.868	0.000	540.001	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.3	13.669	0.000	295.329	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.4	13.080	0.000	260.058	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.5	2.140	0.000	683.345	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.6	2.635	0.000	561.643	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.7	2.305	0.000	680.419	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.8	2.680	0.000	564.934	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.9	2.520	0.000	661.208	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.10	2.873	0.000	552.014	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.11	2.450	0.000	676.405	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.12	2.838	0.000	554.482	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.13	2.530	0.000	683.288	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.14	2.768	0.000	551.050	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.15	2.105	0.000	692.548	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.16	2.674	0.000	553.217	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.17	2.126	0.000	687.971	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.18	2.625	0.000	563.032	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.19	2.171	0.000	672.055	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.20	2.676	0.000	552.567	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.21	2.154	0.000	678.790	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.22	2.624	0.000	563.938	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.23	2.126	0.000	685.528	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance2436.24	2.690	0.000	551.533	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	1.618	0.013	4.144
Available MBytes	155871.198	155845.000	155890.000
Free System Page Table Entries	16511636.959	16511070.000	16511876.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	128911881.834	128827392.000	129019904.000
Pool Paged Bytes	159086673.291	158814208.000	168898560.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/22/2014 12:02:26 AM -- Preparing for testing ...
9/22/2014 12:02:51 AM -- Attaching databases ...
9/22/2014 12:02:51 AM -- Preparations for testing are complete.
9/22/2014 12:03:17 AM -- Performance logging started (Interval: 30000 ms).
9/22/2014 12:03:17 AM -- Backing up databases ...
9/22/2014 6:34:27 AM -- Performance logging has ended.
9/22/2014 6:34:27 AM -- Instance2436.1 (100% processed), Instance2436.2 (100% processed), Instance2436.3 (100% processed), Instance2436.4 (100% processed), Instance2436.5 (100% processed), Instance2436.6 (100% processed), Instance2436.7 (100% processed), Instance2436.8 (100% processed), Instance2436.9 (100% processed), Instance2436.10 (100% processed), Instance2436.11 (100% processed), Instance2436.12 (100% processed), Instance2436.13 (100% processed), Instance2436.14 (100% processed), Instance2436.15 (100% processed), Instance2436.16 (100% processed), Instance2436.17 (100% processed), Instance2436.18 (100% processed), Instance2436.19 (100% processed), Instance2436.20 (100% processed), Instance2436.21 (100% processed), Instance2436.22 (100% processed), Instance2436.23 (100% processed) and Instance2436.24 (100% processed)
9/22/2014 6:34:27 AM -- C:\Users\Administrator\Desktop\Ajith\28T-DB Backup\DatabaseBackup_2014_9_22_0_2_51.blg has 781 samples.
9/22/2014 6:34:27 AM -- Creating test report ...

C.2 Server 2

Microsoft Exchange Jetstress 2013

Database backup Test Result Report

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance3900.1	891304.03	02:20:49	105.48
Instance3900.2	891312.03	01:41:23	146.51
Instance3900.3	891304.03	01:41:53	145.80
Instance3900.4	891312.03	02:16:36	108.74
Instance3900.5	891296.03	02:18:55	106.92
Instance3900.6	891304.03	01:47:02	138.77
Instance3900.7	891312.03	01:46:51	139.01
Instance3900.8	891320.03	02:17:32	108.01
Instance3900.9	891304.03	01:46:48	139.09
Instance3900.10	891312.03	02:21:19	105.11
Instance3900.11	891312.03	01:46:46	139.12
Instance3900.12	891304.03	02:19:24	106.56
Instance3900.13	891304.03	01:46:56	138.90
Instance3900.14	891304.03	02:18:42	107.10
Instance3900.15	891320.03	01:40:36	147.64
Instance3900.16	891312.03	01:43:51	143.03
Instance3900.17	891296.03	01:41:42	146.05
Instance3900.18	891296.03	01:43:54	142.97
Instance3900.19	891304.03	01:42:04	145.54
Instance3900.20	891304.03	01:44:38	141.96

Instance3900.21	891296.03	01:40:43	147.48
Instance3900.22	891312.03	01:43:33	143.46
Instance3900.23	891304.03	01:41:22	146.54
Instance3900.24	891304.03	01:44:14	142.52
Avg			132.60
Sum			3182.30

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance3900.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance3900.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance3900.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance3900.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance3900.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance3900.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance3900.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance3900.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance3900.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance3900.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb
Instance3900.11	Log path: C:\VOL6\DB11 Database: C:\VOL6\DB11\Jetstress011001.edb
Instance3900.12	Log path: C:\VOL6\DB12 Database: C:\VOL6\DB12\Jetstress012001.edb
Instance3900.13	Log path: C:\VOL7\DB13 Database: C:\VOL7\DB13\Jetstress013001.edb
Instance3900.14	Log path: C:\VOL7\DB14 Database: C:\VOL7\DB14\Jetstress014001.edb
Instance3900.15	Log path: C:\VOL8\DB15 Database: C:\VOL8\DB15\Jetstress015001.edb
Instance3900.16	Log path: C:\VOL8\DB16 Database: C:\VOL8\DB16\Jetstress016001.edb
Instance3900.17	Log path: C:\VOL9\DB17 Database: C:\VOL9\DB17\Jetstress017001.edb
Instance3900.18	Log path: C:\VOL9\DB18 Database: C:\VOL9\DB18\Jetstress018001.edb
Instance3900.19	Log path: C:\VOL10\DB19 Database: C:\VOL10\DB19\Jetstress019001.edb
Instance3900.20	Log path: C:\VOL10\DB20 Database: C:\VOL10\DB20\Jetstress020001.edb
Instance3900.21	Log path: C:\VOL11\DB21 Database: C:\VOL11\DB21\Jetstress021001.edb
Instance3900.22	Log path: C:\VOL11\DB22 Database: C:\VOL11\DB22\Jetstress022001.edb
Instance3900.23	Log path: C:\VOL12\DB23 Database: C:\VOL12\DB23\Jetstress023001.edb
Instance3900.24	Log path: C:\VOL12\DB24 Database: C:\VOL12\DB24\Jetstress024001.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
Instance3900.1	3.582	0.000	421.749	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.2	2.737	0.000	586.012	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.3	2.738	0.000	583.105	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.4	3.527	0.000	434.496	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.5	3.626	0.000	427.409	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.6	2.855	0.000	554.646	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.7	2.854	0.000	555.718	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.8	3.604	0.000	431.646	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.9	2.853	0.000	556.158	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.10	3.579	0.000	420.260	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.11	2.845	0.000	556.332	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.12	3.637	0.000	425.954	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.13	2.856	0.000	555.530	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.14	3.634	0.000	427.861	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.15	2.719	0.000	590.481	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.16	2.790	0.000	572.041	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.17	2.727	0.000	584.149	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.18	2.777	0.000	571.692	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.19	2.743	0.000	580.992	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.20	2.795	0.000	567.601	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.21	2.722	0.000	589.880	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.22	2.786	0.000	573.664	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.23	2.733	0.000	585.973	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance3900.24	2.793	0.000	570.042	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	2.736	0.245	3.609
Available MBytes	187259.202	187247.000	187284.000
Free System Page Table Entries	16483123.915	16482869.000	16483428.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	144916567.149	144891904.000	144941056.000
Pool Paged Bytes	133099825.021	133095424.000	133107712.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/15/2014 10:49:01 AM -- Preparing for testing ...
9/15/2014 10:49:25 AM -- Attaching databases ...
9/15/2014 10:49:25 AM -- Preparations for testing are complete.
9/15/2014 10:49:51 AM -- Performance logging started (Interval: 30000 ms).
9/15/2014 10:49:51 AM -- Backing up databases ...
9/15/2014 1:11:12 PM -- Performance logging has ended.
9/15/2014 1:11:12 PM -- Instance3900.1 (100% processed), Instance3900.2 (100% processed), Instance3900.3 (100% processed), Instance3900.4 (100% processed), Instance3900.5 (100% processed), Instance3900.6 (100% processed), Instance3900.7 (100% processed), Instance3900.8 (100% processed), Instance3900.9 (100% processed), Instance3900.10 (100% processed), Instance3900.11 (100% processed), Instance3900.12 (100% processed), Instance3900.13 (100% processed), Instance3900.14 (100% processed), Instance3900.15 (100% processed), Instance3900.16 (100% processed), Instance3900.17 (100% processed), Instance3900.18 (100% processed), Instance3900.19 (100% processed), Instance3900.20 (100% processed), Instance3900.21 (100% processed), Instance3900.22 (100% processed), Instance3900.23 (100% processed) and Instance3900.24 (100% processed)
9/15/2014 1:11:12 PM -- C:\Users\Administrator\Desktop\Ajith\28T-DB Backup\DatabaseBackup_2014_9_15_10_49_25.blg has 282 samples.
9/15/2014 1:11:12 PM -- Creating test report ...

C.3 Server 3

Microsoft Exchange Jetstress 2013

Database backup Test Result Report

Database Backup Statistics - All

Database Instance	Database Size (MBytes)	Elapsed Backup Time	MBytes Transferred/sec
Instance5160.1	1529624.03	02:34:20	165.18
Instance5160.2	1529624.03	03:08:03	135.57
Instance5160.3	1529616.03	06:02:29	70.33
Instance5160.4	1529624.03	06:46:03	62.78
Instance5160.5	1529608.03	02:29:12	170.86
Instance5160.6	1529616.03	03:02:58	139.33
Instance5160.7	1529616.03	02:30:21	169.56
Instance5160.8	1529624.03	03:01:05	140.78
Instance5160.9	1529600.03	02:32:00	167.71
Instance5160.10	1529624.03	03:08:13	135.45
Instance5160.11	1529608.03	02:31:58	167.74
Instance5160.12	1529616.03	03:04:21	138.29
Instance5160.13	1529608.03	02:32:28	167.19
Instance5160.14	1529608.03	03:03:07	139.22
Instance5160.15	1529608.03	02:32:04	167.63
Instance5160.16	1529624.03	03:01:38	140.36
Instance5160.17	1529616.03	02:27:15	173.12
Instance5160.18	1529616.03	03:01:19	140.59
Instance5160.19	1529600.03	02:31:12	168.61
Instance5160.20	1529624.03	03:04:07	138.46

Instance5160.21	1529640.03	02:28:13	172.00
Instance5160.22	1529632.03	03:03:28	138.95
Instance5160.23	1529632.03	02:29:37	170.38
Instance5160.24	1529624.03	03:05:13	137.64
Avg			146.57
Sum			3517.72

Jetstress System Parameters

Thread Count	28
Minimum Database Cache	768.0 MB
Maximum Database Cache	6144.0 MB
Insert Operations	40%
Delete Operations	20%
Replace Operations	5%
Read Operations	35%
Lazy Commits	70%

Database Configuration

Instance5160.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance5160.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance5160.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance5160.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance5160.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance5160.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance5160.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance5160.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance5160.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance5160.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance5160.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance5160.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance5160.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance5160.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance5160.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance5160.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance5160.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance5160.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance5160.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance5160.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance5160.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance5160.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance5160.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance5160.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance5160.1	2.220	0.000	662.126	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.2	2.838	0.000	542.605	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.3	14.542	0.000	280.558	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.4	13.963	0.000	250.652	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.5	2.293	0.000	683.630	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.6	2.676	0.000	557.304	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.7	2.327	0.000	678.956	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.8	2.673	0.000	563.220	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.9	2.536	0.000	672.211	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.10	2.917	0.000	541.852	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.11	2.694	0.000	672.173	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.12	2.777	0.000	553.251	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.13	2.526	0.000	669.923	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.14	2.860	0.000	557.083	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.15	2.202	0.000	672.147	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.16	2.658	0.000	561.459	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.17	2.178	0.000	692.907	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.18	2.659	0.000	562.253	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.19	2.204	0.000	674.543	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.20	2.681	0.000	553.898	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.21	2.237	0.000	688.176	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.22	2.681	0.000	555.768	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.23	2.219	0.000	683.422	0.000	262144.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Instance5160.24	2.715	0.000	550.398	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	1.491	0.000	4.046
Available MBytes	155956.380	155935.000	155978.000
Free System Page Table Entries	16511792.406	16511385.000	16512035.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	126062026.338	126046208.000	126099456.000
Pool Paged Bytes	141266752.079	141074432.000	150847488.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

9/22/2014 10:48:02 PM -- Preparing for testing ...
 9/22/2014 10:48:26 PM -- Attaching databases ...
 9/22/2014 10:48:26 PM -- Preparations for testing are complete.
 9/22/2014 10:48:52 PM -- Performance logging started (Interval: 30000 ms).
 9/22/2014 10:48:52 PM -- Backing up databases ...
 9/23/2014 5:34:56 AM -- Performance logging has ended.
 9/23/2014 5:34:56 AM -- Instance5160.1 (100% processed), Instance5160.2 (100% processed), Instance5160.3 (100% processed), Instance5160.4 (100% processed), Instance5160.5 (100% processed), Instance5160.6 (100% processed), Instance5160.7 (100% processed), Instance5160.8 (100% processed), Instance5160.9 (100% processed), Instance5160.10 (100% processed), Instance5160.11 (100% processed), Instance5160.12 (100% processed), Instance5160.13 (100% processed), Instance5160.14 (100% processed), Instance5160.15 (100% processed), Instance5160.16 (100% processed), Instance5160.17 (100% processed), Instance5160.18 (100% processed), Instance5160.19 (100% processed), Instance5160.20 (100% processed), Instance5160.21 (100% processed), Instance5160.22 (100% processed), Instance5160.23 (100% processed) and Instance5160.24 (100% processed)
 9/23/2014 5:34:56 AM -- C:\Users\Administrator\Desktop\Ajith\Exch3\28T-DB backup\DatabaseBackup_2014_9_22_22_48_26.blg has 811 samples.
 9/23/2014 5:34:56 AM -- Creating test report ...

D Soft Recovery test Result Report

D.1 Server 1

Microsoft Exchange Jetstress 2013

SoftRecovery Test Result Report

Soft-Recovery Statistics - All

Database Instance	Log files replayed	Elapsed seconds
Instance6012.1	513	1471.3409582
Instance6012.2	506	1468.5296222
Instance6012.3	503	1408.7740281
Instance6012.4	508	1547.9589989
Instance6012.5	512	1508.1918817
Instance6012.6	515	1508.4575065
Instance6012.7	512	1473.912499
Instance6012.8	511	1456.2441975
Instance6012.9	501	1446.4877685
Instance6012.10	514	1457.7686469
Instance6012.11	501	1450.360923
Instance6012.12	508	1451.6447455
Instance6012.13	510	1454.4426313
Instance6012.14	503	1438.7296116
Instance6012.15	510	1447.5276888
Instance6012.16	506	1447.7930272
Instance6012.17	511	1441.5719875
Instance6012.18	505	1434.8694551
Instance6012.19	507	1451.3928357
Instance6012.20	512	1451.6447455
Instance6012.21	508	1471.592512
Instance6012.22	516	1472.3762496
Instance6012.23	508	1462.3650194
Instance6012.24	505	1462.3650194
Avg	508	1461.931
Sum	12205	35086.3425591

Database Configuration

Instance6012.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance6012.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance6012.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance6012.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance6012.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance6012.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance6012.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance6012.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance6012.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance6012.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb

Instance6012.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance6012.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance6012.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance6012.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance6012.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance6012.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance6012.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance6012.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance6012.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance6012.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance6012.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance6012.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance6012.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance6012.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.edb

Transactional I/O Performance												
MSEExchange 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
Instance6012.1	30.127	7.859	145.019	1.392	38370.437	32677.978	9.420	0.000	1.740	0.000	209083.671	0.000
Instance6012.2	30.024	7.622	145.335	1.376	38490.000	32768.000	8.270	0.000	1.720	0.000	209688.549	0.000
Instance6012.3	29.206	7.455	150.558	1.427	38624.795	32768.000	11.119	0.000	1.784	0.000	209682.019	0.000
Instance6012.4	33.081	8.148	136.349	1.310	38571.580	32768.000	5.023	0.000	1.637	0.000	209708.058	0.000
Instance6012.5	30.764	7.740	142.265	1.356	38443.037	32592.300	10.711	0.000	1.694	0.000	208629.030	0.000
Instance6012.6	31.425	7.338	141.872	1.366	38346.835	32768.000	9.177	0.000	1.708	0.000	209684.304	0.000
Instance6012.7	30.847	7.965	143.036	1.388	38472.408	32678.225	6.993	0.000	1.741	0.000	209162.793	0.000
Instance6012.8	29.635	7.381	146.893	1.402	38451.026	32768.000	12.213	0.000	1.752	0.000	209700.784	0.000
Instance6012.9	29.903	7.028	146.620	1.384	38487.300	32676.469	11.948	0.000	1.731	0.000	209110.021	0.000
Instance6012.10	30.061	7.586	147.022	1.409	38574.367	32768.000	6.182	0.000	1.767	0.000	209751.355	0.000
Instance6012.11	30.128	7.578	145.721	1.379	38603.415	32676.724	9.593	0.000	1.723	0.000	207847.918	0.000
Instance6012.12	30.336	7.257	145.169	1.397	38639.158	32585.448	7.001	0.000	1.746	0.000	208502.215	0.000
Instance6012.13	30.707	7.284	145.040	1.402	38395.084	32768.000	7.742	0.000	1.752	0.000	209708.382	0.000
Instance6012.14	29.977	8.197	146.024	1.395	38469.425	32768.000	9.931	0.000	1.744	0.000	209718.337	0.000
Instance6012.15	29.292	7.446	146.783	1.409	38463.202	32768.000	7.643	0.000	1.762	0.000	209687.895	0.000
Instance6012.16	29.414	7.808	147.163	1.396	38577.143	32768.000	9.542	0.000	1.744	0.000	209639.360	0.000
Instance6012.17	28.799	7.433	149.328	1.416	38519.745	32768.000	7.257	0.000	1.776	0.000	209127.002	0.000
Instance6012.18	28.984	7.692	148.454	1.405	38458.588	32768.000	9.107	0.000	1.756	0.000	209113.107	0.000
Instance6012.19	29.539	7.858	147.070	1.396	38481.713	32676.724	7.458	0.000	1.743	0.000	209135.907	0.000
Instance6012.20	29.652	7.918	146.183	1.408	38552.482	32768.000	7.702	0.000	1.760	0.000	209683.240	0.000
Instance6012.21	30.021	7.640	144.329	1.381	38408.317	32768.000	11.018	0.000	1.726	0.000	209664.755	0.000
Instance6012.22	29.830	8.000	146.163	1.400	38443.640	32768.000	8.972	0.000	1.750	0.000	209729.753	0.000
Instance6012.23	29.727	7.471	145.635	1.388	38370.700	32768.000	8.564	0.000	1.735	0.000	209717.445	0.000
Instance6012.24	29.749	7.849	145.933	1.377	38407.583	32768.000	10.160	0.000	1.722	0.000	209732.356	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance6012.1	0.000	0.000
Instance6012.2	0.000	0.000
Instance6012.3	0.000	0.000
Instance6012.4	0.000	0.000
Instance6012.5	0.000	0.000
Instance6012.6	0.000	0.000
Instance6012.7	0.000	0.000
Instance6012.8	0.000	0.000
Instance6012.9	0.000	0.000
Instance6012.10	0.000	0.000
Instance6012.11	0.000	0.000
Instance6012.12	0.000	0.000
Instance6012.13	0.000	0.000
Instance6012.14	0.000	0.000
Instance6012.15	0.000	0.000
Instance6012.16	0.000	0.000
Instance6012.17	0.000	0.000
Instance6012.18	0.000	0.000
Instance6012.19	0.000	0.000
Instance6012.20	0.000	0.000
Instance6012.21	0.000	0.000
Instance6012.22	0.000	0.000
Instance6012.23	0.000	0.000
Instance6012.24	0.000	0.000

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
Instance6012.1	30.127	7.859	145.019	1.392	38370.437	32677.978	9.420	0.000	1.740	0.000	209083.671	0.000
Instance6012.2	30.024	7.622	145.335	1.376	38490.000	32768.000	8.270	0.000	1.720	0.000	209688.549	0.000
Instance6012.3	29.206	7.455	150.558	1.427	38624.795	32768.000	11.119	0.000	1.784	0.000	209682.019	0.000
Instance6012.4	33.081	8.148	136.349	1.310	38571.580	32768.000	5.023	0.000	1.637	0.000	209708.058	0.000
Instance6012.5	30.764	7.740	142.265	1.356	38443.037	32592.300	10.711	0.000	1.694	0.000	208629.030	0.000
Instance6012.6	31.425	7.338	141.872	1.366	38346.835	32768.000	9.177	0.000	1.708	0.000	209684.304	0.000
Instance6012.7	30.847	7.965	143.036	1.388	38472.408	32678.225	6.993	0.000	1.741	0.000	209162.793	0.000
Instance6012.8	29.635	7.381	146.893	1.402	38451.026	32768.000	12.213	0.000	1.752	0.000	209700.784	0.000
Instance6012.9	29.903	7.028	146.620	1.384	38487.300	32676.469	11.948	0.000	1.731	0.000	209110.021	0.000
Instance6012.10	30.061	7.586	147.022	1.409	38574.367	32768.000	6.182	0.000	1.767	0.000	209751.355	0.000
Instance6012.11	30.128	7.578	145.721	1.379	38603.415	32676.724	9.593	0.000	1.723	0.000	207847.918	0.000
Instance6012.12	30.336	7.257	145.169	1.397	38639.158	32585.448	7.001	0.000	1.746	0.000	208502.215	0.000
Instance6012.13	30.707	7.284	145.040	1.402	38395.084	32768.000	7.742	0.000	1.752	0.000	209708.382	0.000
Instance6012.14	29.977	8.197	146.024	1.395	38469.425	32768.000	9.931	0.000	1.744	0.000	209718.337	0.000
Instance6012.15	29.292	7.446	146.783	1.409	38463.202	32768.000	7.643	0.000	1.762	0.000	209687.895	0.000
Instance6012.16	29.414	7.808	147.163	1.396	38577.143	32768.000	9.542	0.000	1.744	0.000	209639.360	0.000
Instance6012.17	28.799	7.433	149.328	1.416	38519.745	32768.000	7.257	0.000	1.776	0.000	209127.002	0.000
Instance6012.18	28.984	7.692	148.454	1.405	38458.588	32768.000	9.107	0.000	1.756	0.000	209113.107	0.000
Instance6012.19	29.539	7.858	147.070	1.396	38481.713	32676.724	7.458	0.000	1.743	0.000	209135.907	0.000
Instance6012.20	29.652	7.918	146.183	1.408	38552.482	32768.000	7.702	0.000	1.760	0.000	209683.240	0.000
Instance6012.21	30.021	7.640	144.329	1.381	38408.317	32768.000	11.018	0.000	1.726	0.000	209664.755	0.000
Instance6012.22	29.830	8.000	146.163	1.400	38443.640	32768.000	8.972	0.000	1.750	0.000	209729.753	0.000
Instance6012.23	29.727	7.471	145.635	1.388	38370.700	32768.000	8.564	0.000	1.735	0.000	209717.445	0.000
Instance6012.24	29.749	7.849	145.933	1.377	38407.583	32768.000	10.160	0.000	1.722	0.000	209732.356	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.993	0.000	1.866
Available MBytes	149615.568	149313.000	155594.000
Free System Page Table Entries	16511443.505	16511067.000	16511699.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	129388341.333	129273856.000	129495040.000
Pool Paged Bytes	161687850.667	161681408.000	161738752.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

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D.2 Server 2

Microsoft Exchange Jetstress 2013

SoftRecovery Test Result Report

Soft-Recovery Statistics - All		
Database Instance	Log files replayed	Elapsed seconds
Instance1312.1	510	1422.7055763
Instance1312.2	511	1357.1827223
Instance1312.3	511	1353.7927391
Instance1312.4	501	1415.1656943
Instance1312.5	508	1508.4319678
Instance1312.6	506	1511.265021
Instance1312.7	506	1524.9956673
Instance1312.8	509	1504.2685038
Instance1312.9	517	1500.1521807
Instance1312.10	501	1479.9876505
Instance1312.11	511	1509.4549515
Instance1312.12	516	1506.869515
Instance1312.13	514	1539.1416296
Instance1312.14	511	1527.6337452
Instance1312.15	510	1281.0735085
Instance1312.16	512	1281.3245169
Instance1312.17	509	1274.6197448
Instance1312.18	512	1275.4001743
Instance1312.19	510	1281.3245169
Instance1312.20	512	1283.9153235
Instance1312.21	504	1264.1978885
Instance1312.22	512	1263.4186823
Instance1312.23	510	1285.7157805
Instance1312.24	510	1283.1383114
Avg	509	1393.132
Sum	12233	33435.176012

Database Configuration

Instance1312.1 Log path: C:\VOL1\DB1
Database: C:\VOL1\DB1\Jetstress001001.edb

Instance1312.2 Log path: C:\VOL1\DB2
Database: C:\VOL1\DB2\Jetstress002001.edb

Instance1312.3 Log path: C:\VOL2\DB3
Database: C:\VOL2\DB3\Jetstress003001.edb

Instance1312.4 Log path: C:\VOL2\DB4
Database: C:\VOL2\DB4\Jetstress004001.edb

Instance1312.5 Log path: C:\VOL3\DB5
Database: C:\VOL3\DB5\Jetstress005001.edb

Instance1312.6 Log path: C:\VOL3\DB6
Database: C:\VOL3\DB6\Jetstress006001.edb

Instance1312.7 Log path: C:\VOL4\DB7
Database: C:\VOL4\DB7\Jetstress007001.edb

Instance1312.8 Log path: C:\VOL4\DB8
Database: C:\VOL4\DB8\Jetstress008001.edb

Instance1312.9 Log path: C:\VOL5\DB9
Database: C:\VOL5\DB9\Jetstress009001.edb

Instance1312.10 Log path: C:\VOL5\DB10
Database: C:\VOL5\DB10\Jetstress010001.edb

Instance1312.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance1312.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance1312.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance1312.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance1312.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance1312.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance1312.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance1312.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance1312.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance1312.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance1312.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance1312.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance1312.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance1312.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.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
Instance1312.1	31.751	7.689	148.005	1.432	38668.855	32768.000	6.505	0.000	1.791	0.000	209129.619	0.000
Instance1312.2	29.091	7.187	156.302	1.501	38468.240	32768.000	15.946	0.000	1.876	0.000	209614.577	0.000
Instance1312.3	29.075	7.609	156.230	1.508	38685.541	32768.000	13.527	0.000	1.885	0.000	209702.115	0.000
Instance1312.4	31.466	7.285	148.874	1.412	38649.873	32673.568	6.766	0.000	1.765	0.000	209036.965	0.000
Instance1312.5	32.197	7.419	141.397	1.346	38516.585	32679.438	13.620	0.000	1.682	0.000	208579.074	0.000
Instance1312.6	32.715	6.880	138.956	1.337	38630.796	32679.677	5.305	0.000	1.671	0.000	209149.930	0.000
Instance1312.7	33.399	7.632	138.232	1.326	38627.513	32680.619	8.326	0.000	1.663	0.000	209197.925	0.000
Instance1312.8	32.320	7.171	140.287	1.350	38605.556	32679.198	15.717	0.000	1.687	0.000	209161.283	0.000
Instance1312.9	32.498	7.862	140.247	1.375	38492.275	32768.000	7.091	0.000	1.718	0.000	209697.603	0.000
Instance1312.10	32.117	7.271	141.858	1.353	38624.850	32677.730	16.302	0.000	1.691	0.000	209118.079	0.000
Instance1312.11	31.598	7.368	140.738	1.350	38577.261	32679.677	8.035	0.000	1.688	0.000	208669.369	0.000
Instance1312.12	32.623	7.725	141.259	1.370	38561.983	32679.438	11.960	0.000	1.712	0.000	209138.342	0.000
Instance1312.13	33.095	7.757	137.428	1.331	38564.844	32768.000	7.884	0.000	1.663	0.000	209715.067	0.000
Instance1312.14	32.215	8.084	141.189	1.336	38555.016	32768.000	15.553	0.000	1.670	0.000	209701.226	0.000
Instance1312.15	27.035	6.717	164.317	1.588	38521.198	32768.000	5.946	0.000	1.986	0.000	209729.321	0.000
Instance1312.16	26.851	7.229	164.809	1.595	38657.228	32768.000	8.187	0.000	1.993	0.000	209720.930	0.000
Instance1312.17	26.824	6.565	165.085	1.597	38526.102	32768.000	6.552	0.000	1.996	0.000	209715.200	0.000
Instance1312.18	27.231	6.433	164.960	1.603	38583.880	32768.000	6.939	0.000	2.004	0.000	209655.013	0.000
Instance1312.19	27.007	6.824	163.589	1.588	38575.431	32768.000	8.600	0.000	1.985	0.000	209687.051	0.000
Instance1312.20	27.635	7.418	163.451	1.593	38617.434	32768.000	5.891	0.000	1.991	0.000	209737.673	0.000
Instance1312.21	26.593	6.859	166.300	1.590	38606.088	32768.000	6.800	0.000	1.987	0.000	209715.037	0.000
Instance1312.22	26.421	6.675	167.243	1.622	38671.111	32768.000	7.774	0.000	2.027	0.000	209687.012	0.000
Instance1312.23	27.138	6.798	163.759	1.583	38532.048	32768.000	6.029	0.000	1.979	0.000	209723.724	0.000
Instance1312.24	26.947	6.965	164.967	1.587	38591.928	32768.000	8.579	0.000	1.983	0.000	209726.624	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance1312.1	0.000	0.000
Instance1312.2	0.000	0.000
Instance1312.3	0.000	0.000
Instance1312.4	0.000	0.000
Instance1312.5	0.000	0.000
Instance1312.6	0.000	0.000
Instance1312.7	0.000	0.000
Instance1312.8	0.000	0.000
Instance1312.9	0.000	0.000
Instance1312.10	0.000	0.000
Instance1312.11	0.000	0.000
Instance1312.12	0.000	0.000
Instance1312.13	0.000	0.000
Instance1312.14	0.000	0.000
Instance1312.15	0.000	0.000
Instance1312.16	0.000	0.000
Instance1312.17	0.000	0.000
Instance1312.18	0.000	0.000
Instance1312.19	0.000	0.000
Instance1312.20	0.000	0.000
Instance1312.21	0.000	0.000
Instance1312.22	0.000	0.000
Instance1312.23	0.000	0.000
Instance1312.24	0.000	0.000

Instance1312.23	27.138	6.798	163.759	1.583	38532.048	32768.000	6.029	0.000	1.979	0.000	209723.724	0.000
Instance1312.24	26.947	6.965	164.967	1.587	38591.928	32768.000	8.579	0.000	1.983	0.000	209726.624	0.000

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9/15/2014 5:59:21 PM -- Instance1312.4 has 13.1 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.4 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.4 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.5 has 16.4 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.5 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.5 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.6 has 16.2 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.6 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.6 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.7 has 16.3 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.7 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.7 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.8 has 16.5 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.8 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.8 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.9 has 16.0 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.9 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.9 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.10 has 16.0 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.10 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.10 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.11 has 15.8 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.11 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.11 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.12 has 16.0 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.12 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.12 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.13 has 15.9 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.13 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.13 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.14 has 15.8 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.14 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.14 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.15 has 11.3 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.15 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.15 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.16 has 11.3 for I/O Database Reads Average Latency.

 9/15/2014 5:59:21 PM -- Instance1312.17 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.17 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.18 has 11.0 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.18 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.18 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.19 has 11.4 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.19 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.19 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.20 has 11.3 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.20 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.20 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.21 has 11.3 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.21 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.21 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.22 has 11.2 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.22 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.22 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.23 has 11.2 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.23 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.23 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.24 has 11.1 for I/O Database Reads Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.24 has 0.1 for I/O Log Writes Average Latency.
 9/15/2014 5:59:21 PM -- Instance1312.24 has 0.1 for I/O Log Reads Average Latency.
 9/15/2014 5:59:21 PM -- Test has 0 Maximum Database Page Fault Stalls/sec.
 9/15/2014 5:59:21 PM -- The test has 0 Database Page Fault Stalls/sec samples higher than 0.
 9/15/2014 5:59:21 PM -- C:\Users\Administrator\Desktop\Ajith\28T-Soft Recovery\Performance 2014 9 15 14 55 59.xml has 726 samples queried.
 9/15/2014 5:59:21 PM -- C:\Users\Administrator\Desktop\Ajith\28T-Soft Recovery\Performance 2014 9 15 14 55 59.html was saved.
 9/15/2014 5:59:24 PM -- Performance logging started (interval: 4000 ms).
 9/15/2014 5:59:24 PM -- Recovering databases ...
 9/15/2014 6:25:03 PM -- Performance logging has ended.
 9/15/2014 6:25:03 PM -- Instance1312.1 (1422.7055763), Instance1312.2 (1357.182723), Instance1312.3 (1353.7927391), Instance1312.4 (1415.1656943), Instance1312.5 (1508.4319678), Instance1312.6 (1511.265021), Instance1312.7 (1524.9956673), Instance1312.8 (1504.2685038), Instance1312.9 (1500.1521807), Instance1312.10 (1479.9876505), Instance1312.11 (1509.4549515), Instance1312.12 (1506.869515), Instance1312.13 (1539.1416296), Instance1312.14 (1527.6337452), Instance1312.15 (1281.0735085), Instance1312.16 (1281.3245169), Instance1312.17 (1274.6197448), Instance1312.18 (1275.4001743), Instance1312.19 (1281.3245169), Instance1312.20 (1283.9153235), Instance1312.21 (1264.1978885), Instance1312.22 (1263.4186823), Instance1312.23 (1285.7157805) and Instance1312.24 (1283.1383114)
 9/15/2014 6:25:05 PM -- C:\Users\Administrator\Desktop\Ajith\28T-Soft Recovery\SoftRecovery 2014 9 15 17 59 21.blg has 379 samples.
 9/15/2014 6:25:05 PM -- Creating test report ...

D.3 Server 3

Microsoft Exchange Jetstress 2013

SoftRecovery Test Result Report

Soft-Recovery Statistics - All		
Database Instance	Log files replayed	Elapsed seconds
Instance5684.1	505	1467.2218281
Instance5684.2	514	1469.5294775
Instance5684.3	507	1423.7853501
Instance5684.4	501	1553.1685277
Instance5684.5	510	1515.79132
Instance5684.6	511	1515.540096
Instance5684.7	511	1477.2435404
Instance5684.8	510	1459.791628
Instance5684.9	503	1455.9715576
Instance5684.10	504	1454.9436119
Instance5684.11	508	1458.269789
Instance5684.12	506	1455.9715576
Instance5684.13	509	1449.2588744
Instance5684.14	512	1444.6414207
Instance5684.15	506	1462.0835929
Instance5684.16	504	1461.8271174
Instance5684.17	507	1454.4307502
Instance5684.18	507	1452.6156388
Instance5684.19	503	1452.1027728
Instance5684.20	508	1455.7173876
Instance5684.21	509	1468.5113937
Instance5684.22	509	1467.2218281
Instance5684.23	509	1454.4307502
Instance5684.24	506	1451.8373806
Avg	507	1465.913
Sum	12179	35181.9071913

Database Configuration

Instance5684.1	Log path: C:\VOL1\DB1 Database: C:\VOL1\DB1\Jetstress001001.edb
Instance5684.2	Log path: C:\VOL1\DB2 Database: C:\VOL1\DB2\Jetstress002001.edb
Instance5684.3	Log path: C:\VOL2\DB3 Database: C:\VOL2\DB3\Jetstress003001.edb
Instance5684.4	Log path: C:\VOL2\DB4 Database: C:\VOL2\DB4\Jetstress004001.edb
Instance5684.5	Log path: C:\VOL3\DB5 Database: C:\VOL3\DB5\Jetstress005001.edb
Instance5684.6	Log path: C:\VOL3\DB6 Database: C:\VOL3\DB6\Jetstress006001.edb
Instance5684.7	Log path: C:\VOL4\DB7 Database: C:\VOL4\DB7\Jetstress007001.edb
Instance5684.8	Log path: C:\VOL4\DB8 Database: C:\VOL4\DB8\Jetstress008001.edb
Instance5684.9	Log path: C:\VOL5\DB9 Database: C:\VOL5\DB9\Jetstress009001.edb
Instance5684.10	Log path: C:\VOL5\DB10 Database: C:\VOL5\DB10\Jetstress010001.edb

Instance5684.11 Log path: C:\VOL6\DB11
Database: C:\VOL6\DB11\Jetstress011001.edb

Instance5684.12 Log path: C:\VOL6\DB12
Database: C:\VOL6\DB12\Jetstress012001.edb

Instance5684.13 Log path: C:\VOL7\DB13
Database: C:\VOL7\DB13\Jetstress013001.edb

Instance5684.14 Log path: C:\VOL7\DB14
Database: C:\VOL7\DB14\Jetstress014001.edb

Instance5684.15 Log path: C:\VOL8\DB15
Database: C:\VOL8\DB15\Jetstress015001.edb

Instance5684.16 Log path: C:\VOL8\DB16
Database: C:\VOL8\DB16\Jetstress016001.edb

Instance5684.17 Log path: C:\VOL9\DB17
Database: C:\VOL9\DB17\Jetstress017001.edb

Instance5684.18 Log path: C:\VOL9\DB18
Database: C:\VOL9\DB18\Jetstress018001.edb

Instance5684.19 Log path: C:\VOL10\DB19
Database: C:\VOL10\DB19\Jetstress019001.edb

Instance5684.20 Log path: C:\VOL10\DB20
Database: C:\VOL10\DB20\Jetstress020001.edb

Instance5684.21 Log path: C:\VOL11\DB21
Database: C:\VOL11\DB21\Jetstress021001.edb

Instance5684.22 Log path: C:\VOL11\DB22
Database: C:\VOL11\DB22\Jetstress022001.edb

Instance5684.23 Log path: C:\VOL12\DB23
Database: C:\VOL12\DB23\Jetstress023001.edb

Instance5684.24 Log path: C:\VOL12\DB24
Database: C:\VOL12\DB24\Jetstress024001.edb

Transactional I/O Performance												
MSEExchange 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
Instance5684.1	29.943	7.861	145.003	1.376	38500.837	32587.460	13.144	0.000	1.720	0.000	208549.629	0.000
Instance5684.2	30.148	7.353	144.744	1.395	38293.479	32677.730	6.086	0.000	1.744	0.000	209142.429	0.000
Instance5684.3	29.307	7.385	150.004	1.422	38399.151	32768.000	12.031	0.000	1.778	0.000	209763.592	0.000
Instance5684.4	33.107	7.888	136.498	1.286	38494.887	32597.333	5.245	0.000	1.607	0.000	208076.800	0.000
Instance5684.5	31.544	7.156	140.652	1.343	38350.913	32680.619	7.175	0.000	1.679	0.000	209125.363	0.000
Instance5684.6	31.663	8.259	141.038	1.348	38480.187	32680.619	10.970	0.000	1.685	0.000	208600.347	0.000
Instance5684.7	30.618	7.380	143.471	1.382	38407.047	32768.000	7.883	0.000	1.728	0.000	209734.843	0.000
Instance5684.8	29.991	7.542	146.057	1.398	38581.967	32768.000	10.780	0.000	1.747	0.000	209680.824	0.000
Instance5684.9	30.216	7.259	144.996	1.379	38473.678	32768.000	10.545	0.000	1.724	0.000	209703.384	0.000
Instance5684.10	30.220	7.327	146.006	1.385	38429.886	32768.000	9.262	0.000	1.731	0.000	209642.382	0.000
Instance5684.11	29.945	7.404	145.972	1.392	38458.898	32677.230	10.954	0.000	1.740	0.000	209124.100	0.000
Instance5684.12	29.803	7.248	147.134	1.390	38569.350	32768.000	8.274	0.000	1.738	0.000	209708.382	0.000
Instance5684.13	29.824	7.376	146.816	1.401	38448.632	32768.000	7.258	0.000	1.751	0.000	209715.200	0.000
Instance5684.14	29.654	7.530	146.848	1.416	38417.993	32768.000	11.429	0.000	1.770	0.000	209685.620	0.000
Instance5684.15	30.220	7.688	143.990	1.383	38315.782	32768.000	7.707	0.000	1.735	0.000	209201.224	0.000
Instance5684.16	29.993	7.987	146.035	1.377	38322.516	32768.000	8.733	0.000	1.720	0.000	209142.349	0.000
Instance5684.17	29.433	7.027	146.501	1.393	38430.125	32676.978	9.501	0.000	1.742	0.000	209165.107	0.000
Instance5684.18	30.037	7.299	146.615	1.394	38369.728	32768.000	7.768	0.000	1.743	0.000	209715.200	0.000
Instance5684.19	30.123	7.587	144.701	1.383	38406.088	32768.000	7.522	0.000	1.729	0.000	209666.597	0.000
Instance5684.20	29.602	7.964	146.756	1.393	38417.662	32676.978	9.856	0.000	1.742	0.000	209145.115	0.000
Instance5684.21	30.155	7.599	144.974	1.384	38419.784	32768.000	8.506	0.000	1.730	0.000	209224.993	0.000
Instance5684.22	30.006	7.828	144.337	1.384	38336.189	32768.000	11.290	0.000	1.731	0.000	209737.965	0.000
Instance5684.23	29.839	7.203	145.765	1.399	38397.997	32768.000	10.053	0.000	1.748	0.000	209120.842	0.000
Instance5684.24	29.764	7.519	146.160	1.392	38329.951	32676.724	7.954	0.000	1.739	0.000	209063.027	0.000

Background Database Maintenance I/O Performance

MSExchange Database ==> Instances	Database Maintenance IO Reads/sec	Database Maintenance IO Reads Average Bytes
Instance5684.1	0.000	0.000
Instance5684.2	0.000	0.000
Instance5684.3	0.000	0.000
Instance5684.4	0.000	0.000
Instance5684.5	0.000	0.000
Instance5684.6	0.000	0.000
Instance5684.7	0.000	0.000
Instance5684.8	0.000	0.000
Instance5684.9	0.000	0.000
Instance5684.10	0.000	0.000
Instance5684.11	0.000	0.000
Instance5684.12	0.000	0.000
Instance5684.13	0.000	0.000
Instance5684.14	0.000	0.000
Instance5684.15	0.000	0.000
Instance5684.16	0.000	0.000
Instance5684.17	0.000	0.000
Instance5684.18	0.000	0.000
Instance5684.19	0.000	0.000
Instance5684.20	0.000	0.000
Instance5684.21	0.000	0.000
Instance5684.22	0.000	0.000
Instance5684.23	0.000	0.000
Instance5684.24	0.000	0.000

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
Instance5684.1	29.943	7.861	145.003	1.376	38500.837	32587.460	13.144	0.000	1.720	0.000	208549.629	0.000
Instance5684.2	30.148	7.353	144.744	1.395	38293.479	32677.730	6.086	0.000	1.744	0.000	209142.429	0.000
Instance5684.3	29.307	7.385	150.004	1.422	38399.151	32768.000	12.031	0.000	1.778	0.000	209763.592	0.000
Instance5684.4	33.107	7.888	136.498	1.286	38494.887	32597.333	5.245	0.000	1.607	0.000	208076.800	0.000
Instance5684.5	31.544	7.156	140.652	1.343	38350.913	32680.619	7.175	0.000	1.679	0.000	209125.363	0.000
Instance5684.6	31.663	8.259	141.038	1.348	38480.187	32680.619	10.970	0.000	1.685	0.000	208600.347	0.000
Instance5684.7	30.618	7.380	143.471	1.382	38407.047	32768.000	7.883	0.000	1.728	0.000	209734.843	0.000
Instance5684.8	29.991	7.542	146.057	1.398	38581.967	32768.000	10.780	0.000	1.747	0.000	209680.824	0.000
Instance5684.9	30.216	7.259	144.996	1.379	38473.678	32768.000	10.545	0.000	1.724	0.000	209703.384	0.000
Instance5684.10	30.220	7.327	146.006	1.385	38429.886	32768.000	9.262	0.000	1.731	0.000	209642.382	0.000
Instance5684.11	29.945	7.404	145.972	1.392	38458.898	32677.230	10.954	0.000	1.740	0.000	209124.100	0.000
Instance5684.12	29.803	7.248	147.134	1.390	38569.350	32768.000	8.274	0.000	1.738	0.000	209708.382	0.000
Instance5684.13	29.824	7.376	146.816	1.401	38448.632	32768.000	7.258	0.000	1.751	0.000	209715.200	0.000
Instance5684.14	29.654	7.530	146.848	1.416	38417.993	32768.000	11.429	0.000	1.770	0.000	209685.620	0.000
Instance5684.15	30.220	7.688	143.990	1.383	38315.782	32768.000	7.707	0.000	1.735	0.000	209201.224	0.000
Instance5684.16	29.993	7.987	146.035	1.377	38322.516	32768.000	8.733	0.000	1.720	0.000	209142.349	0.000
Instance5684.17	29.433	7.027	146.501	1.393	38430.125	32676.978	9.501	0.000	1.742	0.000	209165.107	0.000
Instance5684.18	30.037	7.299	146.615	1.394	38369.728	32768.000	7.768	0.000	1.743	0.000	209715.200	0.000
Instance5684.19	30.123	7.587	144.701	1.383	38406.088	32768.000	7.522	0.000	1.729	0.000	209666.597	0.000
Instance5684.20	29.602	7.964	146.756	1.393	38417.662	32676.978	9.856	0.000	1.742	0.000	209145.115	0.000
Instance5684.21	30.155	7.599	144.974	1.384	38419.784	32768.000	8.506	0.000	1.730	0.000	209224.993	0.000
Instance5684.22	30.006	7.828	144.337	1.384	38336.189	32768.000	11.290	0.000	1.731	0.000	209737.965	0.000
Instance5684.23	29.839	7.203	145.765	1.399	38397.997	32768.000	10.053	0.000	1.748	0.000	209120.842	0.000
Instance5684.24	29.764	7.519	146.160	1.392	38329.951	32676.724	7.954	0.000	1.739	0.000	209063.027	0.000

Host System Performance

Counter	Average	Minimum	Maximum
% Processor Time	0.942	0.000	2.306
Available MBytes	149707.018	149415.000	155662.000
Free System Page Table Entries	16511658.761	16511378.000	16511857.000
Transition Pages RePurposed/sec	0.000	0.000	0.000
Pool Nonpaged Bytes	128941899.138	128667648.000	129130496.000
Pool Paged Bytes	143172807.481	143155200.000	143237120.000
Database Page Fault Stalls/sec	0.000	0.000	0.000

Test Log

[illegible]