SPC BENCHMARK 1™
FULL DISCLOSURE REPORT

HEWLETT-PACKARD COMPANY
HP XP7 STORAGE

SPC-1 V1.14

Submitted for Review: August 26, 2015
Submission Identifier: A00162

First Edition – August 2015

Trademarks

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AUDIT CERTIFICATION

Chuck Paridon
Hewlett-Packard Company
8000 Foothills Blvd. MS 5785
Roseville, CA 95747

August 25, 2015

The SPC Benchmark 1™ Reported Data listed below for the HP XP7 Storage was produced in compliance with the SPC Benchmark 1™ v1.14 Onsite Audit requirements.

SPC Benchmark 1™ v1.14 Reported Data	
Tested Storage Product (TSP) Name: HP XP7 Storage	
Metric	**Reported Result**
SPC-1 IOPS™	2,004,041.89
SPC-1 Price-Performance	$0.98/SPC-1 IOPS™
Total ASU Capacity	30,962.247 GB
Data Protection Level	Protected 2 *(Mirroring)*
Total Price (including three-year maintenance)	$1,972,095.28
Currency Used	U.S. Dollars
Target Country for availability, sales and support	USA

The following SPC Benchmark 1™ Onsite Audit requirements were reviewed and found compliant with 1.14 of the SPC Benchmark 1™ specification:

- A Letter of Good Faith, signed by a senior executive.
- The following Data Repository storage items were verified by physical inspection and information supplied by Hewlett-Packard Company:
  - ✓ Physical Storage Capacity and requirements.
  - ✓ Configured Storage Capacity and requirements.
  - ✓ Addressable Storage Capacity and requirements.
  - ✓ Capacity of each Logical Volume and requirements.
  - ✓ Capacity of each Application Storage Unit (ASU) and requirements.
- The total Application Storage Unit (ASU) Capacity was filled with random data, using an auditor approved tool, prior to execution of the SPC-1 Tests.
- An appropriate diagram of the Benchmark Configuration (BC)/Tested Storage Configuration (TSC).

Storage Performance Council
643 Bair Island Road, Suite 103
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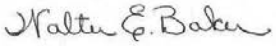
AUDIT CERTIFICATION *(CONT.)*

- Physical verification of the components to match the above diagram.
- Listings and commands to configure the Benchmark Configuration/Tested Storage Configuration, including customer tunable parameters that were changed from default values.
- SPC-1 Workload Generator commands and parameters used for the audited SPC Test Runs.
- The following Host System requirements were verified by physical inspection and information supplied by Hewlett-Packard Company:
  - ✓ The type of Host System including the number of processors and main memory.
  - ✓ The presence and version number of the SPC-1 Workload Generator on the Host System.
  - ✓ The TSC boundary within the Host System.
- The execution of each Test, Test Phase, and Test Run was observed and found compliant with all of the requirements and constraints of Clauses 4, 5, and 11 of the SPC-1 Benchmark Specification.
- The Test Results Files and resultant Summary Results Files received from Hewlett-Packard Company for each of following were authentic, accurate, and compliant with all of the requirements and constraints of Clauses 4 and 5 of the SPC-1 Benchmark Specification:
  - ✓ Data Persistence Test
  - ✓ Sustainability Test Phase
  - ✓ IOPS Test Phase
  - ✓ Response Time Ramp Test Phase
  - ✓ Repeatability Test
- There was no difference between the Tested Storage Configuration (TSC) and Priced Storage Configuration.
- The submitted pricing information met all of the requirements and constraints of Clause 8 of the SPC-1 Benchmark Specification.
- The Full Disclosure Report (FDR) met all of the requirements in Clause 9 of the SPC-1 Benchmark Specification.
- This successfully audited SPC measurement is not subject to an SPC Confidential Review.

Audit Notes:

There were no audit notes or exceptions.

Respectfully,



Walter E. Baker
SPC Auditor

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LETTER OF GOOD FAITH

Hewlett-Packard Company
8000 Foothills Blvd.
Roseville, CA 95747

Date: December 19, 2014

From: Chris Powers, HP Enterprise Services; Hewlett-Packard Company

To: Walter E. Baker, SPC Auditor
Storage Performance Council (SPC)
643 Bair Island Road, Suite 103
Redwood City, CA 94063-2755

Subject: SPC-1 Letter of Good Faith for the HP XP7 Storage

Hewlett-Packard is the SPC-1 Test Sponsor for the above listed product. To the best of our knowledge and belief, the required SPC-1 benchmark results and materials we have submitted for that product are complete, accurate, and in full compliance with V1.14 of the SPC-1 benchmark specification.

In addition, we have reported any items in the Benchmark Configuration and execution of the benchmark necessary to reproduce the reported results even if the items are not explicitly required to be disclosed by the above SPC-1 benchmark specification.

Signed: _____
Chris Powers, Vice President,
Data Center Design Unit

Date: 19Dec14
Date of Signature

EXECUTIVE SUMMARY

Test Sponsor and Contact Information

Test Sponsor and Contact Information	
Test Sponsor Primary Contact	Hewlett-Packard Company – http://www.hp.com Chuck Paridon – chuck.paridon@hp.com 8000 Foothills Blvd. MS 5785 Roseville, CA 95747 Phone: (916) 785-5155 Cell: (916) 472-8239 FAX: (916) 785-1643
Test Sponsor Alternate Contact	Hewlett-Packard Company –http://www.hp.com Michael Fuhrman – michael.fuhrman@hp.com 8000 Foothills Blvd. MS 5785 Roseville, CA 95747 Phone: (916) 785-3167 FAX: (916) 785-1643
Auditor	Storage Performance Council – http://www.storageperformance.org Walter E. Baker – AuditService@StoragePerformance.org 643 Bair Island Road, Suite 103 Redwood City, CA 94063 Phone: (650) 556-9384 FAX: (650) 556-9385

Revision Information and Key Dates

Revision Information and Key Dates	
SPC-1 Specification revision number	V1.14
SPC-1 Workload Generator revision number	V2.3.0
Date Results were first used publicly	August 26, 2015
Date the FDR was submitted to the SPC	August 26, 2015
Date the Priced Storage Configuration is available for shipment to customers	currently available
Date the TSC completed audit certification	August 25, 2015

Tested Storage Product (TSP) Description

The HP XP7 Storage is bulletproof storage for mission-critical converged infrastructure where constant access to data is required-even in the event of a disaster. Designed for organizations that simply cannot afford any downtime, the XP7 combines an ultra-high-performance on-line scalable fully redundant hardware platform with unique data replication capabilities integrated with clustering solutions for complete business continuity and data protection. The XP7 can adapt to changing business conditions in real time, while increasing data center capacity and lifespan and providing solutions that decrease risk and costs.

Massive consolidation becomes a reality by managing open systems, mainframe, and HP Non-Stop applications all on a single XP7 with ultra-high performance, low latency and reduced data center costs.

Summary of Results

SPC-1 Reported Data	
Tested Storage Product (TSP) Name: HP XP7 Storage	
Metric	**Reported Result**
SPC-1 IOPS™	2,004,941.89
SPC-1 Price-Performance™	$0.98/SPC-1 IOPS™
Total ASU Capacity	30,962.247 GB
Data Protection Level	Protected 2 *(mirroring)*
Total Price	$1,972,095.28
Currency Used	U.S. Dollars
Target Country for availability, sales and support	USA

SPC-1 IOPS™ represents the maximum I/O Request Throughput at the 100% load point.

SPC-1 Price-Performance™ is the ratio of **Total Price** to **SPC-1 IOPS™**.

Total ASU (Application Storage Unit) **Capacity** represents the total storage capacity available to be read and written in the course of executing the SPC-1 benchmark.

A **Data Protection Level** of **Protected 2** using ***Mirroring*** configures two or more identical copies of user data.

> ***Protected 2:*** *The single point of failure of any* ***component*** *in the configuration will not result in permanent loss of access to or integrity of the SPC-1 Data Repository.*

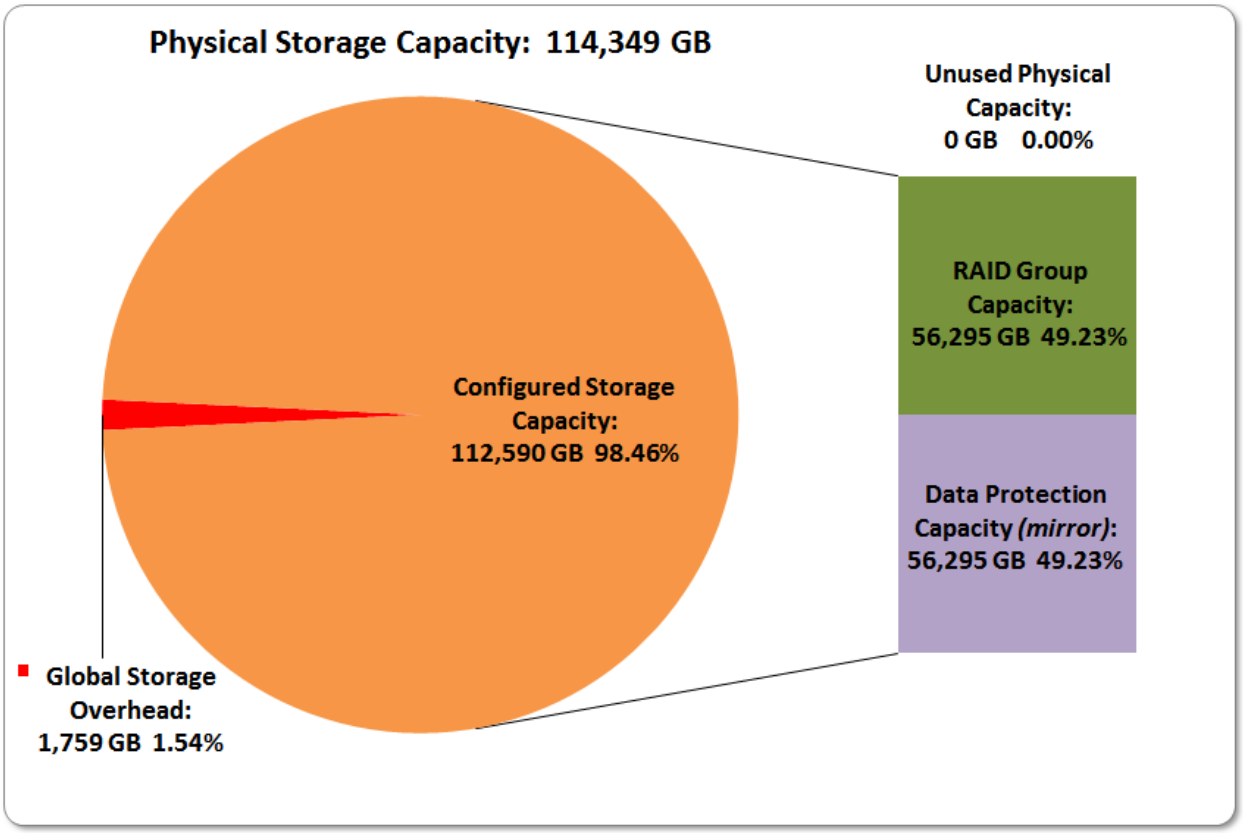
Total Price includes the cost of the Priced Storage Configuration plus three years of hardware maintenance and software support as detailed on page 17.

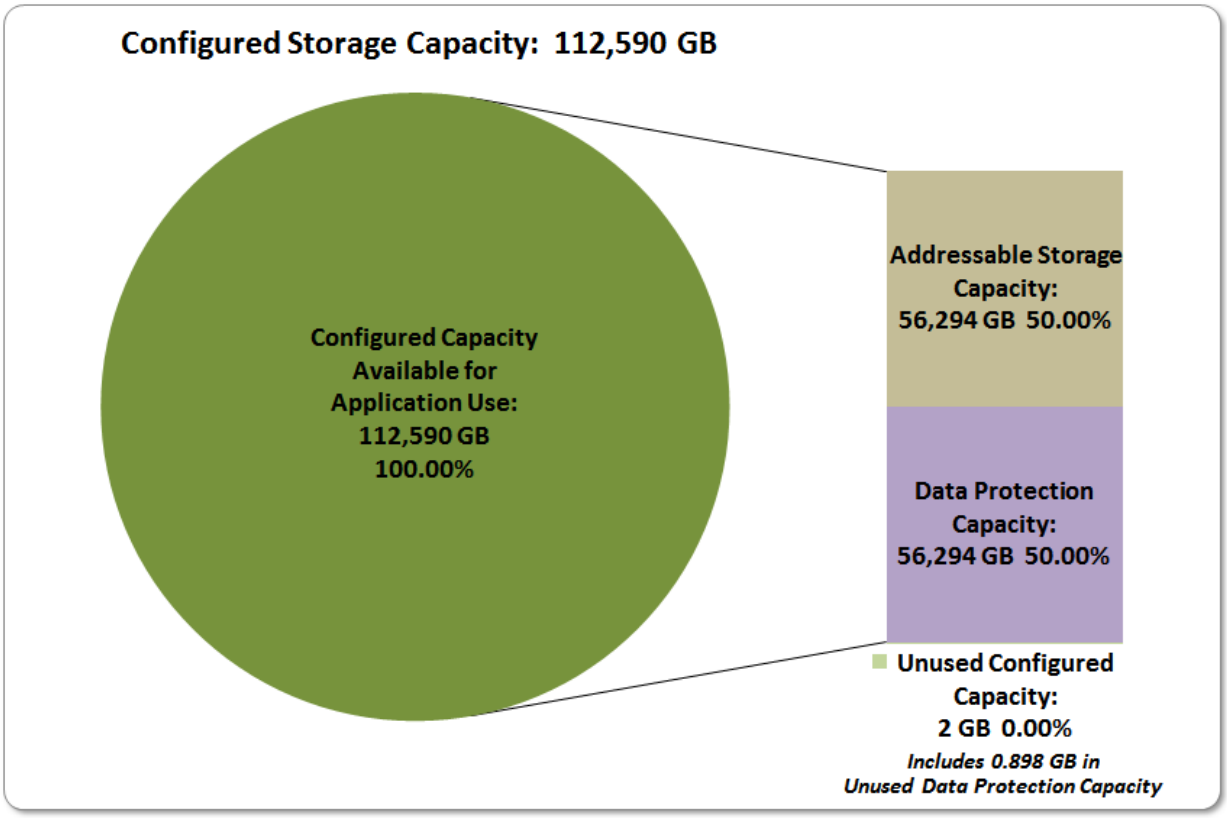
Currency Used is formal name for the currency used in calculating the **Total Price** and **SPC-1 Price-Performance™**. That currency may be the local currency of the **Target Country** or the currency of a difference country *(non-local currency)*.

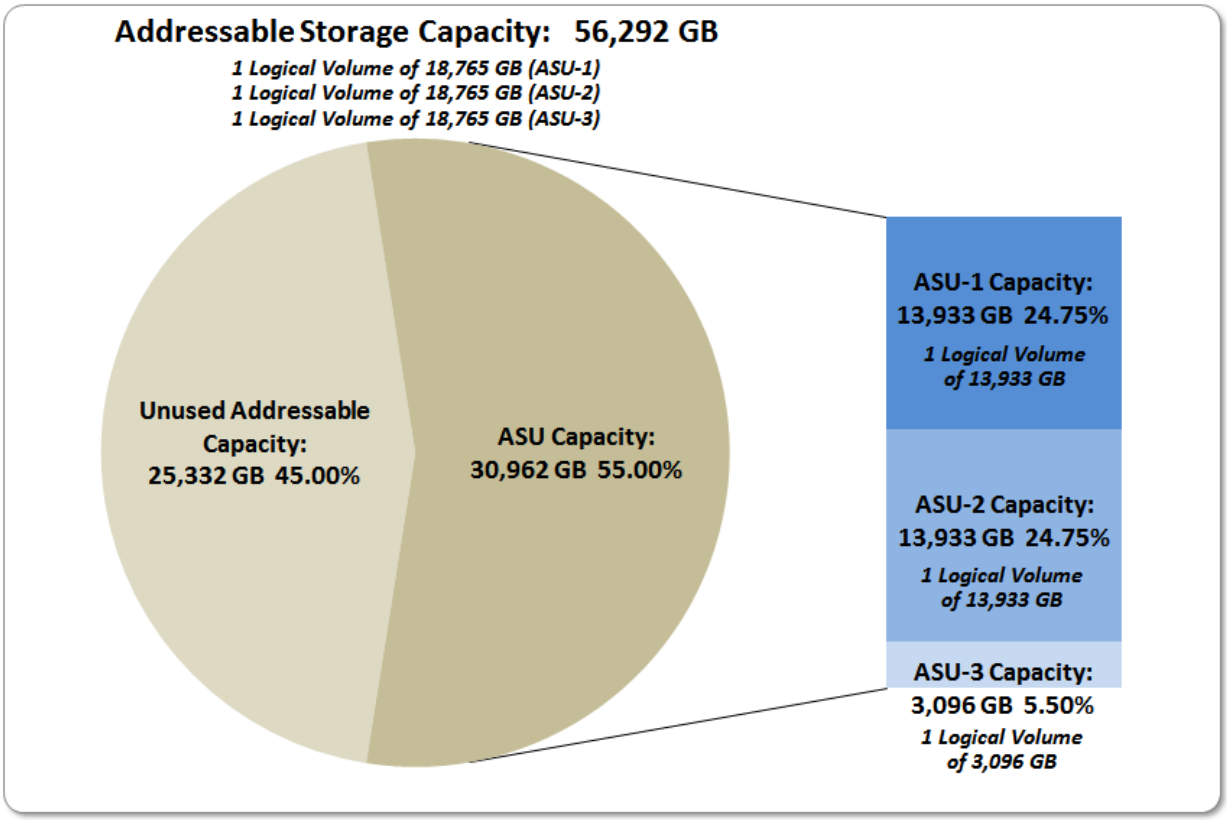
The **Target Country** is the country in which the Priced Storage Configuration is available for sale and in which the required hardware maintenance and software support is provided either directly from the Test Sponsor or indirectly via a third-party supplier.

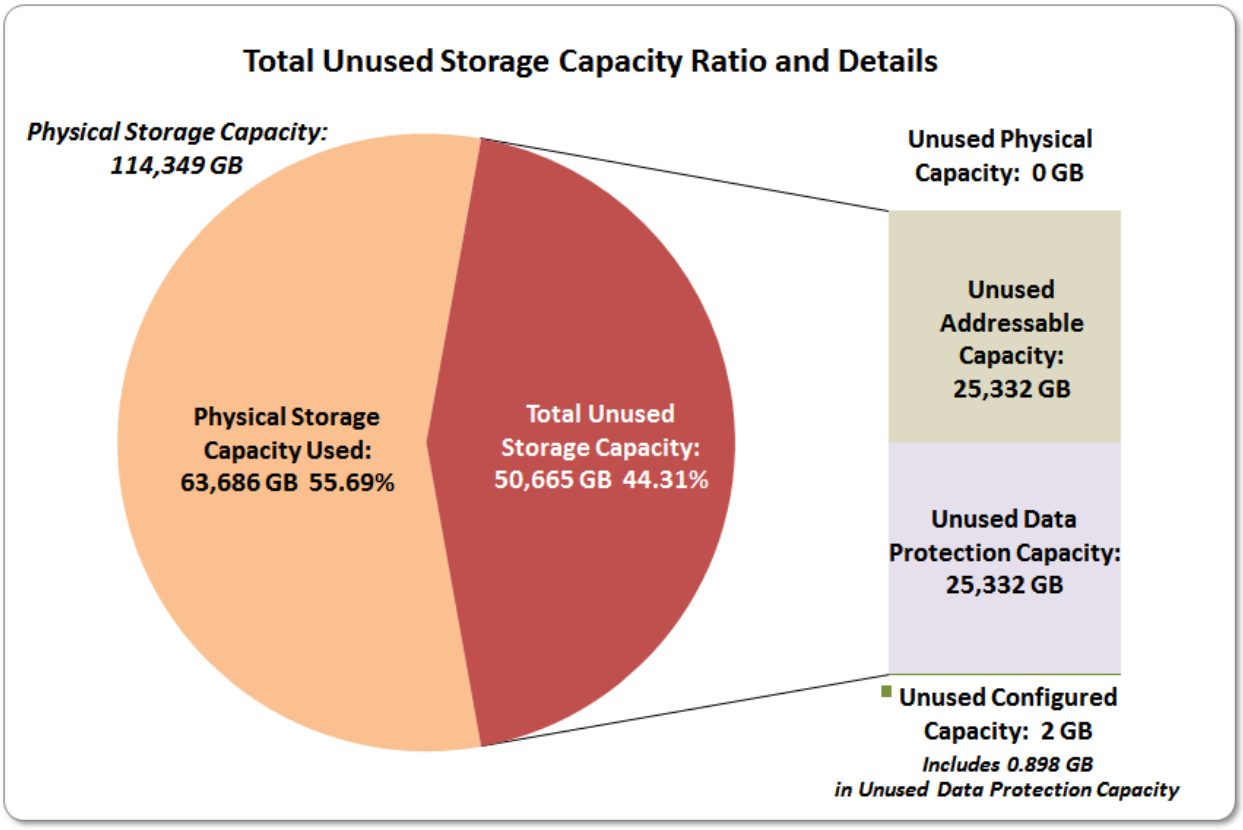
Storage Capacities, Relationships, and Utilization

The following four charts and table document the various storage capacities, used in this benchmark, and their relationships, as well as the storage utilization values required to be reported.




Configured Storage Capacity: 112,590 GB
Configured Capacity Available for Application Use: 112,590 GB 100.00%
Addressable Storage Capacity: 56,294 GB 50.00%
Data Protection Capacity: 56,294 GB 50.00%
Unused Configured Capacity: 2 GB 0.00%
Includes 0.898 GB in Unused Data Protection Capacity


Addressable Storage Capacity: 56,292 GB
1 Logical Volume of 18,765 GB (ASU-1)
1 Logical Volume of 18,765 GB (ASU-2)
1 Logical Volume of 18,765 GB (ASU-3)
Unused Addressable Capacity: 25,332 GB 45.00%
ASU Capacity: 30,962 GB 55.00%
ASU-1 Capacity: 13,933 GB 24.75%
1 Logical Volume of 13,933 GB
ASU-2 Capacity: 13,933 GB 24.75%
1 Logical Volume of 13,933 GB
ASU-3 Capacity: 3,096 GB 5.50%
1 Logical Volume of 3,096 GB



SPC-1 Storage Capacity Utilization	
Application Utilization	27.08%
Protected Application Utilization	54.15%
Unused Storage Ratio	44.31%

Application Utilization: Total ASU Capacity *(30,962.247 GB)* divided by Physical Storage Capacity *(114,349.100 GB)*.

Protected Application Utilization: (Total ASU Capacity *(30,962.247 GB)* plus total Data Protection Capacity *(56,294.833 GB)* minus unused Data Protection Capacity *(25,332.585 GB)*) divided by Physical Storage Capacity *(114,349.100 GB)*.

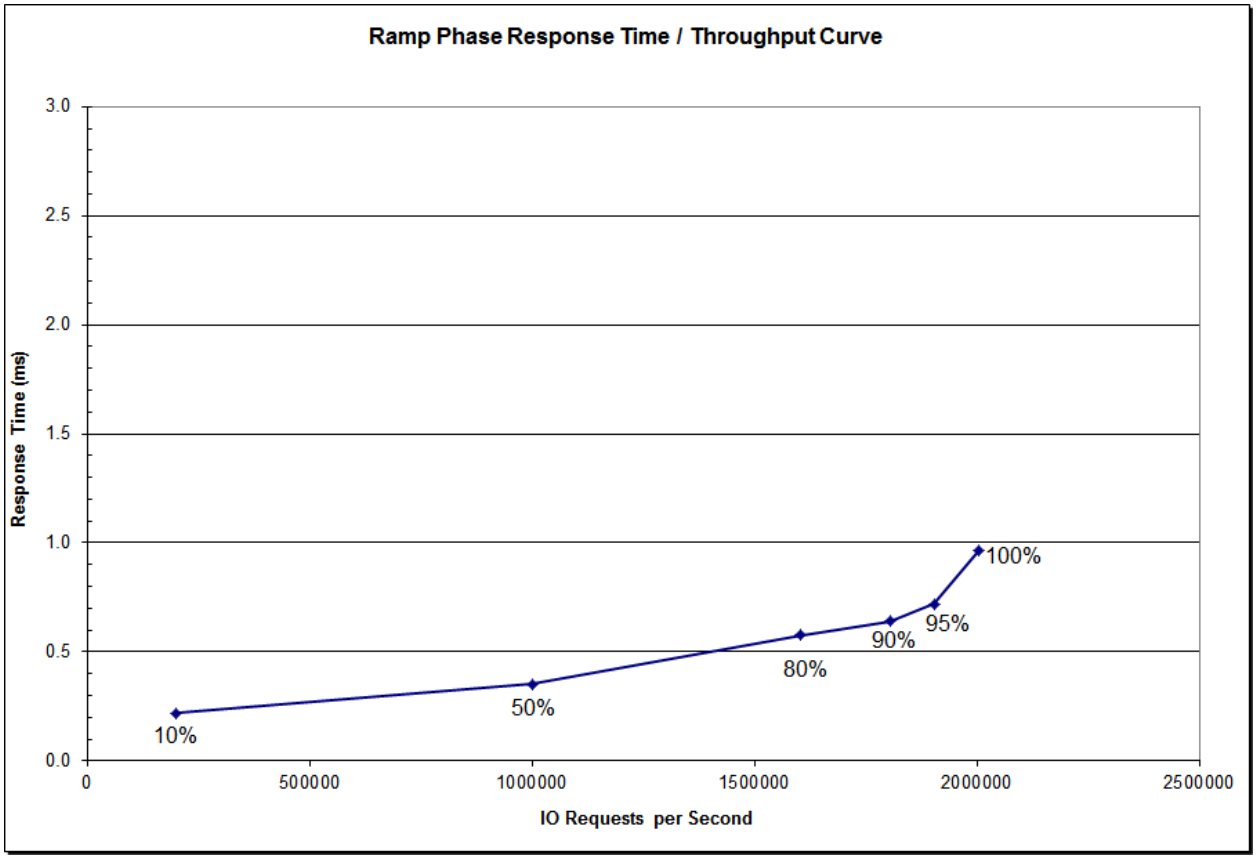
Unused Storage Ratio: Total Unused Capacity *(50,665.170 GB)* divided by Physical Storage Capacity *(114,349.100 GB)* and may not exceed 45%.

Detailed information for the various storage capacities and utilizations is available on pages 26-27.

Response Time – Throughput Curve

The Response Time-Throughput Curve illustrates the Average Response Time (milliseconds) and I/O Request Throughput at 100%, 95%, 90%, 80%, 50%, and 10% of the workload level used to generate the SPC-1 IOPS™ metric.

The Average Response Time measured at any of the above load points cannot exceed 30 milliseconds or the benchmark measurement is invalid.



Response Time – Throughput Data

	10% Load	50% Load	80% Load	90% Load	95% Load	100% Load
I/O Request Throughput	200,512.33	1,000,301.01	1,604,017.59	1,804,534.05	1,904,840.59	2,004,941.89
Average Response Time (ms):						
All ASUs	0.22	0.35	0.58	0.64	0.72	0.96
ASU-1	0.24	0.39	0.64	0.67	0.73	1.02
ASU-2	0.23	0.41	0.75	0.96	1.11	1.37
ASU-3	0.17	0.24	0.38	0.44	0.52	0.67
Reads	0.31	0.54	0.90	0.96	1.05	1.44
Writes	0.16	0.23	0.37	0.43	0.50	0.65

Priced Storage Configuration Pricing

Quantity	PN	Description	List Price	Ext. Price
	HARDWARE			
1	H6F99A	HP XP7 Storage System	$ -	$ -
1	H6F56A	HP XP7 Primary DKC	$ 80,950.00	$ 80,950.00
1	H6F95A	HP XP7 Service Processor	$ 21,399.00	$ 21,399.00
2	H6F54A	HP XP7 Storage Rack	$ 17,100.00	$ 34,200.00
64	H6G70A	HP XP7 1.6TB Flash Module Device	$ 34,900.00	$ 2,233,600.00
4	H6G24A	HP XP7 Large Backup Memory Kit	$ 9,360.00	$ 37,440.00
4	H6G26A	HP XP7 256GB Backup Memory Pair	$ 77,800.00	$ 311,200.00
1	H6F57A	HP XP7 Secondary DKC	$ 85,880.00	$ 85,880.00
2	H6G11A	HP XP7 2M Cu Intra-rack Dev Int Cable	$ 5,647.00	$ 11,294.00
32	H6G22A	HP XP7 32GB Cache Memory Pair	$ 17,780.00	$ 568,960.00
2	H6G20A	HP XP7 Cache Path Controller Adapter Pair	$ 64,654.00	$ 129,308.00
2	H6F62A	HP XP7 Flash Module Chassis	$ 71,815.00	$ 143,630.00
2	H6F97A	HP XP7 Internal Hub	$ 4,737.00	$ 9,474.00
1	H6G03A	HP XP7 5M DKC Interconnect Cable	$ 13,292.00	$ 13,292.00
1	H6G00A	HP XP7 5M DKC Interconnect Kit	$ 17,379.00	$ 17,379.00
6	H6G08A	HP XP7 Processor Blade Pair	$ 211,180.00	$ 1,267,080.00
2	H6F82A	HP XP7 60Hz Flash Module Power Cord	$ 3,276.00	$ 6,552.00
2	H6F80A	HP XP7 60Hz DKC Power Cord	$ 692.00	$ 1,384.00
4	H6G06A	HP XP7 Disk Adapter Pair	$ 19,563.00	$ 78,252.00
4	H6G30A	HP XP7 16-port 8Gbps Fibre Host Adapter Pair	$ 17,967.00	$ 71,868.00
8	H6F70A	HP XP7 Single Phase 60Hz PDU	$ 920.00	$ 7,360.00
2	H6G10A	HP XP7 1M Cu Intra-chassis Dev Int Cable	$ 5,647.00	$ 11,294.00
		TOTAL		**$ 5,141,796.00**
	SOFTWARE			
1	TK914AA	HP XP7 Array Mgr Suite Base LTU	$ 271.00	$ 271.00
52	TK914AB	HP XP7 Array Mgr Suite 1TB 0-100TB LTU	$ 1,833.00	$ 95,316.00
		TOTAL		**$ 95,587.00**
	INSTALLATION & HARDWARE SUPPORT			
1	HA114A1	HP Installation and Startup Service	$ -	$ -
1	HA114A1 5	HP Startup XP7 P9500 Array DKC Mod 0 SVC	$ 22,125.00	$ 22,125.00
1	HA114A1 5	HP Startup XP7 P9500 Array DKC DKU SVC	$ 1,775.00	$ 1,775.00
4	HA114A1 5	HP Startup XP7 P9500 Array Expansion SVC	$ 900.00	$ 3,600.00
1	HA114A1 5	HP Startup XP7 P9500 Software Type 6 SVC	$ 5,250.00	$ 5,250.00
1	H7J34A3	HP 3yr Foundation Care 24x7 Service	$ -	$ -
		TOTAL		**$ 32,750.00**

Priced Storage Configuration Pricing *(continued)*

	SOFTWARE SUPPORT			
52	H7J34A3 T8	HP XP7 Array Mgr St 0-100TB LTU SWSup	$ 390.00	$ 20,280.00
		TOTAL		**$ 20,280.00**
	Additional Hardware			
32	QR559A	HP SN1000E 16Gb Dual Port Fibre Channel Host Adapte	$ 2,799.00	$ 89,568.00
64	QK734AH	HP Premier Flex LC/LC OM4 2f 5m Cable	$ 114.00	$ 7,296.00
		TOTAL		**$ 96,864.00**

Category Totals	List Price	Discount	Net price
HARDWARE	$ 5,141,796.00	64%	$ 1,851,046.56
SOFTWARE	$ 95,587.00	64%	$ 34,411.32
INSTALLATION & HARDWARE SUPPORT	$ 32,750.00	50%	$ 16,375.00
SOFTWARE SUPPORT	$ 20,280.00	64%	$ 7,300.80
ADDITIONAL HARDWARE	$ 96,864.00	35%	$ 62,961.60
Grand Total	**$ 5,387,277.00**		**$ 1,972,095.28**

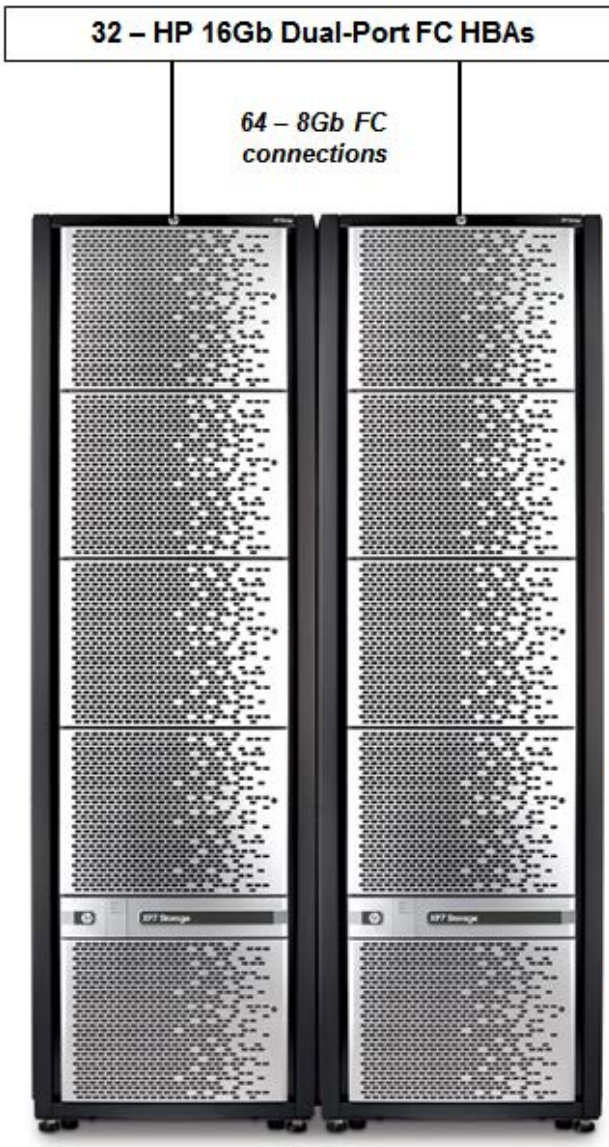
The above pricing includes hardware maintenance and software support for three years, 7 days per week, 24 hours per day. The hardware maintenance and software support provides the following:

- Acknowledgement of new and existing problems within four (4) hours.
- Onsite presence of a qualified maintenance engineer or provision of a customer replaceable part within four (4) hours of the above acknowledgement for any hardware failure that results in an inoperative Price Storage Configuration that can be remedied by the repair or replacement of a Priced Storage Configuration component.

Differences between the Tested Storage Configuration (TSC) and Priced Storage Configuration

There were no differences between the TSC and the Priced Storage Configuration.

Priced Storage Configuration Diagram



Primary and Second Controller Chassis

8 Processor Blades pairs
(16 blades total, 8 blades per chassis)

4 Cache Path Control Adapters pairs
(8 adapters total, 4 adapters per chassis)

32 Cache Memory Modules pairs
(64 modules total, 32 GB/module)
(2048 GB cache memory total, 1024 GB per chassis)

4 FC Host Adapter pairs
(8 adapters total, 4 adapters per chassis)
(88Gb connections per adapter)
(64 total connections, 64 connections used)

4 SAS Disk Adapter pairs
(8 adapters total, 4 adapters per chassis)
(4x6Gb ports per adapter, 32 ports total)
(4 – 1x6 Gbps links per port)
(16 links per adapter)
(128 links total and used)

64 1.6TB Flash Module Drives (FMDs)
(32 FMDs per chassis)

Priced Storage Configuration Components

Priced Storage Configuration:
32 – HP 16Gb Dual-Port HBAs
HP XP7 Storage Primary and Second Controller Chassis 1 – Interconnect kit 2 – Hubs *(1 Hub per chassis)* 8 Processor Blade pairs *(16 blades total)* *(8 blades per chassis)* 4 – Cache Path Control Adapter pairs *(8 adapters total, 4 adapters per chassis)* 32 – Cache Memory Modules pairs *(32 GB per module)* *(64 modules total, 32 modules per chassis)* *(2048 GB cache memory, 1024 GB per chassis)* 4 Cache Flash Memory Modules pairs *(256 GB per module, 8 modules total)* *(2048 GB backup flash)* 4 FC Host Adapter pairs *(8 adapters total, 4 adapters per chassis)* *(8x8Gb connections per adapter)* *(64 total connections, 64 connections used)* 4 SAS Disk Adapter pairs *(8 adapters total, 4 BEDs per chassis)* *(4x6Gb ports per BED, 32 total ports)* *(4 – 1x6 Gbps links per port, 16 links per BED)* *(128 total links, 128 links used)*
2 – Flash Module Drive Chassis
64 – 1.6 TB Flash Module Drives (FMDs) *(24 FMDs per chassis)*
8 – Single Phase 60Hz PDUs
2 – Storage Racks

In each of the following sections of this document, the appropriate Full Disclosure Report requirement, from the SPC-1 benchmark specification, is stated in italics followed by the information to fulfill the stated requirement.

CONFIGURATION INFORMATION

Benchmark Configuration (BC)/Tested Storage Configuration (TSC) Diagram

Clause 9.4.3.4.1

A one page Benchmark Configuration (BC)/Tested Storage Configuration (TSC) diagram shall be included in the FDR…

The Benchmark Configuration (BC)/Tested Storage Configuration (TSC) is illustrated on page 22 *(Benchmark Configuration/Tested Storage Configuration Diagram)*.

Storage Network Configuration

Clause 9.4.3.4.1

…

5. *If the TSC contains network storage, the diagram will include the network configuration. If a single diagram is not sufficient to illustrate both the Benchmark Configuration and network configuration in sufficient detail, the Benchmark Configuration diagram will include a high-level network illustration as shown in Figure 9-8. In that case, a separate, detailed network configuration diagram will also be included as described in Clause 9.4.3.4.2.*

Clause 9.4.3.4.2

If a storage network was configured as a part of the Tested Storage Configuration and the Benchmark Configuration diagram described in Clause 9.4.3.4.1 contains a high-level illustration of the network configuration, the Executive Summary will contain a one page topology diagram of the storage network as illustrated in Figure 9-9.

There was no storage network in this configuration. All of the storage was directly connected.

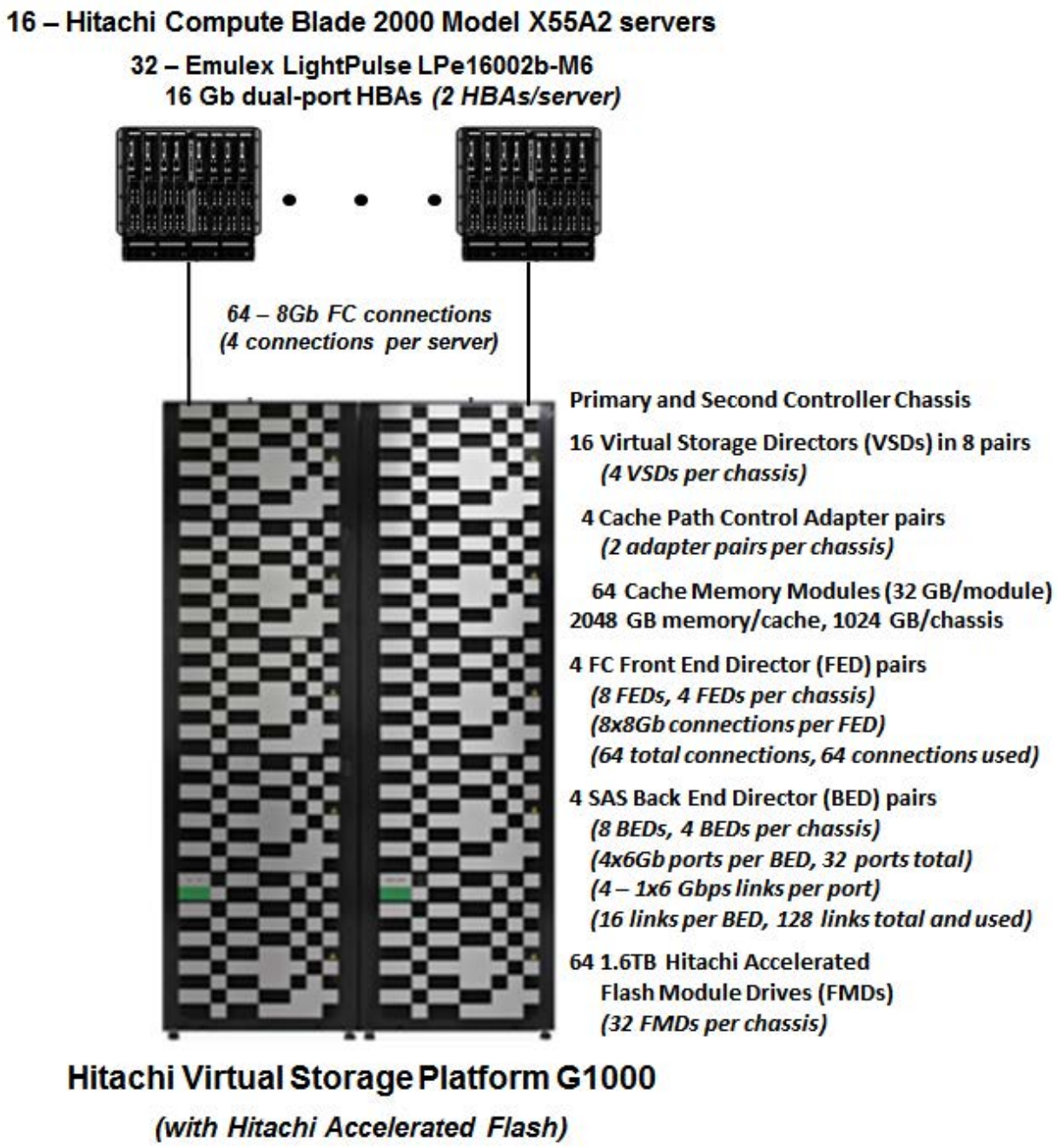
Host System(s) and Tested Storage Configuration (TSC) Table of Components

Clause 9.4.3.4.3

The FDR will contain a table that lists the major components of each Host System and the Tested Storage Configuration (TSC).

The Host System(s) and TSC table of components may be found on page 23 *(Host System and Tested Storage Configuration Components)*.

Benchmark Configuration/Tested Storage Configuration Diagram



Host System and Tested Storage Configuration Components

Host Systems
16 – Hitachi Compute Blade 2000 Model X55A2 servers, each with: 2 – Intel® Xeon® 5690 six core 3.47 Ghz processors 12 MB Intel® SmartCache per processor 128 GB main memory Red Hat Enterprise Linux 6.4 (x86_64) Linux Logical Volume Manager LVM version 2.02.98-9 PCIe
Tested Storage Configuration (TSC) Components
32 – Emulex LightPulse LPE16002-M6 16Gb dual-port HBAs
HP XP7 Storage ***(with Hitachi Accelerated Flash)*** Primary and Second Controller Chassis 1 – Inter-controller connecting kit 2 – Hubs *(1 Hub per chassis)* 16 Virtual Storage Directors (VSDs) in 6 pairs *(8 VSDs per chassis)* 4 – Cache Path Control Adapter pairs *(2 adapter pairs per chassis)* 64 – Cache Memory Modules *(32 GB per module)* *(2048 GB memory/cache, 1024 GB per chassis)* 8 Cache Flash Memory Modules *(256 GB per module)* *(2048 GB backup flash)* 4 FC Front End Director (FED) pairs *(8 FEDs, 4 FEDs per chassis)* *(8x8Gb connections per FED, 64 total connections)* *(64 connections used)* 4 SAS Back End Director (BED) pairs *(8 BEDs, 4 BEDs per chassis)* *(4x6Gb ports per BED, 32 total ports)* *(4 – 1x6 Gbps links per port, 16 links per BED)* *(128 total links, 128 links used)*
2 – Flash Module Drive Chassis
64 – 1.6 TB Flash Module Drives (FMDs) *(32 FMDs per chassis)*
8 – 12xC13 1Phase 208V 30A NEMA PDUs
2 – 42U 600x1200x2010mm *(WxDxH)* racks

Customer Tunable Parameters and Options

Clause 9.4.3.5.1

All Benchmark Configuration (BC) components with customer tunable parameter and options that have been altered from their default values must be listed in the FDR. The FDR entry for each of those components must include both the name of the component and the altered value of the parameter or option. If the parameter name is not self-explanatory to a knowledgeable practitioner, a brief description of the parameter's use must also be included in the FDR entry.

Appendix B: Customer Tunable Parameters and Options on page 67 contains the customer tunable parameters and options that have been altered from their default values for this benchmark.

Tested Storage Configuration (TSC) Description

Clause 9.4.3.5.2

The FDR must include sufficient information to recreate the logical representation of the TSC. In addition to customer tunable parameters and options (Clause 4.2.4.5.3), that information must include, at a minimum:

- *A diagram and/or description of the following:*
  - *All physical components that comprise the TSC. Those components are also illustrated in the BC Configuration Diagram in Clause 9.2.4.4.1 and/or the Storage Network Configuration Diagram in Clause 9.2.4.4.2.*
  - *The logical representation of the TSC, configured from the above components that will be presented to the Workload Generator.*
- *Listings of scripts used to create the logical representation of the TSC.*
- *If scripts were not used, a description of the process used with sufficient detail to recreate the logical representation of the TSC.*

Appendix C: Tested Storage Configuration (TSC) Creation on page 68 contains the detailed information that describes how to create and configure the logical TSC.

SPC-1 Workload Generator Storage Configuration

Clause 9.4.3.5.3

The FDR must include all SPC-1 Workload Generator storage configuration commands and parameters.

The SPC-1 Workload Generator storage configuration commands and parameters for this measurement appear in Appendix D: SPC-1 Workload Generator Storage Commands and Parameters on page 121.

ASU Pre-Fill

Clause 5.3.3

Each of the three SPC-1 ASUs (ASU-1, ASU-2 and ASU-3) is required to be completely filled with specified content prior to the execution of audited SPC-1 Tests. The content is required to consist of random data pattern such as that produced by an SPC recommended tool.

The configuration file used to complete the required ASU pre-fill appears in Appendix D: SPC-1 Workload Generator Storage Commands and Parameters on page 121.

SPC-1 DATA REPOSITORY

This portion of the Full Disclosure Report presents the detailed information that fully documents the various SPC-1 storage capacities and mappings used in the Tested Storage Configuration. SPC-1 Data Repository Definitions on page 63 contains definitions of terms specific to the SPC-1 Data Repository.

Storage Capacities and Relationships

Clause 9.4.3.6.1

Two tables and four charts documenting the storage capacities and relationships of the SPC-1 Storage Hierarchy (Clause 2.1) shall be included in the FDR. … The capacity value in each chart may be listed as an integer value, for readability, rather than the decimal value listed in the table below.

SPC-1 Storage Capacities

The Physical Storage Capacity consisted of 114,349,100 GB distributed over 64 solid state storage devices (SSDs) each with a formatted capacity of 1,786.705 GB. There was 0.000 GB (0.00%) of Unused Storage within the Physical Storage Capacity. Global Storage Overhead consisted of 1,759.5435 GB (1.54%) of the Physical Storage Capacity. There was 1.75 GB (0.002%) of Unused Storage within the Configured Storage Capacity. The Total ASU Capacity utilized 55.00% of the Addressable Storage Capacity resulting in 25,331.688 GB (45.00%) of Unused Storage within the Addressable Storage Capacity. The Data Protection *(Mirroring)* capacity was 56,294.833 GB of which 30,962.247 GB was utilized. The total Unused Storage capacity was 50,665.170 GB.

Note: The configured Storage Devices may include additional storage capacity reserved for system overhead, which is not accessible for application use. That storage capacity may not be included in the value presented for Physical Storage Capacity.

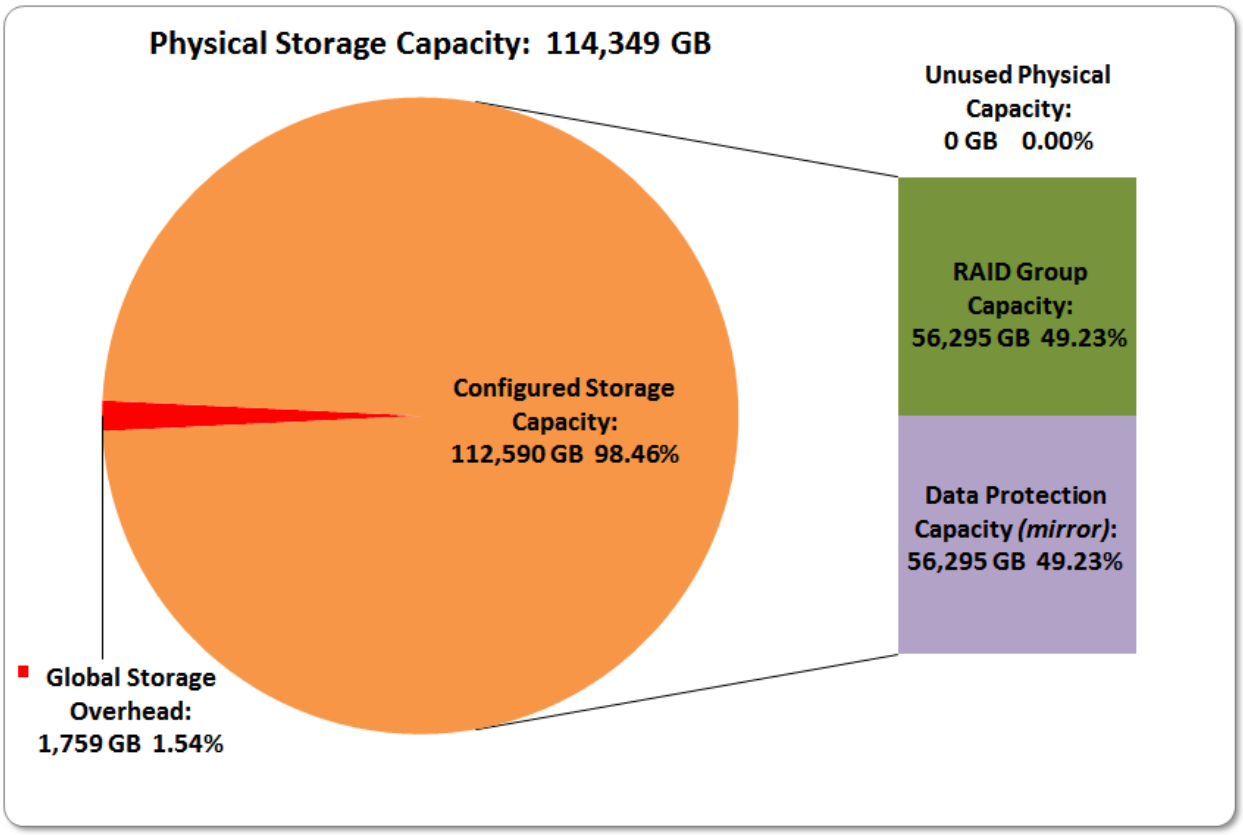
SPC-1 Storage Capacities

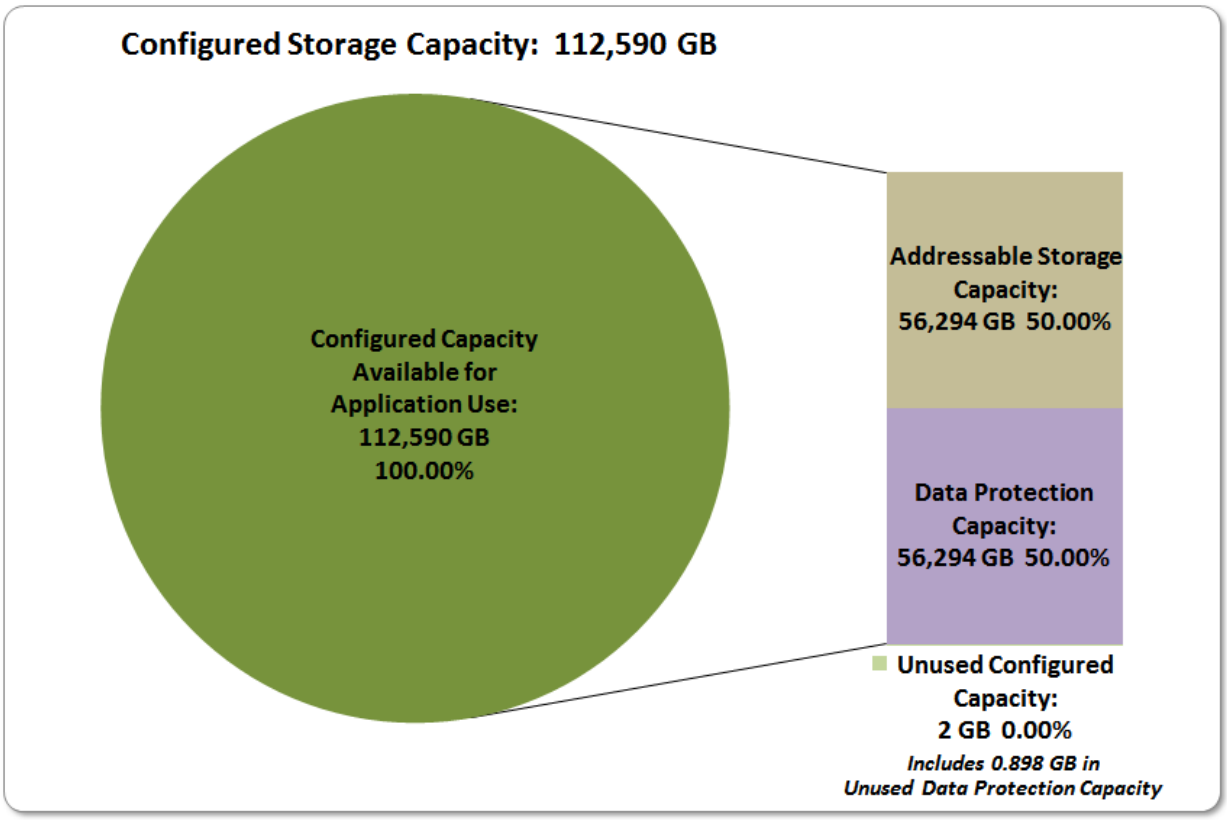
Storage Hierarchy Component	Units	Capacity
Total ASU Capacity	Gigabytes (GB)	30,962.247
Addressable Storage Capacity	Gigabytes (GB)	56,293.935
Configured Storage Capacity	Gigabytes (GB)	112,589.665
Physical Storage Capacity	Gigabytes (GB)	114,349.100
Data Protection *(Mirroring)*	Gigabytes (GB)	56,294.833
Required Storage	Gigabytes (GB)	0.000
Global Storage Overhead	Gigabytes (GB)	1,759.435
Total Unused Storage	Gigabytes (GB)	50,665.170

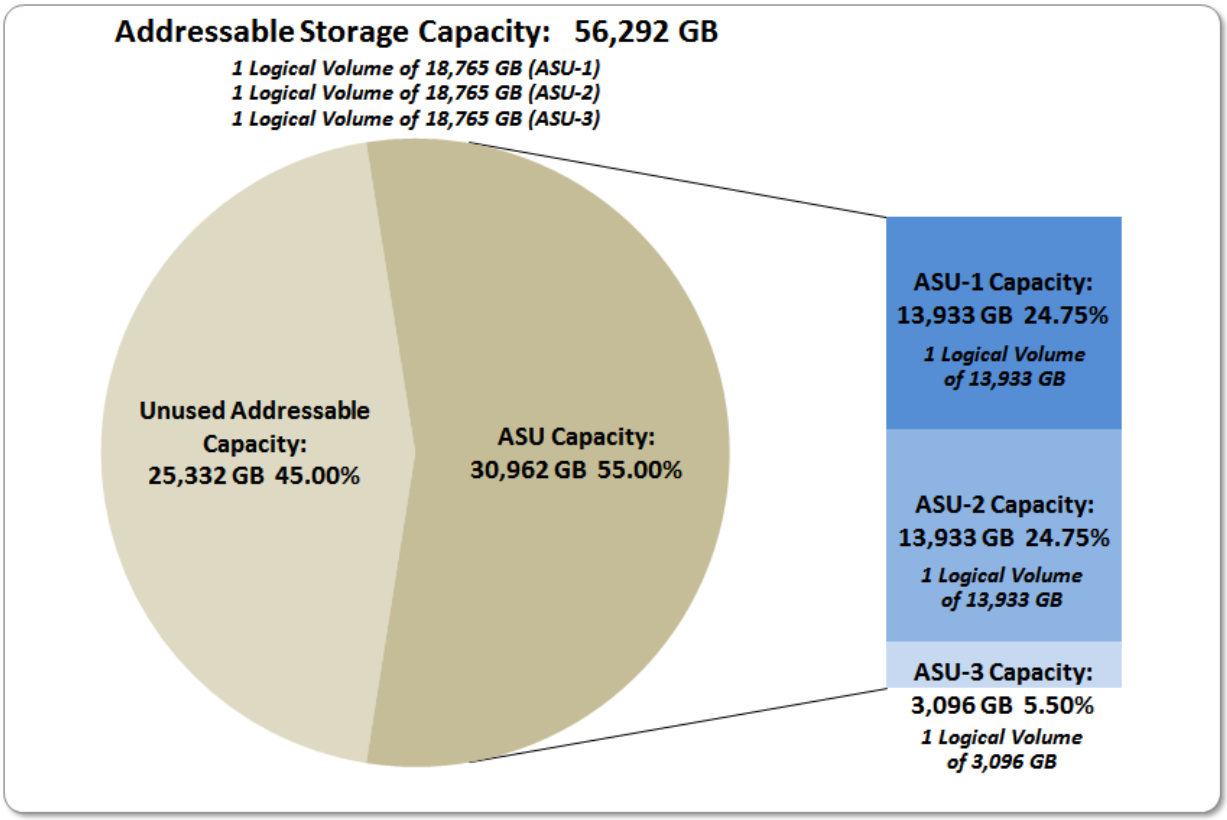
SPC-1 Storage Hierarchy Ratios

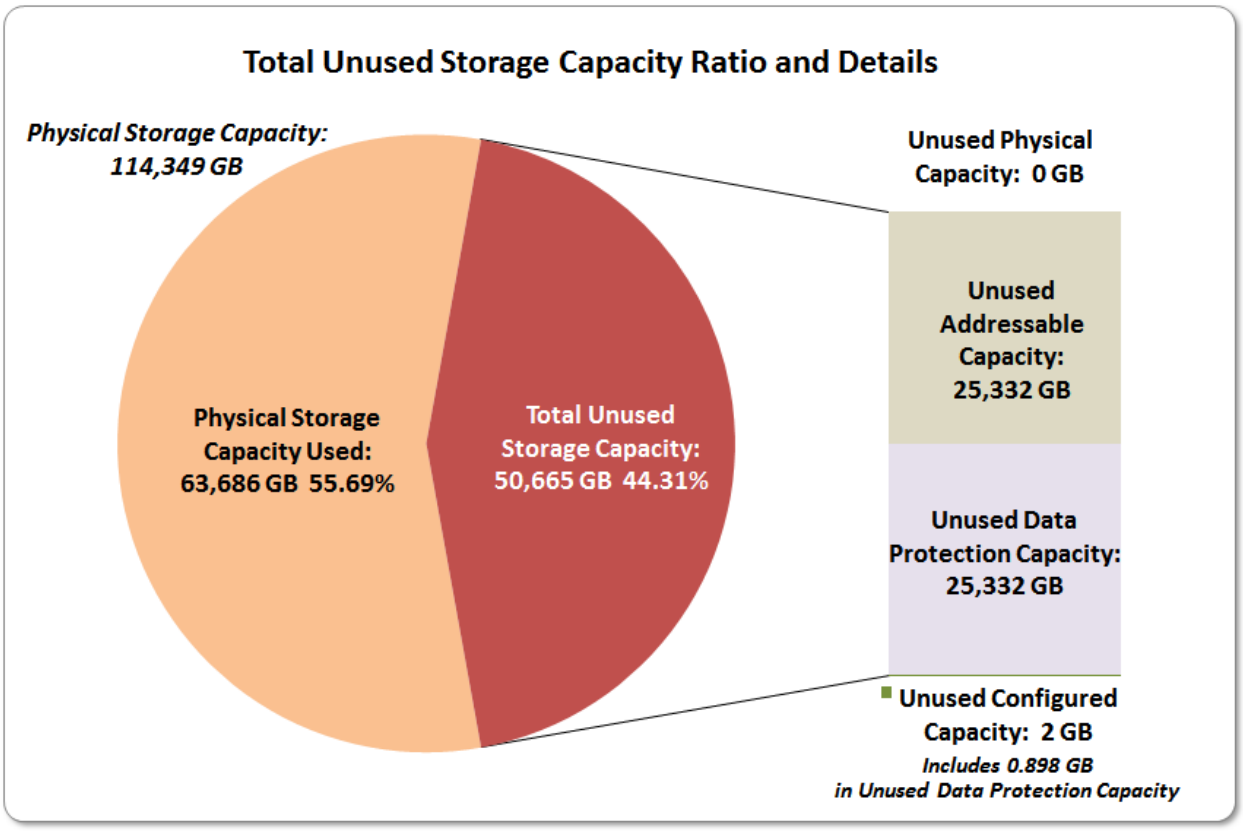
	Addressable Storage Capacity	Configured Storage Capacity	Physical Storage Capacity
Total ASU Capacity	55.00%	27.50%	27.08%
Required for Data Protection *(Mirroring)*		50.00%	49.23%
Addressable Storage Capacity		50.00%	49.23%
Required Storage		0.00%	0.00%
Configured Storage Capacity			98.46%
Global Storage Overhead			1.54%
Unused Storage:			
Addressable	45.00%		
Configured		0.002%	
Physical			0.00%

SPC-1 Storage Capacity Charts




Configured Storage Capacity: 112,590 GB
Configured Capacity Available for Application Use: 112,590 GB 100.00%
Addressable Storage Capacity: 56,294 GB 50.00%
Data Protection Capacity: 56,294 GB 50.00%
Unused Configured Capacity: 2 GB 0.00%
Includes 0.898 GB in Unused Data Protection Capacity


Addressable Storage Capacity: 56,292 GB
1 Logical Volume of 18,765 GB (ASU-1)
1 Logical Volume of 18,765 GB (ASU-2)
1 Logical Volume of 18,765 GB (ASU-3)
Unused Addressable Capacity: 25,332 GB 45.00%
ASU Capacity: 30,962 GB 55.00%
ASU-1 Capacity: 13,933 GB 24.75%
1 Logical Volume of 13,933 GB
ASU-2 Capacity: 13,933 GB 24.75%
1 Logical Volume of 13,933 GB
ASU-3 Capacity: 3,096 GB 5.50%
1 Logical Volume of 3,096 GB



Storage Capacity Utilization

Clause 9.4.3.6.2

The FDR will include a table illustrating the storage capacity utilization values defined for Application Utilization (Clause 2.8.1), Protected Application Utilization (Clause 2.8.2), and Unused Storage Ratio (Clause 2.8.3).

Clause 2.8.1

Application Utilization is defined as Total ASU Capacity divided by Physical Storage Capacity.

Clause 2.8.2

Protected Application Utilization is defined as (Total ASU Capacity plus total Data Protection Capacity minus unused Data Protection Capacity) divided by Physical Storage Capacity.

Clause 2.8.3

Unused Storage Ratio is defined as Total Unused Capacity divided by Physical Storage Capacity and may not exceed 45%.

SPC-1 Storage Capacity Utilization	
Application Utilization	27.08%
Protected Application Utilization	54.15%
Unused Storage Ratio	44.31%

Logical Volume Capacity and ASU Mapping

Clause 9.4.3.6.3

A table illustrating the capacity of each ASU and the mapping of Logical Volumes to ASUs shall be provided in the FDR. … Logical Volumes shall be sequenced in the table from top to bottom per its position in the contiguous address space of each ASU. The capacity of each Logical Volume shall be stated. … In conjunction with this table, the Test Sponsor shall provide a complete description of the type of data protection (see Clause 2.4.5) used on each Logical Volume.

Logical Volume Capacity and Mapping		
ASU-1 (13,933.011 GB)	**ASU-2 (13,933.011 GB)**	**ASU-3 (3,096.225 GB)**
1 Logical Volume 18,764.645 GB per Logical Volume (13,933.011 GB used per Logical Volume)	1 Logical Volume 18,764.645 GB per Logical Volume (13,933.011 GB used per Logical Volume)	1 Logical Volume 18,764.645 GB per Logical Volume (3,096.225 GB used per Logical Volume)

The Data Protection Level used for all Logical Volumes was **Protected 2** using ***Mirroring*** as described on page 12. See "ASU Configuration" in the **IOPS Test Results File** for more detailed configuration information.

SPC-1 BENCHMARK EXECUTION RESULTS

This portion of the Full Disclosure Report documents the results of the various SPC-1 Tests, Test Phases, and Test Runs. An SPC-1 glossary on page 63 contains definitions of terms specific to the SPC-1 Tests, Test Phases, and Test Runs.

Clause 5.4.3

The Tests must be executed in the following sequence: Primary Metrics, Repeatability, and Data Persistence. That required sequence must be uninterrupted from the start of Primary Metrics to the completion of Persistence Test Run 1. Uninterrupted means the Benchmark Configuration shall not be power cycled, restarted, disturbed, altered, or adjusted during the above measurement sequence. If the required sequence is interrupted other than for the Host System/TSC power cycle between the two Persistence Test Runs, the measurement is invalid.

SPC-1 Tests, Test Phases, and Test Runs

The SPC-1 benchmark consists of the following Tests, Test Phases, and Test Runs:

- **Primary Metrics Test**
  - Sustainability Test Phase and Test Run
  - IOPS Test Phase and Test Run
  - Response Time Ramp Test Phase
    - 95% of IOPS Test Run
    - 90% of IOPS Test Run
    - 80% of IOPS Test Run
    - 50% of IOPS Test Run
    - 10% of IOPS Test Run (LRT)
- **Repeatability Test**
  - Repeatability Test Phase 1
    - 10% of IOPS Test Run (LRT)
    - IOPS Test Run
  - Repeatability Test Phase 2
    - 10% of IOPS Test Run (LRT)
    - IOPS Test Run
- **Data Persistence Test**
  - Data Persistence Test Run 1
  - Data Persistence Test Run 2

Each Test is an atomic unit that must be executed from start to finish before any other Test, Test Phase, or Test Run may be executed.

The results from each Test, Test Phase, and Test Run are listed below along with a more detailed explanation of each component.

"Ramp-Up" Test Runs

Clause 5.3.13

In order to warm-up caches or perform the initial ASU data migration in a multi-tier configuration, a Test Sponsor may perform a series of "Ramp-Up" Test Runs as a substitute for an initial, gradual Ramp-Up.

Clause 5.3.13.3

The "Ramp-Up" Test Runs will immediately precede the Primary Metrics Test as part of the uninterrupted SPC-1 measurement sequence.

Clause 9.4.3.7.1

If a series of "Ramp-Up" Test Runs were included in the SPC-1 measurement sequence, the FDR shall report the duration (ramp-up and measurement interval), BSU level, SPC-1 IOPS and average response time for each "Ramp-Up" Test Run in an appropriate table.

There were no "Ramp-Up" Test Runs executed.

Primary Metrics Test – Sustainability Test Phase

Clause 5.4.4.1.1

The Sustainability Test Phase has exactly one Test Run and shall demonstrate the maximum sustainable I/O Request Throughput within at least a continuous eight (8) hour Measurement Interval. This Test Phase also serves to insure that the TSC has reached Steady State prior to reporting the final maximum I/O Request Throughput result (SPC-1 IOPS™).

Clause 5.4.4.1.2

The computed I/O Request Throughput of the Sustainability Test must be within 5% of the reported SPC-1 IOPS™ result.

Clause 5.4.4.1.4

The Average Response Time, as defined in Clause 5.1.1, will be computed and reported for the Sustainability Test Run and cannot exceed 30 milliseconds. If the Average Response time exceeds that 30-milliseconds constraint, the measurement is invalid.

Clause 9.4.3.7.2

For the Sustainability Test Phase the FDR shall contain:

1. *A Data Rate Distribution graph and data table.*
2. *I/O Request Throughput Distribution graph and data table.*
3. *A Response Time Frequency Distribution graph and table.*
4. *An Average Response Time Distribution graph and table.*
5. *The human readable Test Run Results File produced by the Workload Generator (may be included in an appendix).*
6. *A listing or screen image of all input parameters supplied to the Workload Generator (may be included in an appendix).*
7. *The Measured Intensity Multiplier for each I/O stream.*
8. *The variability of the Measured Intensity Multiplier, as defined in Clause 5.3.13.3.*

SPC-1 Workload Generator Input Parameters

The SPC-1 Workload Generator input parameters for the Sustainability, IOPS, Response Time Ramp, Repeatability, and Persistence Test Runs are documented in Appendix E: SPC-1 Workload Generator Input Parameters on Page 126.

Sustainability Test Results File

A link to the test results file generated from the Sustainability Test Run is listed below.

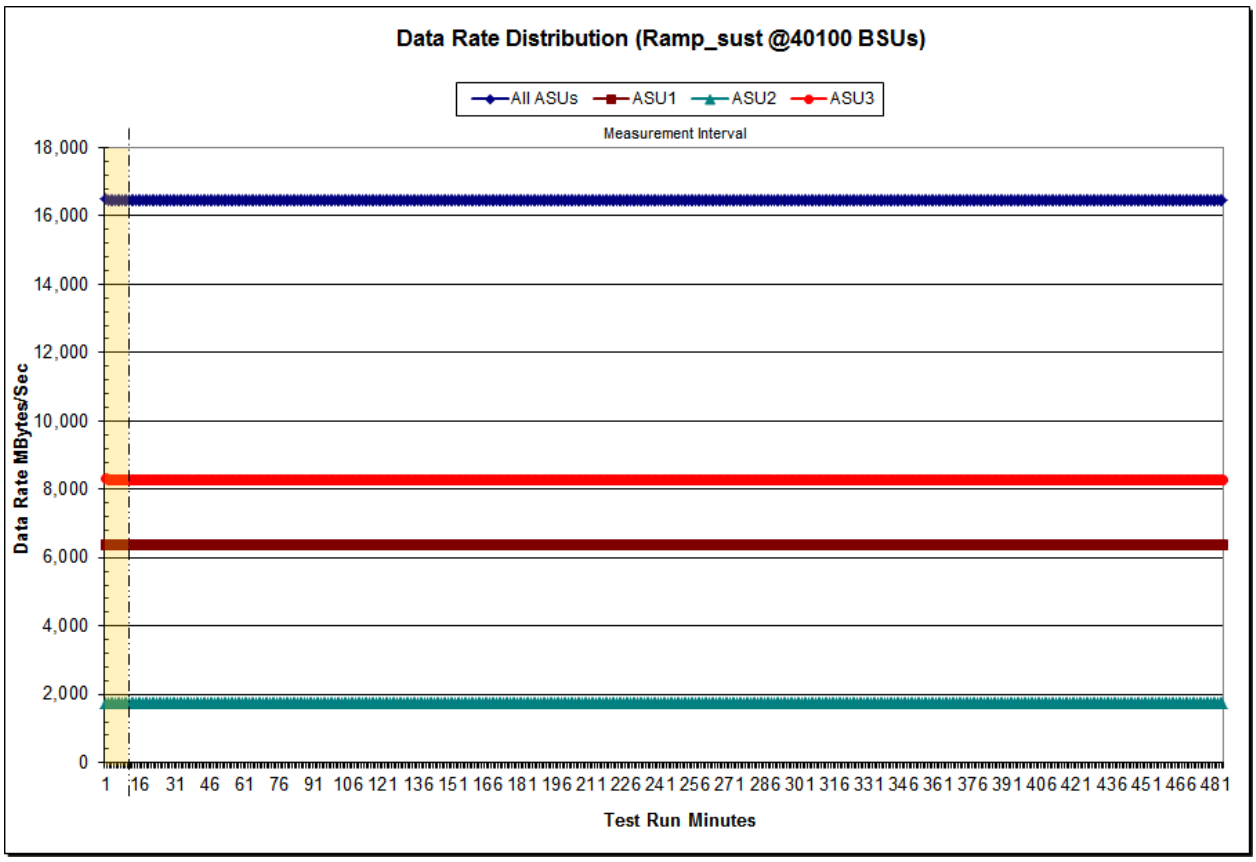
Sustainability Test Results File

Sustainability – Data Rate Distribution Data (MB/second)

The Sustainability Data Rate table of data is not embedded in this document due to its size. The table is available via the following URL:

Sustainability Data Rate Table

Sustainability – Data Rate Distribution Graph

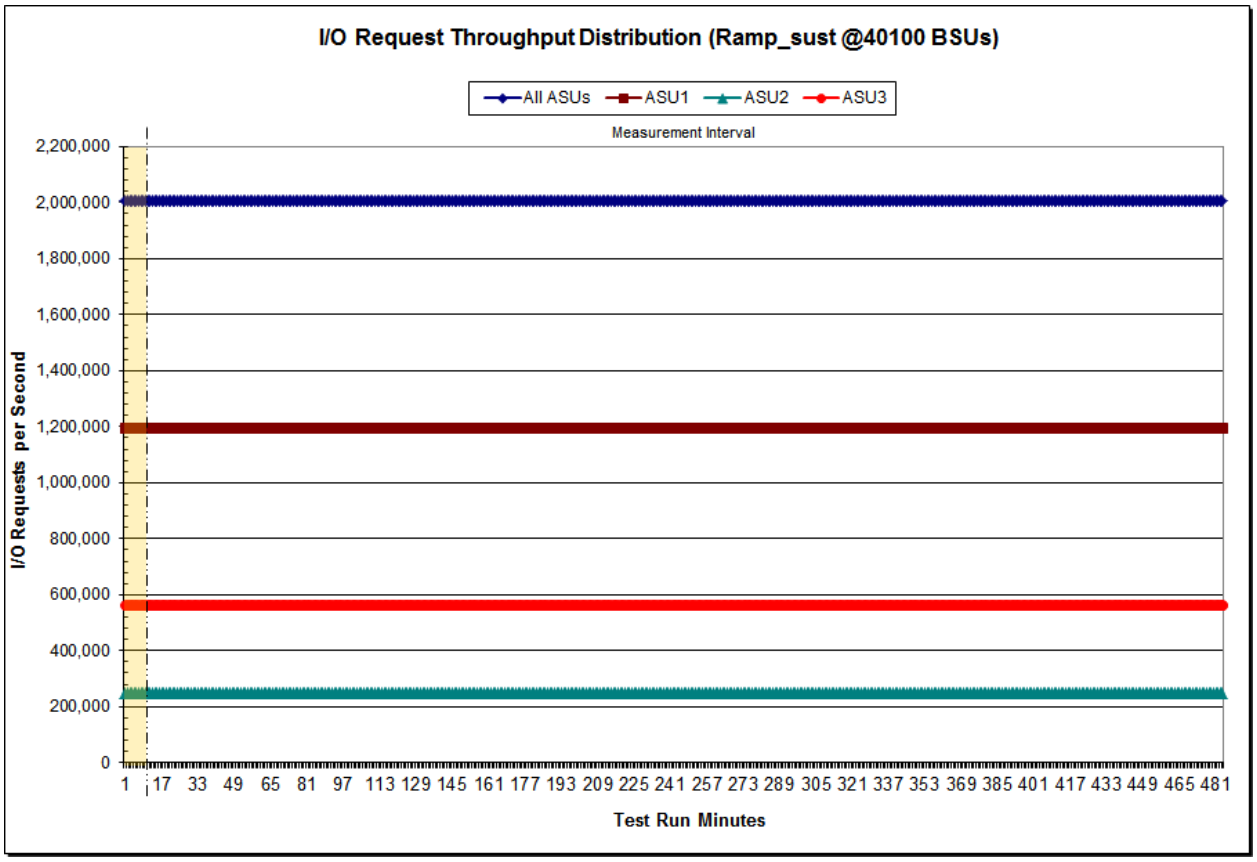


Sustainability – I/O Request Throughput Distribution Data

The Sustainability I/O Request Throughput table of data is not embedded in this document due to its size. The table is available via the following URL:

Sustainability I/O Request Throughput Table

Sustainability – I/O Request Throughput Distribution Graph

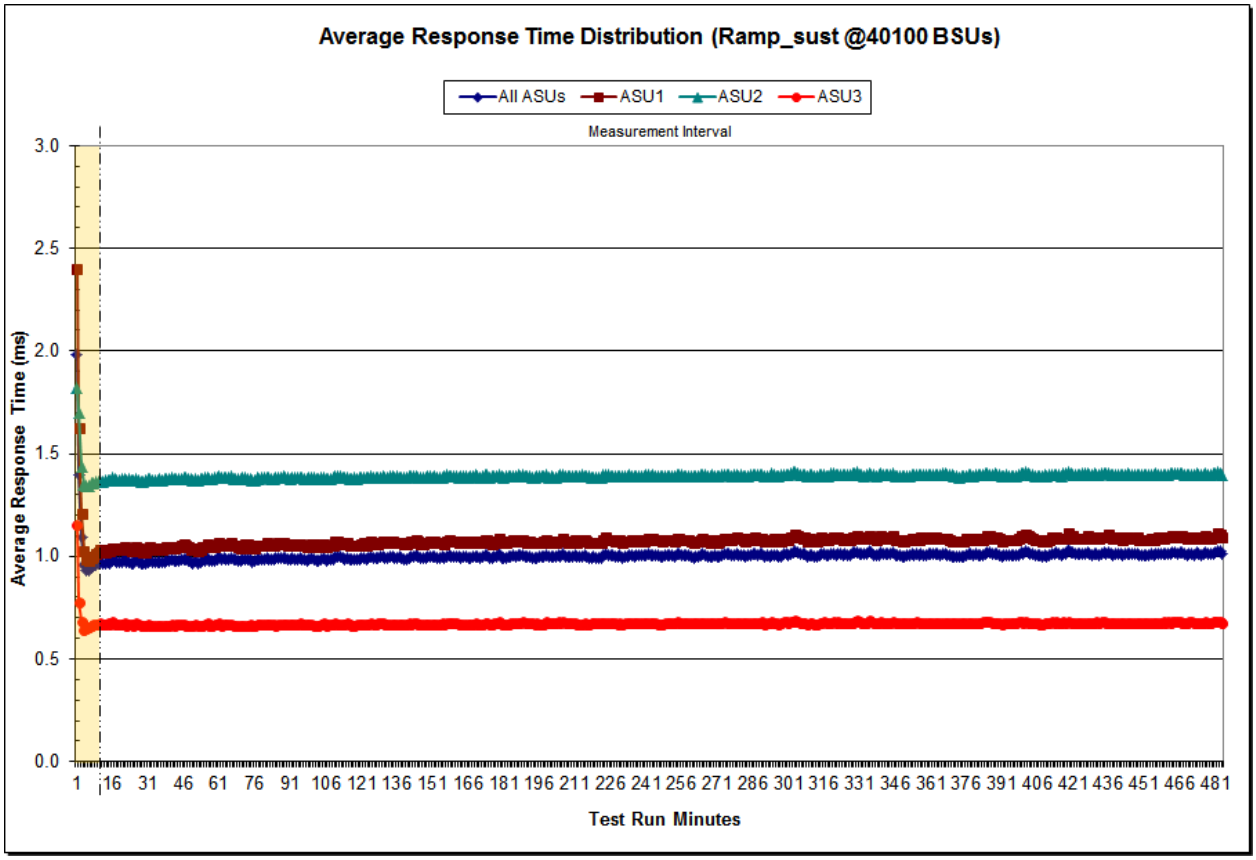


Sustainability – Average Response Time (ms) Distribution Data

The Sustainability Average Response Time table of data is not embedded in this document due to its size. The table is available via the following URL:

Sustainability Average Response Time Table

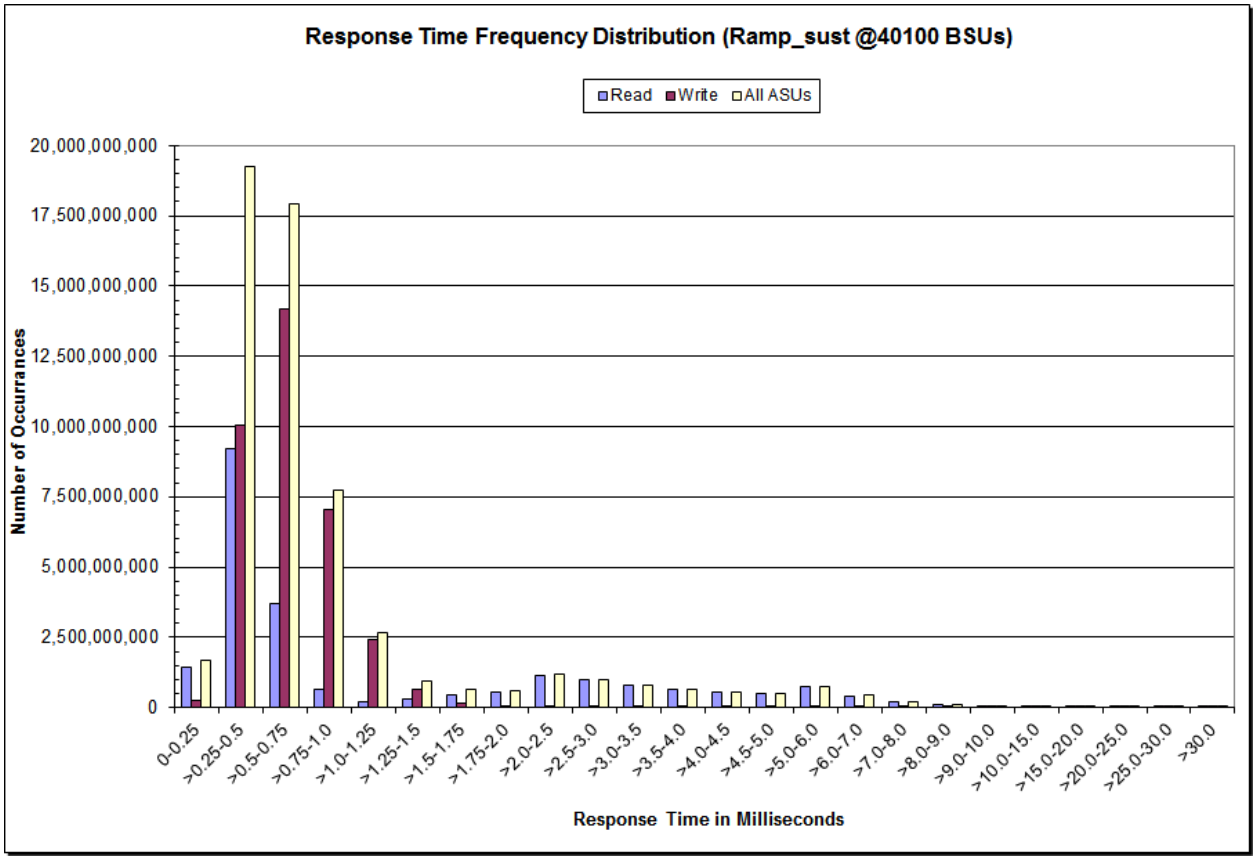
Sustainability – Average Response Time (ms) Distribution Graph



Sustainability – Response Time Frequency Distribution Data

Response Time (ms)	0-0.25	>0.25-0.5	>0.5-0.75	>0.75-1.0	>1.0-1.25	>1.25-1.5	>1.5-1.75	>1.75-2.0
Read	1,424,607,554	9,191,931,820	3,712,778,141	652,180,174	224,562,535	311,694,364	465,179,509	567,748,505
Write	258,037,718	10,069,598,354	14,203,006,467	7,068,214,255	2,444,309,822	650,840,065	170,857,740	54,136,234
All ASUs	1,682,645,272	19,261,530,174	17,915,784,608	7,720,394,429	2,668,872,357	962,534,429	636,037,249	621,884,739
ASU1	1,411,424,010	12,847,676,825	9,493,424,646	3,510,324,596	1,135,178,381	454,033,604	387,314,294	432,158,148
ASU2	169,551,991	2,038,614,894	1,850,331,496	778,226,422	293,899,384	157,512,653	150,270,291	158,103,348
ASU3	101,669,271	4,375,238,455	6,572,028,466	3,431,843,411	1,239,794,592	350,988,172	98,452,664	31,623,243
Response Time (ms)	**>2.0-2.5**	**>2.5-3.0**	**>3.0-3.5**	**>3.5-4.0**	**>4.0-4.5**	**>4.5-5.0**	**>5.0-6.0**	**>6.0-7.0**
Read	1,155,243,442	969,825,699	782,652,433	641,288,216	553,216,305	479,624,445	744,841,992	425,405,233
Write	30,338,330	6,725,207	2,246,543	1,395,154	1,893,691	1,602,279	1,895,168	1,138,753
All ASUs	1,185,581,772	976,550,906	784,898,976	642,683,370	555,109,996	481,226,724	746,737,160	426,543,986
ASU1	873,445,636	736,330,490	596,065,965	489,451,676	423,436,482	367,373,509	571,124,943	325,759,240
ASU2	295,214,408	236,848,909	187,963,472	152,837,545	131,053,762	113,326,850	175,106,227	100,556,713
ASU3	16,921,728	3,371,507	869,539	394,149	619,752	526,365	505,990	228,033
Response Time (ms)	**>7.0-8.0**	**>8.0-9.0**	**>9.0-10.0**	**>10.0-15.0**	**>15.0-20.0**	**>20.0-25.0**	**>25.0-30.0**	**>30.0**
Read	223,636,630	119,086,831	61,778,116	63,305,614	2,787,323	265,663	73,399	60,963
Write	830,397	680,912	575,554	1,525,404	228,417	72,691	20,576	29,732
All ASUs	224,467,027	119,767,743	62,353,670	64,831,018	3,015,740	338,354	93,975	90,695
ASU1	170,898,268	90,994,922	47,269,888	48,958,405	2,321,709	263,370	75,614	73,235
ASU2	53,413,432	28,629,684	14,942,605	15,430,708	660,301	56,126	13,573	10,471
ASU3	155,327	143,137	141,177	441,905	33,730	18,858	4,788	6,989

Sustainability – Response Time Frequency Distribution Graph



Sustainability – Measured Intensity Multiplier and Coefficient of Variation

Clause 3.4.3

IM – Intensity Multiplier: *The ratio of I/Os for each I/O stream relative to the total I/Os for all I/O streams (ASU1-1 – ASU3-1) as required by the benchmark specification.*

Clauses 5.1.10 and 5.3.15.2

MIM – Measured Intensity Multiplier: *The Measured Intensity Multiplier represents the ratio of measured I/Os for each I/O stream relative to the total I/Os measured for all I/O streams (ASU1-1 – ASU3-1). This value may differ from the corresponding Expected Intensity Multiplier by no more than 5%.*

Clause 5.3.15.3

COV – Coefficient of Variation: *This measure of variation for the Measured Intensity Multiplier cannot exceed 0.2.*

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2810
COV	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000

Primary Metrics Test – IOPS Test Phase

Clause 5.4.4.2

The IOPS Test Phase consists of one Test Run at the 100% load point with a Measurement Interval of ten (10) minutes. The IOPS Test Phase immediately follows the Sustainability Test Phase without any interruption or manual intervention.

The IOPS Test Run generates the SPC-1 IOPS™ primary metric, which is computed as the I/O Request Throughput for the Measurement Interval of the IOPS Test Run.

The Average Response Time is computed for the IOPS Test Run and cannot exceed 30 milliseconds. If the Average Response Time exceeds the 30 millisecond constraint, the measurement is invalid.

Clause 9.4.3.7.3

For the IOPS Test Phase the FDR shall contain:

1. *I/O Request Throughput Distribution (data and graph).*
2. *A Response Time Frequency Distribution.*
3. *An Average Response Time Distribution.*
4. *The human readable Test Run Results File produced by the Workload Generator.*
5. *A listing or screen image of all input parameters supplied to the Workload Generator.*
6. *The total number of I/O Requests completed in the Measurement Interval as well as the number of I/O Requests with a Response Time less than or equal to 30 milliseconds and the number of I/O Requests with a Response Time greater than 30 milliseconds.*

SPC-1 Workload Generator Input Parameters

The SPC-1 Workload Generator input parameters for the Sustainability, IOPS, Response Time Ramp, Repeatability, and Persistence Test Runs are documented in Appendix E: SPC-1 Workload Generator Input Parameters on Page 126.

IOPS Test Results File

A link to the test results file generated from the IOPS Test Run is listed below.

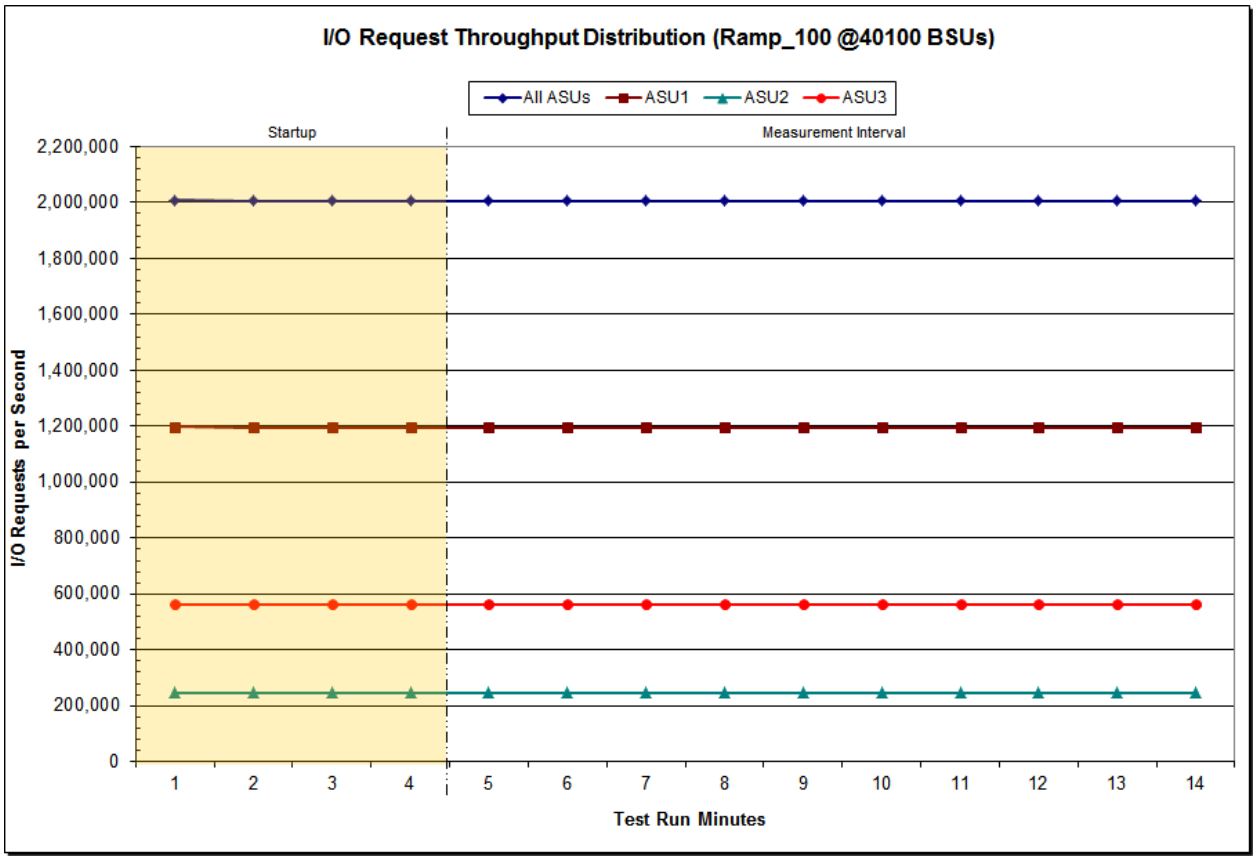
IOPS Test Results File

IOPS Test Run – I/O Request Throughput Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	7:34:41	7:38:41	0-3	0:04:00
Measurement Interval	7:38:41	7:48:41	4-13	0:10:00

60 second intervals	All ASUs	ASU1	ASU2	ASU3
0	2,008,200.12	1,196,885.42	247,046.98	564,267.72
1	2,004,846.78	1,194,898.43	246,519.57	563,428.78
2	2,005,160.93	1,195,145.35	246,633.60	563,381.98
3	2,005,005.58	1,195,116.20	246,510.13	563,379.25
4	2,004,941.50	1,194,890.42	246,684.52	563,366.57
5	2,004,516.52	1,194,707.43	246,571.65	563,237.43
6	2,004,921.52	1,194,972.27	246,588.62	563,360.63
7	2,005,044.73	1,195,091.68	246,582.43	563,370.62
8	2,004,723.57	1,194,624.37	246,661.57	563,437.63
9	2,005,300.10	1,195,040.80	246,599.45	563,659.85
10	2,005,408.48	1,195,088.48	246,724.08	563,595.92
11	2,004,975.32	1,194,938.93	246,638.47	563,397.92
12	2,004,698.00	1,194,793.80	246,564.30	563,339.90
13	2,004,889.15	1,195,016.80	246,561.92	563,310.43
Average	***2,004,941.89***	***1,194,916.50***	***246,617.70***	***563,407.69***

IOPS Test Run – I/O Request Throughput Distribution Graph

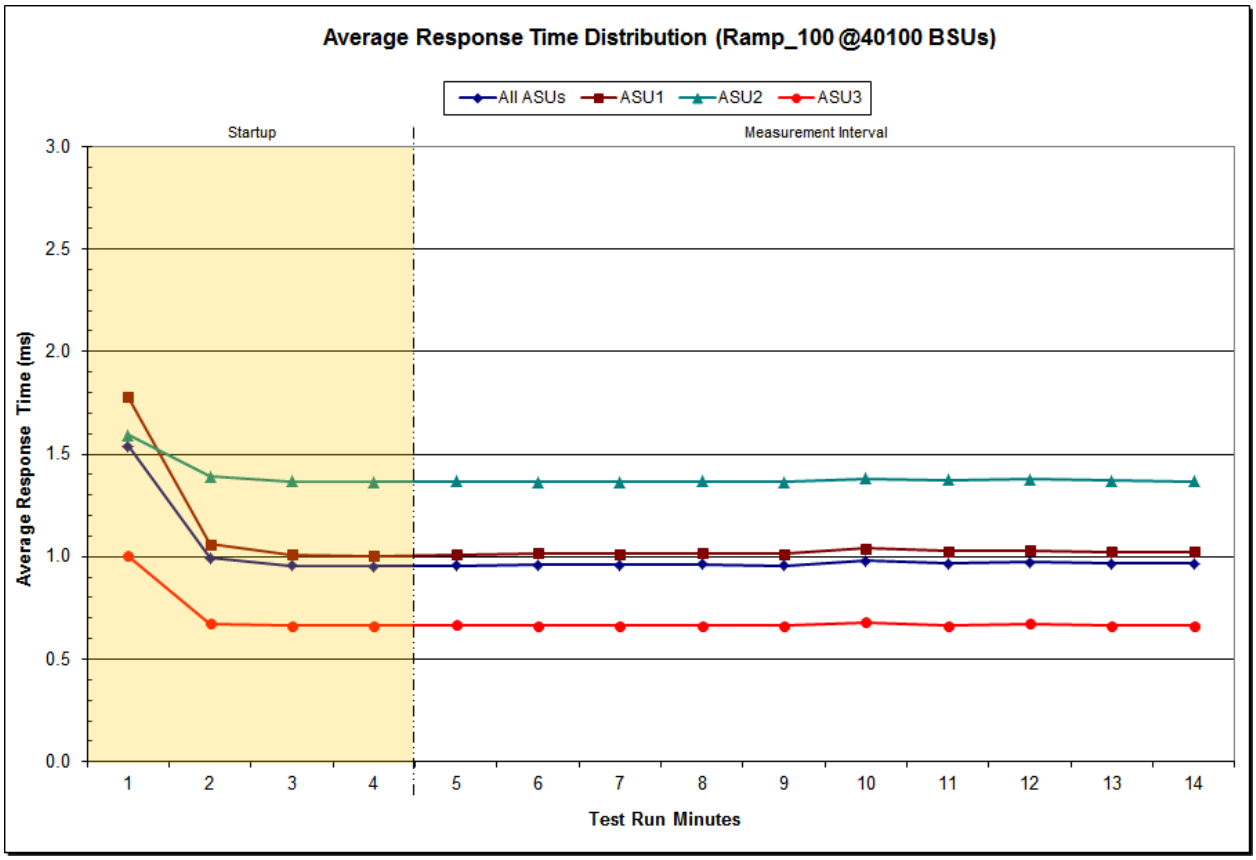


IOPS Test Run – Average Response Time (ms) Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	7:34:41	7:38:41	0-3	0:04:00
Measurement Interval	7:38:41	7:48:41	4-13	0:10:00

60 second intervals	All ASUs	ASU1	ASU2	ASU3
0	1.54	1.78	1.59	1.00
1	0.99	1.06	1.39	0.67
2	0.96	1.01	1.37	0.66
3	0.95	1.00	1.36	0.66
4	0.96	1.01	1.37	0.67
5	0.96	1.02	1.37	0.66
6	0.96	1.01	1.36	0.66
7	0.96	1.02	1.37	0.66
8	0.96	1.01	1.37	0.66
9	0.98	1.04	1.38	0.68
10	0.97	1.03	1.37	0.67
11	0.97	1.03	1.38	0.67
12	0.97	1.02	1.37	0.66
13	0.97	1.02	1.37	0.66
Average	***0.96***	***1.02***	***1.37***	***0.67***

IOPS Test Run – Average Response Time (ms) Distribution Graph



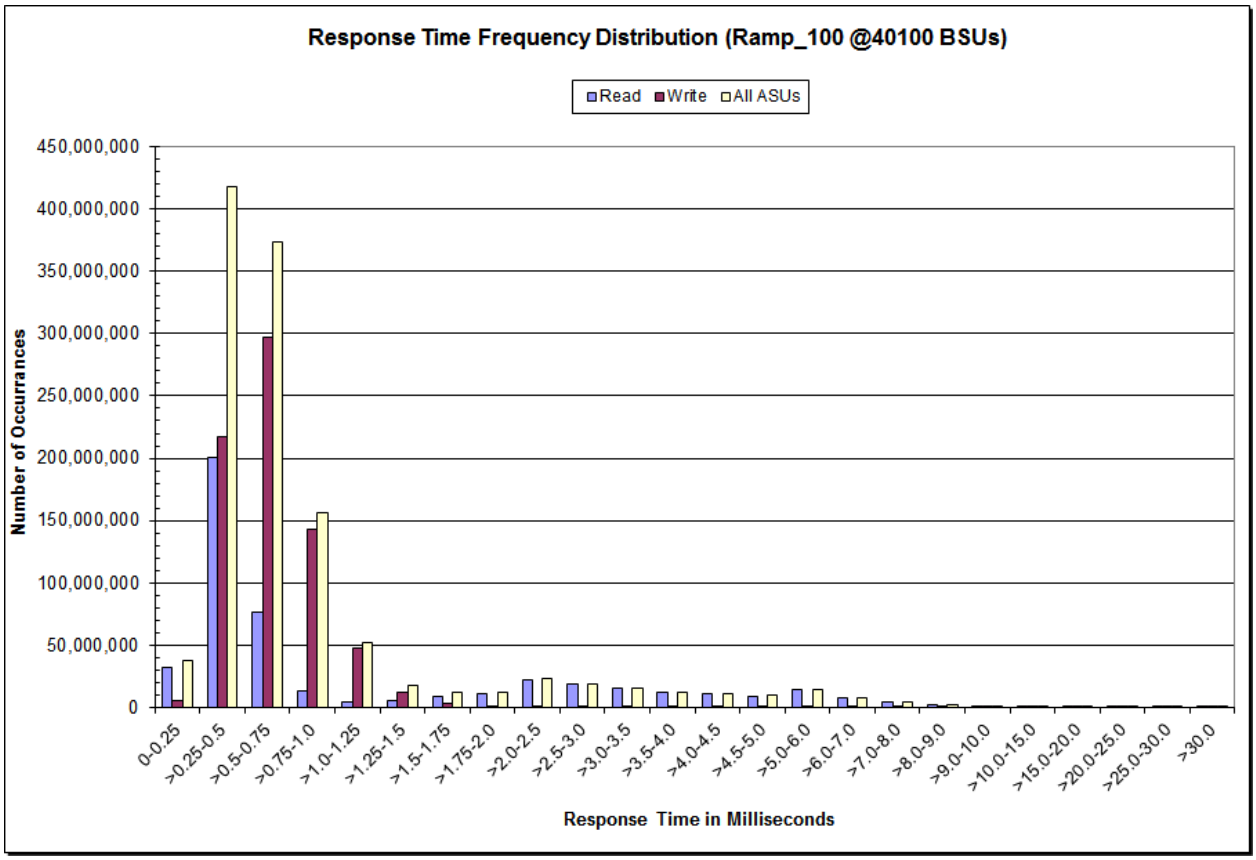
IOPS Test Run –Response Time Frequency Distribution Data

Response Time (ms)	0-0.25	>0.25-0.5	>0.5-0.75	>0.75-1.0	>1.0-1.25	>1.25-1.5	>1.5-1.75	>1.75-2.0
Read	32,422,248	200,625,379	76,368,422	12,963,281	4,508,660	6,130,770	9,094,471	11,049,828
Write	5,783,105	217,125,541	296,980,137	143,388,433	47,650,566	12,190,482	3,177,376	1,026,523
All ASUs	38,205,353	417,750,920	373,348,559	156,351,714	52,159,226	18,321,252	12,271,847	12,076,351
ASU1	32,116,236	279,485,554	197,322,352	70,818,089	22,092,067	8,572,181	7,373,949	8,244,291
ASU2	3,816,598	43,948,412	38,364,061	15,686,872	5,765,583	3,114,948	3,056,087	3,233,554
ASU3	2,272,519	94,316,954	137,662,146	69,846,753	24,301,576	6,634,123	1,841,811	598,506

Response Time (ms)	>2.0-2.5	>2.5-3.0	>3.0-3.5	>3.5-4.0	>4.0-4.5	>4.5-5.0	>5.0-6.0	>6.0-7.0
Read	22,333,590	18,739,638	15,356,079	12,856,007	11,185,263	9,556,814	14,357,244	8,052,774
Write	593,563	138,496	52,631	38,557	47,640	40,844	51,387	34,309
All ASUs	22,927,153	18,878,134	15,408,710	12,894,564	11,232,903	9,597,658	14,408,631	8,087,083
ASU1	16,571,127	13,962,662	11,487,042	9,651,569	8,427,478	7,205,690	10,831,308	6,066,511
ASU2	6,026,164	4,846,174	3,900,738	3,230,374	2,788,783	2,377,591	3,561,346	2,010,773
ASU3	329,862	69,298	20,930	12,621	16,642	14,377	15,977	9,799

Response Time (ms)	>7.0-8.0	>8.0-9.0	>9.0-10.0	>10.0-15.0	>15.0-20.0	>20.0-25.0	>25.0-30.0	>30.0
Read	4,218,476	2,210,752	1,135,482	1,186,603	61,096	8,476	3,857	6,595
Write	28,751	25,579	24,774	110,931	10,042	4,345	2,808	4,584
All ASUs	4,247,227	2,236,331	1,160,256	1,297,534	71,138	12,821	6,665	11,179
ASU1	3,174,682	1,666,155	860,931	938,492	53,869	10,173	5,568	10,699
ASU2	1,063,935	561,858	290,085	309,504	14,824	1,347	363	316
ASU3	8,610	8,318	9,240	49,538	2,445	1,301	734	164

IOPS Test Run –Response Time Frequency Distribution Graph



IOPS Test Run – I/O Request Information

I/O Requests Completed in the Measurement Interval	I/O Requests Completed with Response Time = or < 30 ms	I/O Requests Completed with Response Time > 30 ms
1,202,963,209	1,202,952,030	11,179

IOPS Test Run – Measured Intensity Multiplier and Coefficient of Variation

Clause 3.4.3

IM – Intensity Multiplier: *The ratio of I/Os for each I/O stream relative to the total I/Os for all I/O streams (ASU1-1 – ASU3-1) as required by the benchmark specification.*

Clauses 5.1.10 and 5.3.15.2

MIM – Measured Intensity Multiplier: *The Measured Intensity Multiplier represents the ratio of measured I/Os for each I/O stream relative to the total I/Os measured for all I/O streams (ASU1-1 – ASU3-1). This value may differ from the corresponding Expected Intensity Multiplier by no more than 5%.*

Clause 5.3.15.3

COV – Coefficient of Variation: *This measure of variation for the Measured Intensity Multiplier cannot exceed 0.2.*

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2810
COV	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000

Primary Metrics Test – Response Time Ramp Test Phase

Clause 5.4.4.3

The Response Time Ramp Test Phase consists of five Test Runs, one each at 95%, 90%, 80%, 50%, and 10% of the load point (100%) used to generate the SPC-1 IOPS™ primary metric. Each of the five Test Runs has a Measurement Interval of ten (10) minutes. The Response Time Ramp Test Phase immediately follows the IOPS Test Phase without any interruption or manual intervention.

The five Response Time Ramp Test Runs, in conjunction with the IOPS Test Run (100%), demonstrate the relationship between Average Response Time and I/O Request Throughput for the Tested Storage Configuration (TSC) as illustrated in the response time/throughput curve on page 16.

In addition, the Average Response Time measured during the 10% Test Run is the value for the SPC-1 LRT™ metric. That value represents the Average Response Time of a lightly loaded TSC.

Clause 9.4.3.7.4

The following content shall appear in the FDR for the Response Time Ramp Phase:

1. *A Response Time Ramp Distribution.*
2. *The human readable Test Run Results File produced by the Workload Generator for each Test Run within the Response Time Ramp Test Phase.*
3. *For the 10% Load Level Test Run (SPC-1 LRT™ metric) an Average Response Time Distribution.*
4. *A listing or screen image of all input parameters supplied to the Workload Generator.*

SPC-1 Workload Generator Input Parameters

The SPC-1 Workload Generator input parameters for the Sustainability, IOPS, Response Time Ramp, Repeatability, and Persistence Test Runs are documented in Appendix E: SPC-1 Workload Generator Input Parameters on Page 126.

Response Time Ramp Test Results File

A link to each test result file generated from each Response Time Ramp Test Run list listed below.

95% Load Level

90% Load Level

80% Load Level

50% Load Level

10% Load Level

Response Time Ramp Distribution (IOPS) Data

The five Test Runs that comprise the Response Time Ramp Phase are executed at 95%, 90%, 80%, 50%, and 10% of the Business Scaling Unit (BSU) load level used to produce the SPC-1 IOPS™ primary metric. The 100% BSU load level is included in the following Response Time Ramp data table and graph for completeness.

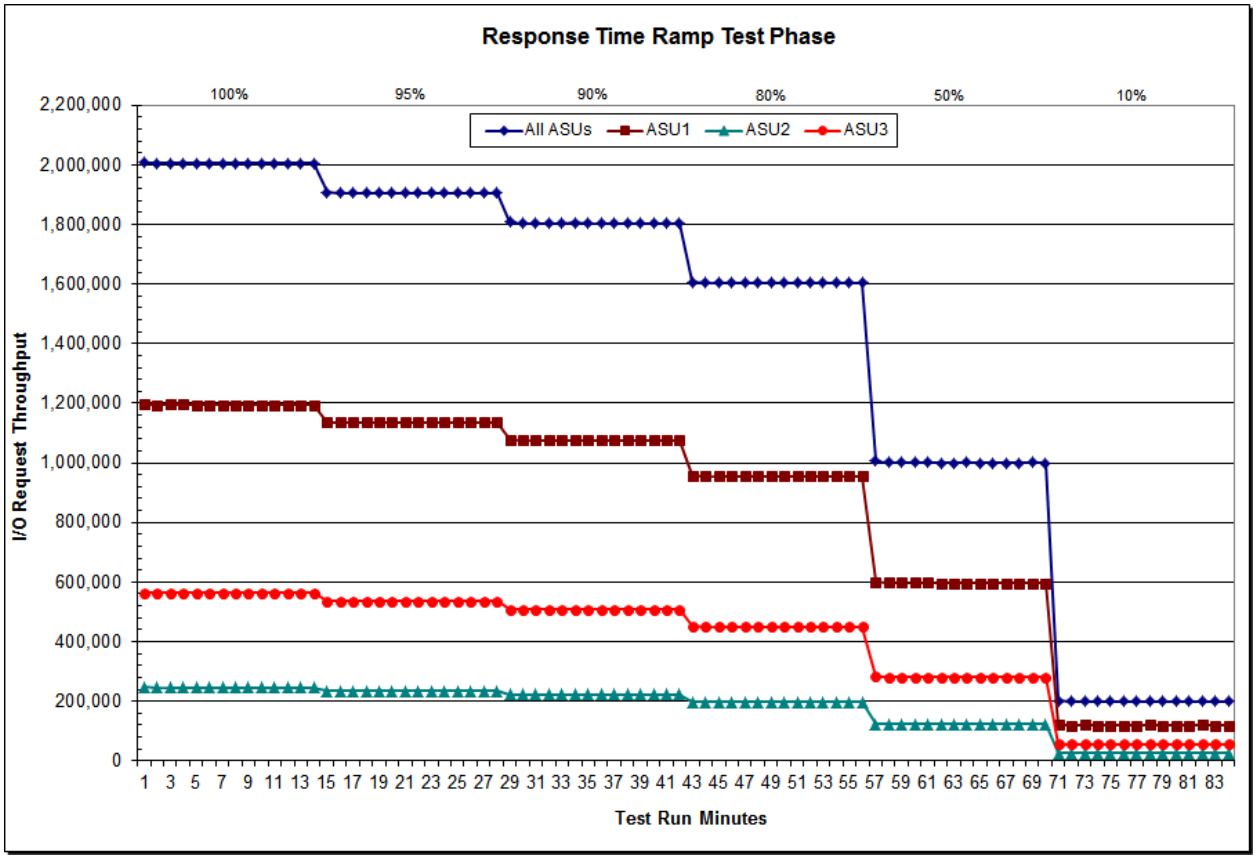
100% Load Level: 40,100 BSUs	Start	Stop	Interval	Duration	95% Load Level: 38,095 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	7:34:41	7:38:41	0-3	0:04:00	Start-Up/Ramp-Up	8:02:45	8:06:45	0-3	0:04:00
Measurement Interval	7:38:41	7:48:41	4-14	0:10:00	Measurement Interval	8:06:45	8:16:45	4-14	0:10:00
(60 second intervals)	All ASUs	ASU-1	ASU-2	ASU-3	*(60 second intervals)*	All ASUs	ASU-1	ASU-2	ASU-3
0	2,008,200.12	1,196,885.42	247,046.98	564,267.72	0	1,907,631.45	1,136,876.40	234,694.37	536,060.68
1	2,004,846.78	1,194,898.43	246,519.57	563,428.78	1	1,904,961.28	1,135,432.90	234,247.87	535,280.52
2	2,005,160.93	1,195,145.35	246,633.60	563,381.98	2	1,904,513.08	1,134,882.22	234,357.70	535,273.17
3	2,005,005.58	1,195,116.20	246,510.13	563,379.25	3	1,904,666.38	1,135,166.50	234,285.53	535,214.35
4	2,004,941.50	1,194,890.42	246,684.52	563,366.57	4	1,904,867.70	1,135,221.32	234,295.12	535,351.27
5	2,004,516.52	1,194,707.43	246,571.65	563,237.43	5	1,904,877.47	1,135,254.27	234,298.13	535,325.07
6	2,004,921.52	1,194,972.27	246,588.62	563,360.63	6	1,904,478.38	1,135,211.68	234,233.60	535,033.10
7	2,005,044.73	1,195,091.68	246,582.43	563,370.62	7	1,904,749.58	1,135,298.42	234,244.12	535,207.05
8	2,004,723.57	1,194,624.37	246,661.57	563,437.63	8	1,904,994.68	1,135,381.43	234,392.77	535,220.48
9	2,005,300.10	1,195,040.80	246,599.45	563,659.85	9	1,905,062.80	1,135,528.35	234,270.00	535,264.45
10	2,005,408.48	1,195,088.48	246,724.08	563,595.92	10	1,905,012.07	1,135,317.58	234,376.57	535,317.92
11	2,004,975.32	1,194,938.93	246,638.47	563,397.92	11	1,904,808.60	1,135,311.68	234,420.57	535,076.35
12	2,004,698.00	1,194,793.80	246,564.30	563,339.90	12	1,904,717.87	1,135,311.60	234,317.37	535,088.90
13	2,004,889.15	1,195,016.80	246,561.92	563,310.43	13	1,904,836.70	1,135,219.82	234,209.73	535,407.15
Average	***2,004,941.89***	***1,194,916.50***	***246,617.70***	***563,407.69***	***Average***	***1,904,840.59***	***1,135,305.62***	***234,305.80***	***535,229.17***

90% Load Level: 36,090 BSUs	Start	Stop	Interval	Duration	80% Load Level: 32,080 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	8:30:28	8:34:28	0-3	0:04:00	Start-Up/Ramp-Up	8:57:27	9:01:27	0-3	0:04:00
Measurement Interval	8:34:28	8:44:28	4-14	0:10:00	Measurement Interval	9:01:27	9:11:27	4-14	0:10:00
(60 second intervals)	All ASUs	ASU-1	ASU-2	ASU-3	*(60 second intervals)*	All ASUs	ASU-1	ASU-2	ASU-3
0	1,807,144.28	1,076,940.85	222,261.88	507,941.55	0	1,606,792.03	957,725.83	197,584.77	451,481.43
1	1,804,518.98	1,075,468.92	221,898.67	507,151.40	1	1,603,732.60	955,873.38	197,274.85	450,584.37
2	1,804,400.70	1,075,541.35	221,900.68	506,958.67	2	1,604,254.98	956,159.27	197,368.12	450,727.60
3	1,804,202.28	1,075,358.03	221,880.95	506,963.30	3	1,603,941.28	955,984.37	197,362.57	450,594.35
4	1,804,473.07	1,075,380.73	222,008.02	507,084.32	4	1,604,161.52	956,126.27	197,323.80	450,711.45
5	1,804,769.43	1,075,596.78	222,058.28	507,114.37	5	1,603,739.97	955,667.92	197,349.05	450,723.00
6	1,804,429.85	1,075,374.72	221,966.98	507,088.15	6	1,603,979.92	955,931.82	197,361.37	450,686.73
7	1,804,536.77	1,075,493.40	222,000.13	507,043.23	7	1,604,086.73	955,957.95	197,311.37	450,817.42
8	1,804,625.13	1,075,445.47	222,034.52	507,145.15	8	1,603,960.38	955,872.33	197,339.03	450,749.02
9	1,804,586.27	1,075,391.13	222,001.52	507,193.62	9	1,603,973.63	956,082.90	197,311.47	450,579.27
10	1,804,516.88	1,075,581.38	221,942.02	506,993.48	10	1,604,093.37	956,020.48	197,365.22	450,707.67
11	1,804,202.98	1,075,211.42	221,961.68	507,029.88	11	1,604,108.77	956,082.75	197,167.70	450,858.32
12	1,804,492.38	1,075,469.87	222,017.88	507,004.63	12	1,604,029.43	956,029.45	197,238.55	450,761.43
13	1,804,707.68	1,075,627.85	221,968.98	507,110.85	13	1,604,042.13	955,872.90	197,310.97	450,858.27
Average	***1,804,534.05***	***1,075,457.28***	***221,996.00***	***507,080.77***	***Average***	***1,604,017.59***	***955,964.48***	***197,307.85***	***450,745.26***

Response Time Ramp Distribution (IOPS) Data *(continued)*

50% Load Level: 20,050 BSUs	Start	Stop	Interval	Duration	10% Load Level: 4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	9:21:50	9:25:50	0-3	0:04:00	Start-Up/Ramp-Up	9:50:07	9:54:07	0-3	0:04:00
Measurement Interval	9:25:50	9:35:50	4-14	0:10:00	Measurement Interval	9:54:07	10:04:07	4-14	0:10:00
(60 second intervals)	All ASUs	ASU-1	ASU-2	ASU-3	*(60 second intervals)*	All ASUs	ASU-1	ASU-2	ASU-3
0	1,006,455.73	599,883.70	123,813.40	282,758.63	0	201,009.83	119,760.60	24,728.20	56,521.03
1	1,002,348.30	597,267.93	123,298.23	281,782.13	1	200,465.28	119,503.77	24,669.35	56,292.17
2	1,002,491.37	597,528.87	123,268.98	281,693.52	2	200,565.95	119,557.35	24,661.08	56,347.52
3	1,002,522.22	597,509.10	123,348.60	281,664.52	3	200,536.48	119,503.47	24,669.18	56,363.83
4	1,002,152.60	597,243.28	123,245.67	281,663.65	4	200,529.33	119,528.50	24,657.67	56,343.17
5	1,000,129.25	595,982.38	123,078.23	281,068.63	5	200,461.57	119,486.90	24,652.82	56,321.85
6	1,000,035.77	595,997.70	123,061.75	280,976.32	6	200,466.65	119,495.62	24,625.77	56,345.27
7	1,000,397.68	596,286.98	122,997.22	281,113.48	7	200,557.02	119,598.20	24,665.80	56,293.02
8	999,770.70	595,772.78	123,014.43	280,983.48	8	200,506.60	119,512.53	24,666.40	56,327.67
9	999,963.83	595,938.00	123,028.53	280,997.30	9	200,563.77	119,548.70	24,650.43	56,364.63
10	1,000,114.62	596,048.23	122,977.20	281,089.18	10	200,525.38	119,505.82	24,649.98	56,369.58
11	1,000,144.10	596,061.23	123,031.68	281,051.18	11	200,552.38	119,590.33	24,676.03	56,286.02
12	1,000,424.22	596,242.85	123,133.63	281,047.73	12	200,523.40	119,496.28	24,665.62	56,361.50
13	999,877.37	595,931.87	122,957.32	280,988.18	13	200,437.22	119,472.53	24,653.15	56,311.53
Average	***1,000,301.01***	***596,150.53***	***123,052.57***	***281,097.92***	***Average***	***200,512.33***	***119,523.54***	***24,656.37***	***56,332.42***

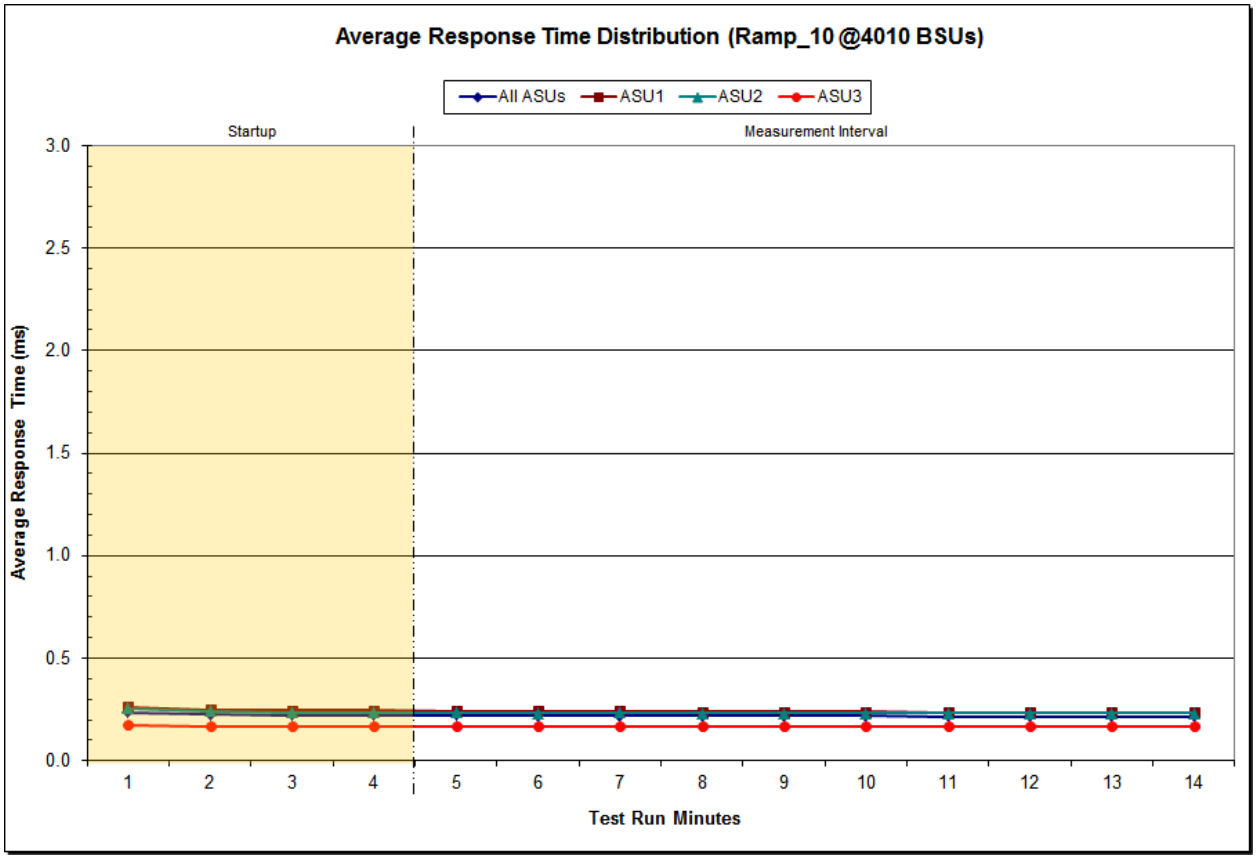
Response Time Ramp Distribution (IOPS) Graph



SPC-1 LRT™ Average Response Time (ms) Distribution Data

4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	9:50:07	9:54:07	0-3	0:04:00
Measurement Interval	9:54:07	10:04:07	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	0.24	0.26	0.26	0.18
1	0.23	0.25	0.24	0.17
2	0.22	0.25	0.24	0.17
3	0.22	0.24	0.24	0.17
4	0.22	0.24	0.24	0.17
5	0.22	0.24	0.23	0.17
6	0.22	0.24	0.23	0.17
7	0.22	0.24	0.23	0.17
8	0.22	0.24	0.23	0.17
9	0.22	0.24	0.23	0.17
10	0.22	0.24	0.23	0.17
11	0.22	0.24	0.23	0.17
12	0.22	0.24	0.23	0.17
13	0.22	0.23	0.23	0.17
Average	***0.22***	***0.24***	***0.23***	***0.17***

SPC-1 LRT™ Average Response Time (ms) Distribution Graph



SPC-1 LRT™ (10%) – Measured Intensity Multiplier and Coefficient of Variation

Clause 3.4.3

IM – Intensity Multiplier: *The ratio of I/Os for each I/O stream relative to the total I/Os for all I/O streams (ASU1-1 – ASU3-1) as required by the benchmark specification.*

Clauses 5.1.10 and 5.3.15.2

MIM – Measured Intensity Multiplier: *The Measured Intensity Multiplier represents the ratio of measured I/Os for each I/O stream relative to the total I/Os measured for all I/O streams (ASU1-1 – ASU3-1). This value may differ from the corresponding Expected Intensity Multiplier by no more than 5%.*

Clause 5.3.15.3

COV – Coefficient of Variation: *This measure of variation for the Measured Intensity Multiplier cannot exceed 0.2.*

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2101	0.0180	0.0700	0.0350	0.2809
COV	0.001	0.000	0.001	0.0001	0.001	0.001	0.001	0.001

Repeatability Test

Clause 5.4.5

The Repeatability Test demonstrates the repeatability and reproducibility of the SPC-1 IOPS™ primary metric and the SPC-1 LRT™ metric generated in earlier Test Runs.

There are two identical Repeatability Test Phases. Each Test Phase contains two Test Runs. Each of the Test Runs will have a Measurement Interval of no less than ten (10) minutes. The two Test Runs in each Test Phase will be executed without interruption or any type of manual intervention.

The first Test Run in each Test Phase is executed at the 10% load point. The Average Response Time from each of the Test Runs is compared to the SPC-1 LRT™ metric. Each Average Response Time value must be less than the SPC-1 LRT™ metric plus 5% or less than the SPC-1 LRT™ metric plus one (1) millisecond (ms).

The second Test Run in each Test Phase is executed at the 100% load point. The I/O Request Throughput from the Test Runs is compared to the SPC-1 IOPS™ primary metric. Each I/O Request Throughput value must be greater than the SPC-1 IOPS™ primary metric minus 5%. In addition, the Average Response Time for each Test Run cannot exceed 30 milliseconds.

If any of the above constraints are not met, the benchmark measurement is invalid.

Clause 9.4.3.7.5

The following content shall appear in the FDR for each Test Run in the two Repeatability Test Phases:

1. *A table containing the results of the Repeatability Test.*
2. *An I/O Request Throughput Distribution graph and table.*
3. *An Average Response Time Distribution graph and table.*
4. *The human readable Test Run Results File produced by the Workload Generator.*
5. *A listing or screen image of all input parameters supplied to the Workload Generator.*

SPC-1 Workload Generator Input Parameters

The SPC-1 Workload Generator input parameters for the Sustainability, IOPS, Response Time Ramp, Repeatability, and Persistence Test Runs are documented in Appendix E: SPC-1 Workload Generator Input Parameters on Page 126.

Repeatability Test Results File

The values for the SPC-1 IOPS™, SPC-1 LRT™, and the Repeatability Test measurements are listed in the tables below.

	SPC-1 IOPS™
Primary Metrics	***2,004,941.89***
Repeatability Test Phase 1	2,004,955.20
Repeatability Test Phase 2	2,004,935.09

The SPC-1 IOPS™ values in the above table were generated using 100% of the specified Business Scaling Unit (BSU) load level. Each of the Repeatability Test Phase values for SPC-1 IOPS™ must greater than 95% of the reported SPC-1 IOPS™ Primary Metric.

	SPC-1 LRT™
Primary Metrics	***0.22 ms***
Repeatability Test Phase 1	0.21 ms
Repeatability Test Phase 2	0.21 ms

The average response time values in the SPC-1 LRT™ column were generated using 10% of the specified Business Scaling Unit (BSU) load level. Each of the Repeatability Test Phase values for SPC-1 LRT™ must be less than 105% of the reported SPC-1 LRT™ Primary Metric or less than the reported SPC-1 LRT™ Primary Metric plus one (1) millisecond (ms).

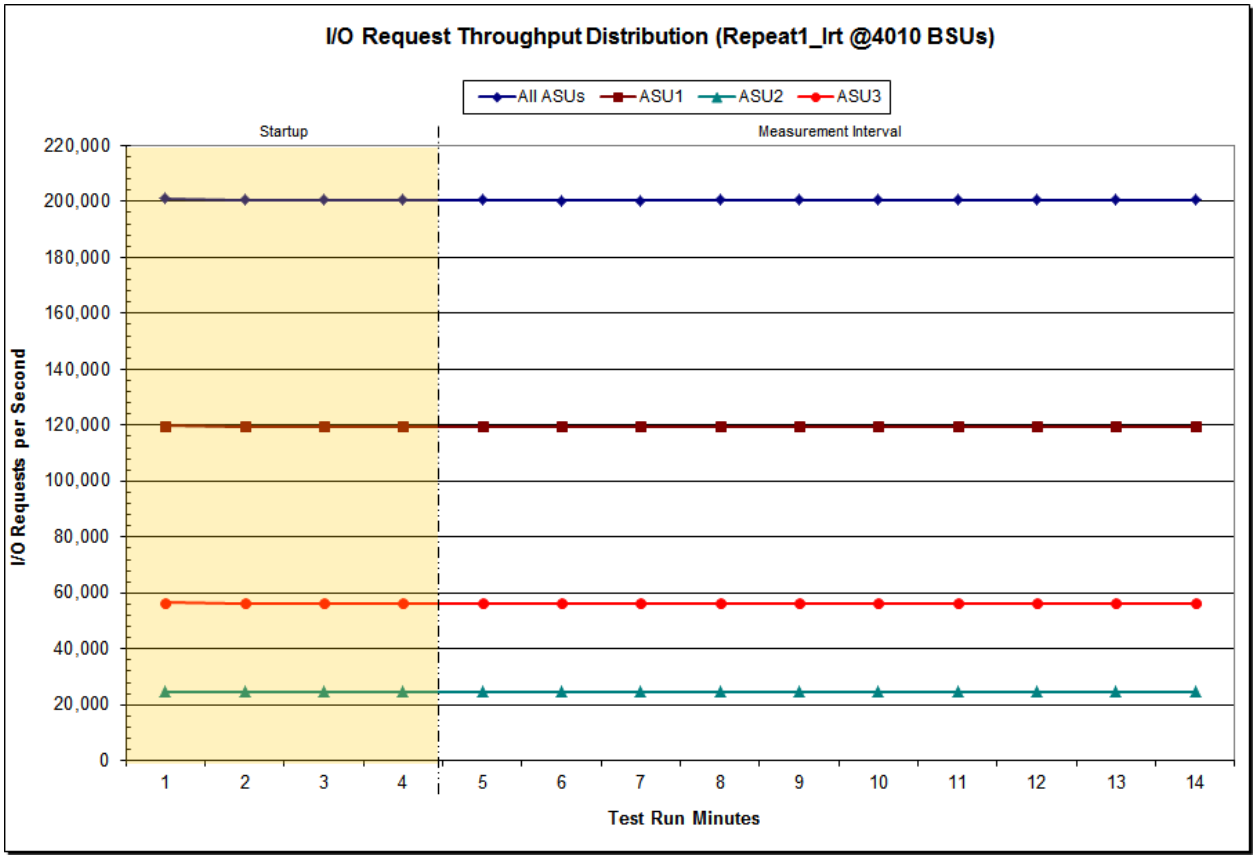
A link to the test result file generated from each Repeatability Test Run is listed below.

Repeatability Test Phase 1, Test Run 1 (LRT)
Repeatability Test Phase 1, Test Run 2 (IOPS)
Repeatability Test Phase 2, Test Run 1 (LRT)
Repeatability Test Phase 2, Test Run 2 (IOPS)

Repeatability 1 LRT – I/O Request Throughput Distribution Data

4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:10:29	10:14:29	0-3	0:04:00
Measurement Interval	10:14:29	10:24:29	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	201,040.68	119,823.03	24,738.93	56,478.72
1	200,485.07	119,546.52	24,619.28	56,319.27
2	200,577.30	119,472.18	24,683.22	56,421.90
3	200,496.92	119,539.30	24,677.02	56,280.60
4	200,507.82	119,524.97	24,638.92	56,343.93
5	200,366.25	119,433.77	24,637.43	56,295.05
6	200,383.42	119,474.05	24,635.22	56,274.15
7	200,434.58	119,480.15	24,692.70	56,261.73
8	200,413.45	119,457.57	24,652.32	56,303.57
9	200,545.05	119,518.32	24,700.93	56,325.80
10	200,475.77	119,445.75	24,655.23	56,374.78
11	200,478.03	119,467.93	24,664.70	56,345.40
12	200,471.78	119,525.98	24,646.25	56,299.55
13	200,502.17	119,512.47	24,694.47	56,295.23
Average	***200,457.83***	***119,484.10***	***24,661.82***	***56,311.92***

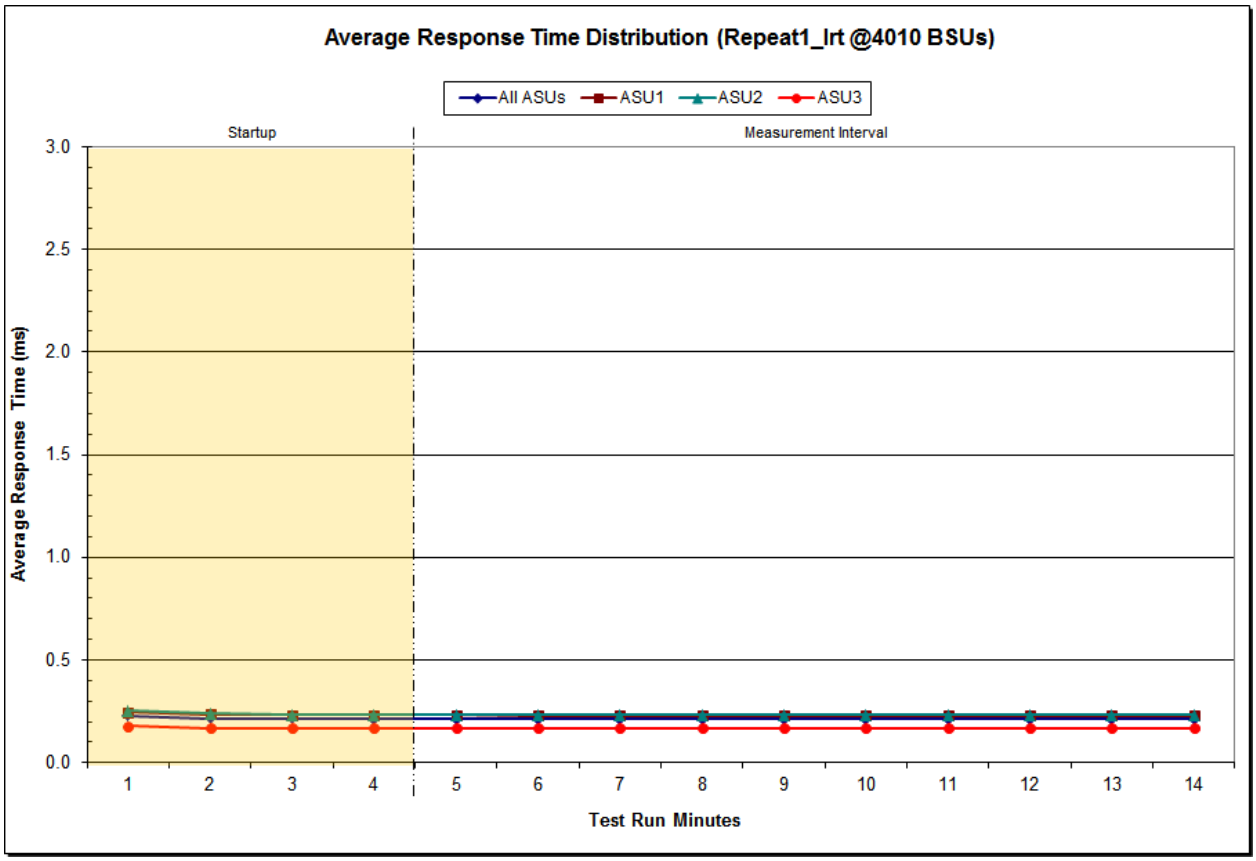
Repeatability 1 LRT – I/O Request Throughput Distribution Graph



Repeatability 1 LRT –Average Response Time (ms) Distribution Data

4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:10:29	10:14:29	0-3	0:04:00
Measurement Interval	10:14:29	10:24:29	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	0.23	0.25	0.25	0.18
1	0.22	0.23	0.24	0.17
2	0.21	0.23	0.23	0.17
3	0.21	0.23	0.23	0.17
4	0.21	0.23	0.23	0.17
5	0.21	0.23	0.23	0.17
6	0.21	0.23	0.23	0.17
7	0.21	0.23	0.23	0.17
8	0.21	0.23	0.23	0.17
9	0.21	0.23	0.23	0.17
10	0.21	0.23	0.23	0.17
11	0.21	0.23	0.23	0.17
12	0.21	0.23	0.23	0.17
13	0.21	0.23	0.23	0.17
Average	***0.21***	***0.23***	***0.23***	***0.17***

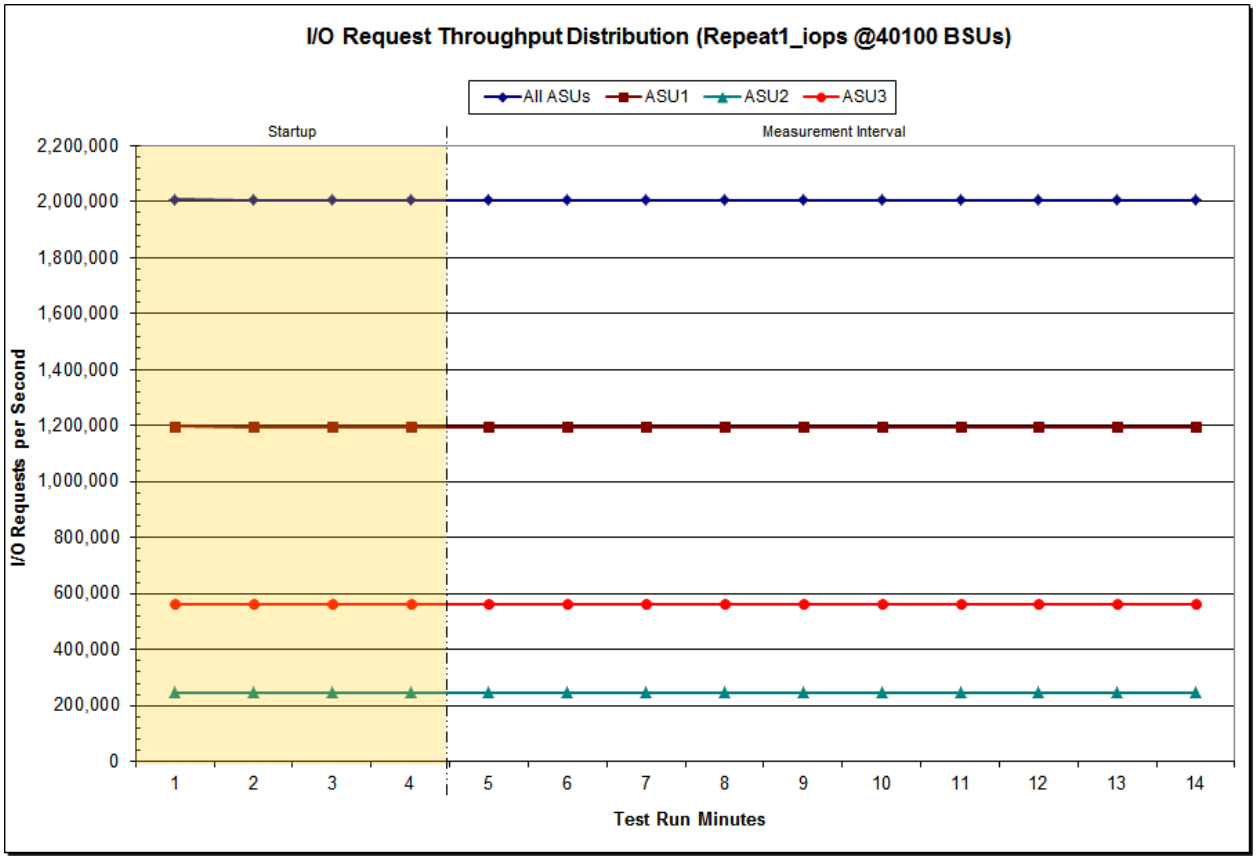
Repeatability 1 LRT –Average Response Time (ms) Distribution Graph



Repeatability 1 IOPS – I/O Request Throughput Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:38:56	10:42:56	0-3	0:04:00
Measurement Interval	10:42:56	10:52:56	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	2,008,474.35	1,197,308.90	246,999.55	564,165.90
1	2,004,982.18	1,195,093.95	246,577.07	563,311.17
2	2,005,217.35	1,195,184.90	246,540.02	563,492.43
3	2,004,688.45	1,194,832.45	246,630.80	563,225.20
4	2,005,054.45	1,194,984.68	246,589.62	563,480.15
5	2,004,662.95	1,194,925.40	246,567.35	563,170.20
6	2,005,255.98	1,195,104.95	246,745.97	563,405.07
7	2,004,716.67	1,195,068.25	246,525.93	563,122.48
8	2,005,059.92	1,195,078.38	246,513.10	563,468.43
9	2,004,754.18	1,194,837.82	246,569.00	563,347.37
10	2,005,015.37	1,194,993.85	246,672.13	563,349.38
11	2,005,232.83	1,195,043.15	246,685.33	563,504.35
12	2,004,960.00	1,194,867.57	246,632.63	563,459.80
13	2,004,839.62	1,194,933.02	246,594.97	563,311.63
Average	***2,004,955.20***	***1,194,983.71***	***246,609.60***	***563,361.89***

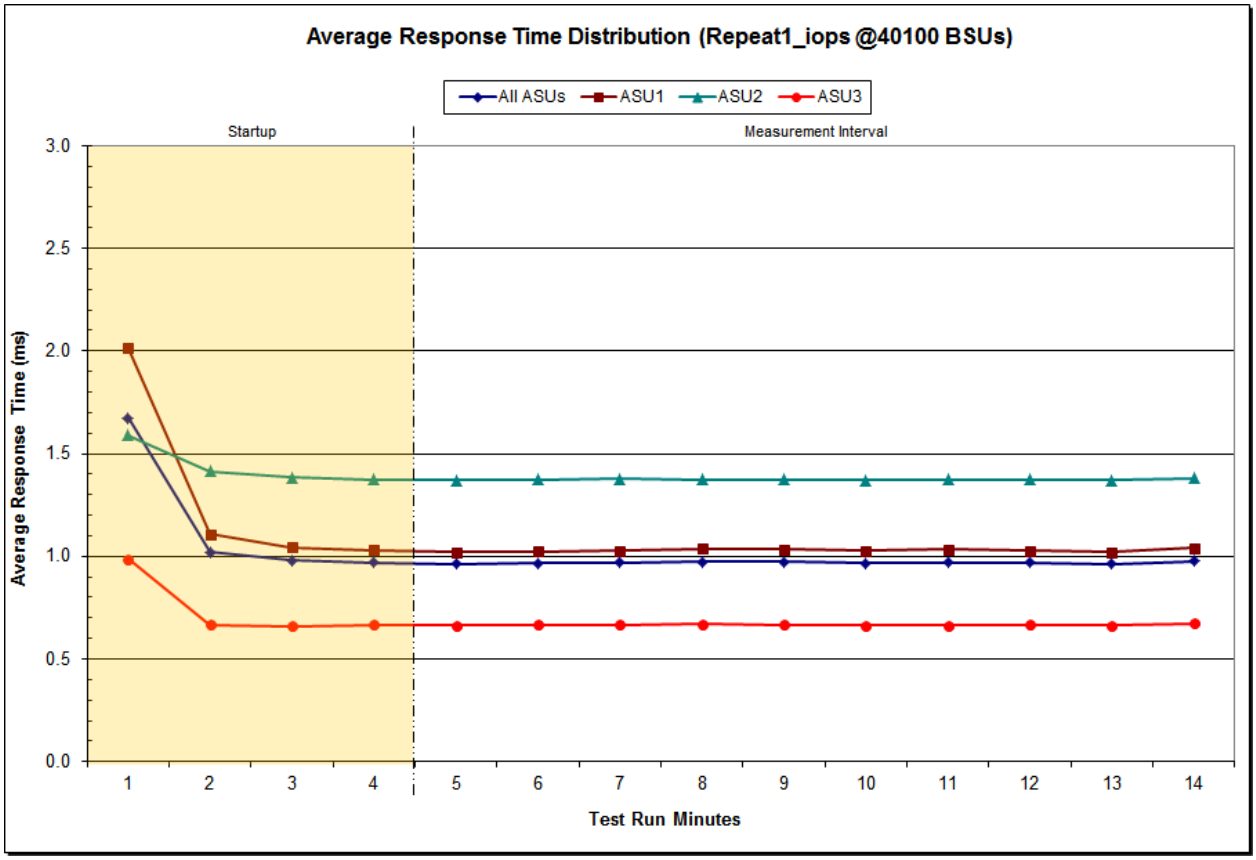
Repeatability 1 IOPS – I/O Request Throughput Distribution Graph



Repeatability 1 IOPS –Average Response Time (ms) Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:38:56	10:42:56	0-3	0:04:00
Measurement Interval	10:42:56	10:52:56	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	1.67	2.01	1.59	0.99
1	1.02	1.11	1.41	0.67
2	0.98	1.04	1.38	0.66
3	0.97	1.03	1.38	0.67
4	0.96	1.02	1.37	0.66
5	0.97	1.02	1.37	0.67
6	0.97	1.03	1.38	0.67
7	0.98	1.04	1.37	0.67
8	0.97	1.03	1.37	0.67
9	0.97	1.03	1.37	0.66
10	0.97	1.03	1.37	0.66
11	0.97	1.03	1.37	0.67
12	0.96	1.02	1.37	0.66
13	0.98	1.04	1.38	0.67
Average	***0.97***	***1.03***	***1.37***	***0.67***

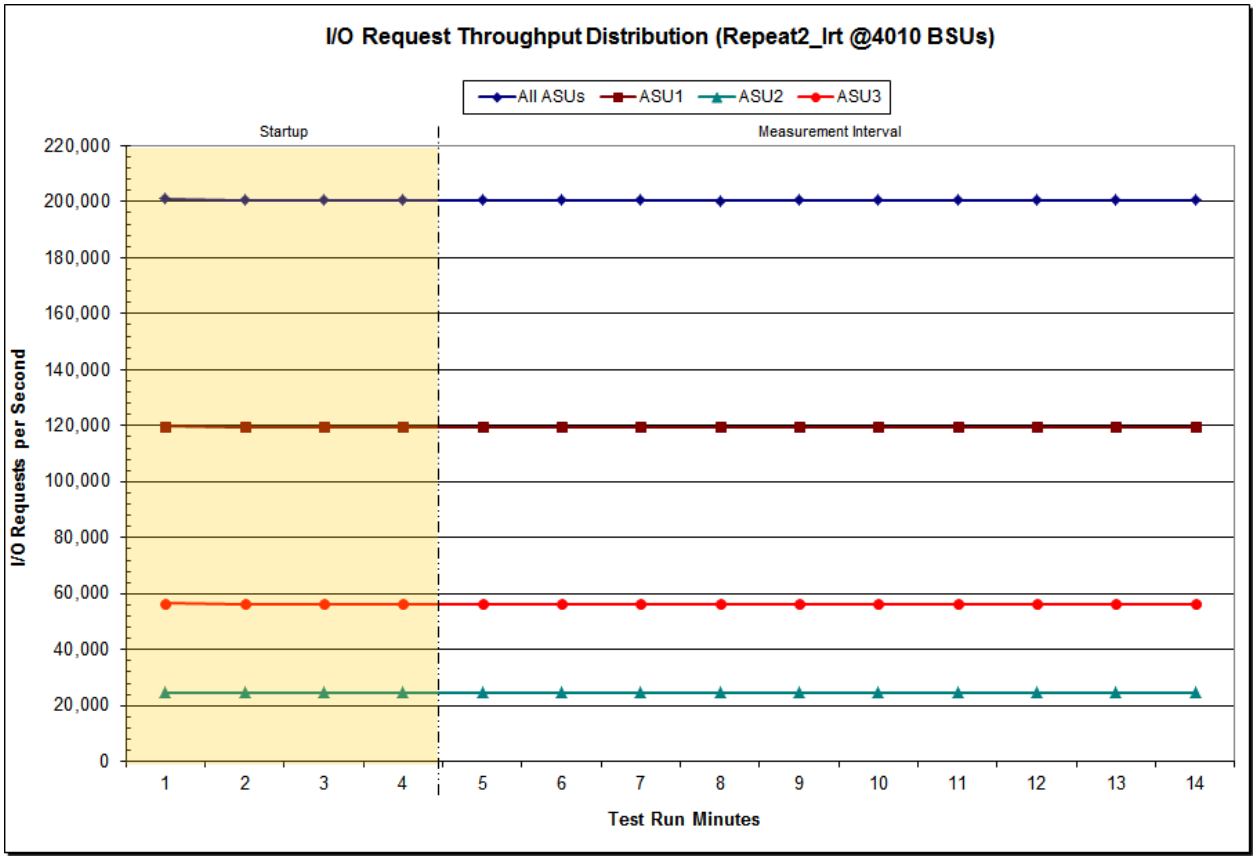
Repeatability 1 IOPS –Average Response Time (ms) Distribution Graph



Repeatability 2 LRT – I/O Request Throughput Distribution Data

4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:59:19	11:03:19	0-3	0:04:00
Measurement Interval	11:03:19	11:13:19	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	201,137.43	119,876.33	24,745.88	56,515.22
1	200,516.93	119,506.08	24,681.75	56,329.10
2	200,420.38	119,471.08	24,643.32	56,305.98
3	200,514.52	119,442.20	24,689.18	56,383.13
4	200,440.35	119,462.28	24,650.75	56,327.32
5	200,491.63	119,483.60	24,671.53	56,336.50
6	200,516.72	119,515.17	24,662.23	56,339.32
7	200,409.50	119,435.07	24,666.50	56,307.93
8	200,471.25	119,484.15	24,644.35	56,342.75
9	200,498.12	119,545.10	24,642.43	56,310.58
10	200,425.78	119,474.95	24,630.13	56,320.70
11	200,431.60	119,442.48	24,672.63	56,316.48
12	200,522.02	119,524.52	24,647.48	56,350.02
13	200,504.53	119,509.32	24,688.53	56,306.68
Average	***200,471.15***	***119,487.66***	***24,657.66***	***56,325.83***

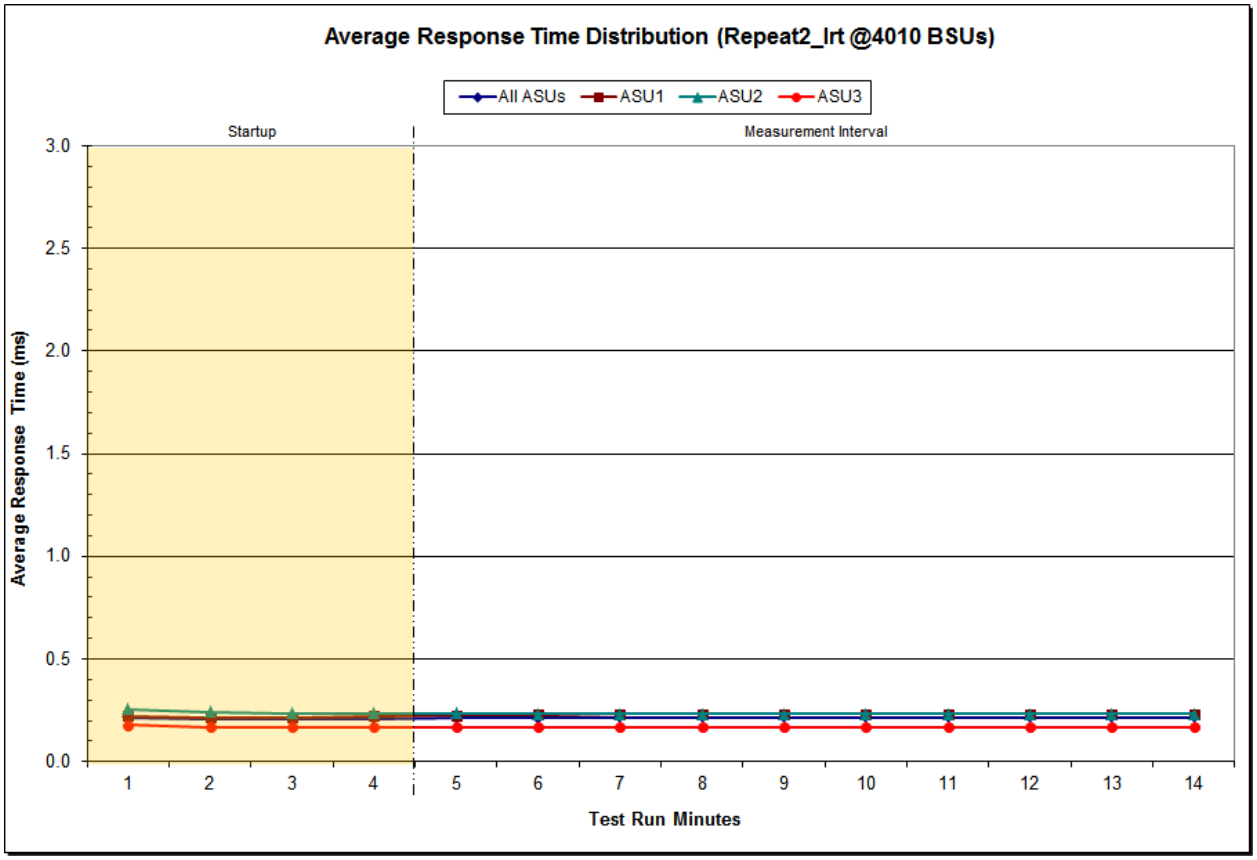
Repeatability 2 LRT – I/O Request Throughput Distribution Graph



Repeatability 2 LRT –Average Response Time (ms) Distribution Data

4,010 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	10:59:19	11:03:19	0-3	0:04:00
Measurement Interval	11:03:19	11:13:19	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	0.22	0.22	0.26	0.18
1	0.21	0.22	0.24	0.17
2	0.21	0.22	0.24	0.17
3	0.21	0.22	0.24	0.17
4	0.21	0.23	0.24	0.17
5	0.21	0.23	0.23	0.17
6	0.21	0.23	0.23	0.17
7	0.21	0.23	0.23	0.17
8	0.21	0.23	0.23	0.17
9	0.21	0.23	0.23	0.17
10	0.21	0.23	0.23	0.17
11	0.21	0.23	0.23	0.17
12	0.21	0.23	0.23	0.17
13	0.21	0.23	0.23	0.17
Average	***0.21***	***0.23***	***0.23***	***0.17***

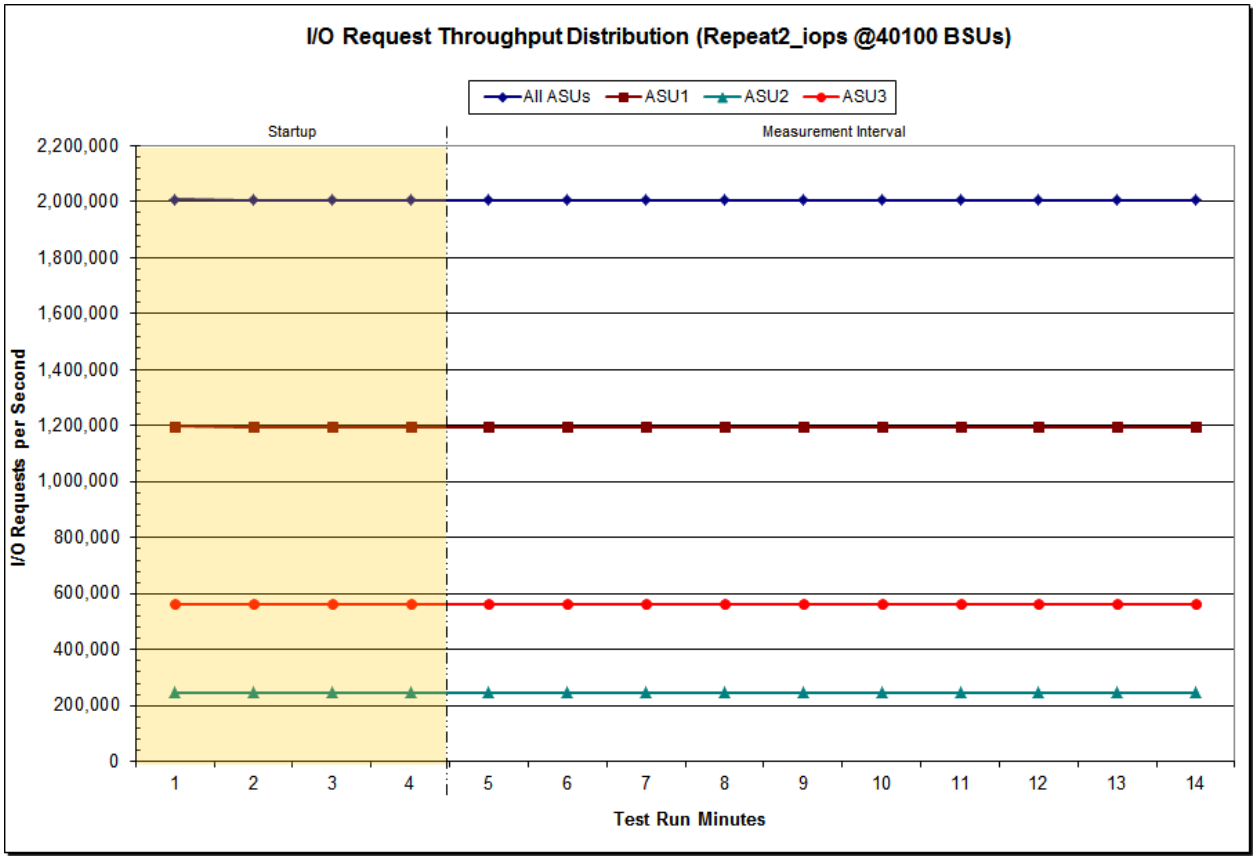
Repeatability 2 LRT –Average Response Time (ms) Distribution Graph



Repeatability 2 IOPS – I/O Request Throughput Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	11:27:48	11:31:48	0-3	0:04:00
Measurement Interval	11:31:48	11:41:48	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	2,008,093.32	1,196,908.42	247,022.68	564,162.22
1	2,004,870.52	1,194,939.23	246,588.37	563,342.92
2	2,005,007.48	1,195,190.18	246,532.10	563,285.20
3	2,005,189.35	1,195,163.25	246,610.18	563,415.92
4	2,005,027.33	1,194,978.27	246,637.28	563,411.78
5	2,004,740.55	1,194,914.88	246,564.72	563,260.95
6	2,004,833.90	1,194,825.08	246,605.63	563,403.18
7	2,004,974.20	1,194,998.07	246,547.20	563,428.93
8	2,005,009.78	1,194,944.33	246,699.25	563,366.20
9	2,005,396.07	1,195,140.05	246,697.03	563,558.98
10	2,004,726.62	1,194,757.50	246,598.45	563,370.67
11	2,005,100.18	1,195,180.25	246,462.62	563,457.32
12	2,004,841.77	1,194,776.50	246,636.57	563,428.70
13	2,004,700.50	1,194,887.97	246,453.77	563,358.77
Average	***2,004,935.09***	***1,194,940.29***	***246,590.25***	***563,404.55***

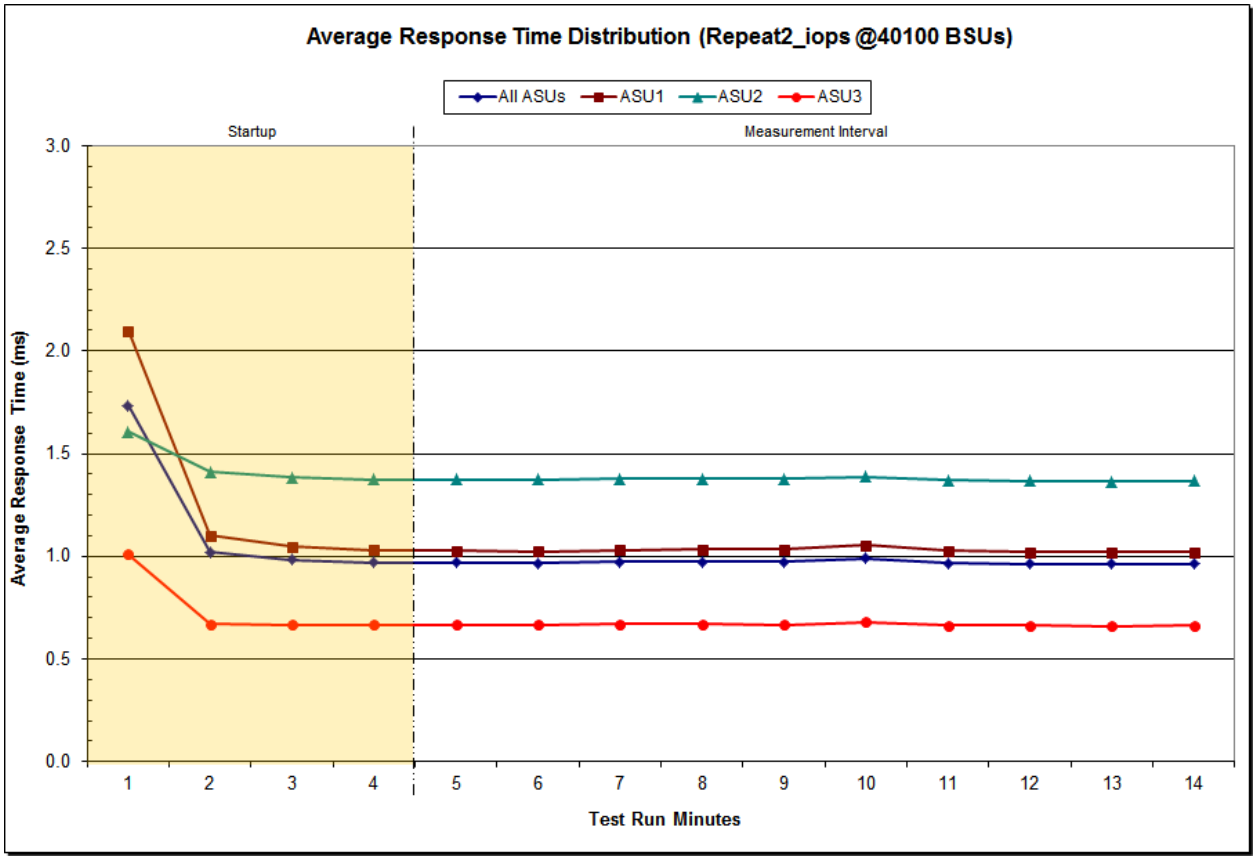
Repeatability 2 IOPS – I/O Request Throughput Distribution Graph



Repeatability 2 IOPS –Average Response Time (ms) Distribution Data

40,100 BSUs	Start	Stop	Interval	Duration
Start-Up/Ramp-Up	11:27:48	11:31:48	0-3	0:04:00
Measurement Interval	11:31:48	11:41:48	4-13	0:10:00
60 second intervals	**All ASUs**	**ASU1**	**ASU2**	**ASU3**
0	1.73	2.10	1.61	1.01
1	1.02	1.10	1.41	0.67
2	0.98	1.05	1.39	0.67
3	0.97	1.03	1.37	0.67
4	0.97	1.03	1.37	0.67
5	0.97	1.03	1.37	0.67
6	0.97	1.03	1.38	0.67
7	0.97	1.04	1.38	0.67
8	0.97	1.03	1.38	0.67
9	0.99	1.05	1.39	0.68
10	0.97	1.03	1.37	0.67
11	0.96	1.02	1.37	0.66
12	0.96	1.02	1.36	0.66
13	0.96	1.02	1.37	0.66
Average	***0.97***	***1.03***	***1.37***	***0.67***

Repeatability 2 IOPS –Average Response Time (ms) Distribution Graph



Repeatability 1 (LRT)
Measured Intensity Multiplier and Coefficient of Variation

Clause 3.4.3

IM – Intensity Multiplier: *The ratio of I/Os for each I/O stream relative to the total I/Os for all I/O streams (ASU1-1 – ASU3-1) as required by the benchmark specification.*

Clauses5.1.10 and 5.3.15.2

MIM – Measured Intensity Multiplier: *The Measured Intensity Multiplier represents the ratio of measured I/Os for each I/O stream relative to the total I/Os measured for all I/O streams (ASU1-1 – ASU3-1). This value may differ from the corresponding Expected Intensity Multiplier by no more than 5%.*

Clause 5.3.15.3

COV – Coefficient of Variation: *This measure of variation for the Measured Intensity Multiplier cannot exceed 0.2.*

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2809
COV	0.002	0.000	0.001	0.000	0.002	0.001	0.002	0.001

Repeatability 1 (IOPS)
Measured Intensity Multiplier and Coefficient of Variation

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2810
COV	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.000

Repeatability 2 (LRT)
Measured Intensity Multiplier and Coefficient of Variation

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2810
COV	0.002	0.000	0.001	0.001	0.003	0.001	0.002	0.000

Repeatability 2 (IOPS)
Measured Intensity Multiplier and Coefficient of Variation

	ASU1-1	ASU1-2	ASU1-3	ASU1-4	ASU2-1	ASU2-2	ASU2-3	ASU3-1
IM	***0.0350***	***0.2810***	***0.0700***	***0.2100***	***0.0180***	***0.0700***	***0.0350***	***0.2810***
MIM	0.0350	0.2810	0.0700	0.2100	0.0180	0.0700	0.0350	0.2810
COV	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000

Data Persistence Test

Clause 6

The Data Persistence Test demonstrates the Tested Storage Configuration (TSC):

- *Is capable of maintain data integrity across a power cycle.*
- *Ensures the transfer of data between Logical Volumes and host systems occurs without corruption or loss.*

The SPC-1 Workload Generator will write 16 block I/O requests at random over the total Addressable Storage Capacity of the TSC for ten (10) minutes at a minimum of 25% of the load used to generate the SPC-1 IOPS™ primary metric. The bit pattern selected to be written to each block as well as the address of the block will be retained in a log file.

The Tested Storage Configuration (TSC) will be shutdown and restarted using a power off/power on cycle at the end of the above sequence of write operations. In addition, any caches employing battery backup must be flushed/emptied.

The SPC-1 Workload Generator will then use the above log file to verify each block written contains the correct bit pattern.

Clause 9.4.3.8

The following content shall appear in this section of the FDR:

1. *A listing or screen image of all input parameters supplied to the Workload Generator.*
2. *For the successful Data Persistence Test Run, a table illustrating key results. The content, appearance, and format of this table are specified in Table 9-12. Information displayed in this table shall be obtained from the Test Run Results File referenced below in #3.*
3. *For the successful Data Persistence Test Run, the human readable Test Run Results file produced by the Workload Generator (may be contained in an appendix).*

SPC-1 Workload Generator Input Parameters

The SPC-1 Workload Generator input parameters for the Sustainability, IOPS, Response Time Ramp, Repeatability, and Persistence Test Runs are documented in Appendix E: SPC-1 Workload Generator Input Parameters on Page 126.

Data Persistence Test Results File

A link to each test result file generated from each Data Persistence Test is listed below.

Persistence 1 Test Results File

Persistence 2 Test Results File

Data Persistence Test Results

Data Persistence Test Results	
Data Persistence Test Run Number: 1	
Total Number of Logical Blocks Written	917,051
Total Number of Logical Blocks Verified	902,590
Total Number of Logical Blocks that Failed Verification	0
Time Duration for Writing Test Logical Blocks	5 minutes
Size in bytes of each Logical Block	1024
Number of Failed I/O Requests in the process of the Test	0

If approved by the SPC Auditor, the SPC-2 Persistence Test may be used to meet the SPC-1 persistence requirements. Both the SPC-1 and SPC-2 Persistence Tests provide the same level of functionality and verification of data integrity. The SPC-2 Persistence Test may be easily configured to address an SPC-1 storage configuration. The SPC-2 Persistence Test extends the size of storage configurations that may be tested and significantly reduces the test duration of such configurations.

The SPC-2 Persistence Test was approved for use in this set of audited measurements.

In some cases the same address was the target of multiple writes, which resulted in more Logical Blocks Written than Logical Blocks Verified. In the case of multiple writes to the same address, the pattern written and verified must be associated with the last write to that address.

PRICED STORAGE CONFIGURATION AVAILABILITY DATE

Clause 9.4.3.9

The committed delivery data for general availability (Availability Date) of all products that comprise the Priced Storage Configuration must be reported. When the Priced Storage Configuration includes products or components with different availability dates, the reported Availability Date for the Priced Storage Configuration must be the date at which all components are committed to be available.

The HP XP7 Storage as documented in this Full Disclosure Report is currently available for customer purchase and shipment.

PRICING INFORMATION

Clause 9.4.3.3.6

The Executive Summary shall contain a pricing spreadsheet as documented in Clause 8.3.1.

Pricing information may be found in the Priced Storage Configuration Pricing section on page 17.

TESTED STORAGE CONFIGURATION (TSC) AND PRICED STORAGE CONFIGURATION DIFFERENCES

Clause 9.4.3.3.8

The Executive Summary shall contain a list of all differences between the Tested Storage Configuration (TSC) and the Priced Storage Configuration.

A list of all differences between the Tested Storage Configuration (TSC) and Priced Storage Configuration may be found in the Executive Summary portion of this document on page 17.

ANOMALIES OR IRREGULARITIES

Clause 9.4.3.10

The FDR shall include a clear and complete description of any anomalies or irregularities encountered in the course of executing the SPC-1 benchmark that may in any way call into question the accuracy, verifiability, or authenticity of information published in this FDR.

There were no anomalies or irregularities encountered during the SPC-1 Onsite Audit of the HP XP7 Storage.

APPENDIX A: SPC-1 GLOSSARY

"Decimal" *(powers of ten)* Measurement Units

In the storage industry, the terms "kilo", "mega", "giga", "tera", "peta", and "exa" are commonly used prefixes for computing performance and capacity. For the purposes of the SPC workload definitions, all of the following terms are defined in "powers of ten" measurement units.

A kilobyte (KB) is equal to 1,000 (10^3) bytes.

A megabyte (MB) is equal to 1,000,000 (10^6) bytes.

A gigabyte (GB) is equal to 1,000,000,000 (10^9) bytes.

A terabyte (TB) is equal to 1,000,000,000,000 (10^{12}) bytes.

A petabyte (PB) is equal to 1,000,000,000,000,000 (10^{15}) bytes

An exabyte (EB) is equal to 1,000,000,000,000,000,000 (10^{18}) bytes

"Binary" *(powers of two)* Measurement Units

The sizes reported by many operating system components use "powers of two" measurement units rather than "power of ten" units. The following standardized definitions and terms are also valid and may be used in this document.

A kibibyte (KiB) is equal to 1,024 (2^{10}) bytes.

A mebibyte (MiB) is equal to 1,048,576 (2^{20}) bytes.

A gigibyte (GiB) is equal to 1,073,741,824 (2^{30}) bytes.

A tebibyte (TiB) is equal to 1,099,511,627,776 (2^{40}) bytes.

A pebibyte (PiB) is equal to 1,125,899,906,842,624 (2^{50}) bytes.

An exbibyte (EiB) is equal to 1,152,921,504,606,846,967 (2^{60}) bytes.

SPC-1 Data Repository Definitions

Total ASU Capacity: The total storage capacity read and written in the course of executing the SPC-1 benchmark.

Application Storage Unit (ASU): The logical interface between the storage and SPC-1 Workload Generator. The three ASUs (Data, User, and Log) are typically implemented on one or more Logical Volume.

Logical Volume: The division of Addressable Storage Capacity into individually addressable logical units of storage used in the SPC-1 benchmark. Each Logical Volume is implemented as a single, contiguous address space.

Addressable Storage Capacity: The total storage (sum of Logical Volumes) that can be read and written by application programs such as the SPC-1 Workload Generator.

Configured Storage Capacity: This capacity includes the Addressable Storage Capacity and any other storage (parity disks, hot spares, etc.) necessary to implement the Addressable Storage Capacity.

Physical Storage Capacity: The formatted capacity of all storage devices physically present in the Tested Storage Configuration (TSC).

Data Protection Overhead: The storage capacity required to implement the selected level of data protection.

Required Storage: The amount of Configured Storage Capacity required to implement the Addressable Storage Configuration, excluding the storage required for the three ASUs.

Global Storage Overhead: The amount of Physical Storage Capacity that is required for storage subsystem use and unavailable for use by application programs.

Total Unused Storage: The amount of storage capacity available for use by application programs but not included in the Total ASU Capacity.

SPC-1 Data Protection Levels

Protected 1: The single point of failure of any ***storage device*** in the configuration will not result in permanent loss of access to or integrity of the SPC-1 Data Repository.

Protected 2: The single point of failure of any ***component*** in the configuration will not result in permanent loss of access to or integrity of the SPC-1 Data Repository.

SPC-1 Test Execution Definitions

Average Response Time: The sum of the Response Times for all Measured I/O Requests divided by the total number of Measured I/O Requests.

Completed I/O Request: An I/O Request with a Start Time and a Completion Time (see "I/O Completion Types" below).

Completion Time: The time recorded by the Workload Generator when an I/O Request is satisfied by the TSC as signaled by System Software.

Data Rate: The data transferred in all Measured I/O Requests in an SPC-1 Test Run divided by the length of the Test Run in seconds.

Expected I/O Count: For any given I/O Stream and Test Phase, the product of 50 times the BSU level, the duration of the Test Phase in seconds, and the Intensity Multiplier for that I/O Stream.

Failed I/O Request: Any I/O Request issued by the Workload Generator that could not be completed or was signaled as failed by System Software. A Failed I/O Request has no Completion Time (see "I/O Completion Types" below).

I/O Request Throughput: The total number of Measured I/O requests in an SPC-1 Test Run divided by the duration of the Measurement Interval in seconds.

In-Flight I/O Request: An I/O Request issued by the I/O Command Generator to the TSC that has a recorded Start Time, but does not complete within the Measurement Interval (see "I/O Completion Types" below).

Measured I/O Request: A Completed I/O Request with a Completion Time occurring within the Measurement Interval (see "I/O Completion Types" below).

Measured Intensity Multiplier: The percentage of all Measured I/O Requests that were issued by a given I/O Stream.

Measurement Interval: The finite and contiguous time period, after the TSC has reached Steady State, when data is collected by a Test Sponsor to generate an SPC-1 test result or support an SPC-1 test result.

Ramp-Up: The time required for the Benchmark Configuration (BC) to produce Steady State throughput after the Workload Generator begins submitting I/O Requests to the TSC for execution.

Ramp-Down: The time required for the BC to complete all I/O Requests issued by the Workload Generator. The Ramp-Down period begins when the Workload Generator ceases to issue new I/O Requests to the TSC.

Response Time: The Response Time of a Measured I/O Request is its Completion Time minus its Start Time.

Start Time: The time recorded by the Workload Generator when an I/O Request is submitted, by the Workload Generator, to the System Software for execution on the Tested Storage Configuration (TSC).

Start-Up: The period that begins after the Workload Generator starts to submit I/O requests to the TSC and ends at the beginning of the Measurement Interval.

Shut-Down: The period between the end of the Measurement Interval and the time when all I/O Requests issued by the Workload Generator have completed or failed.

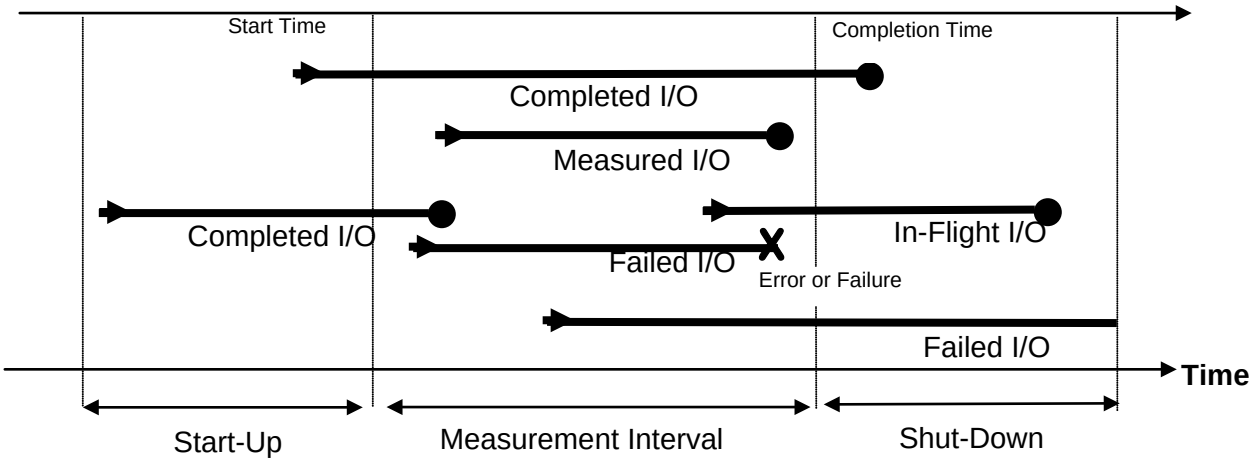
Steady State: The consistent and sustainable throughput of the TSC. During this period the load presented to the TSC by the Workload Generator is constant.

Test: A collection of Test Phases and or Test Runs sharing a common objective.

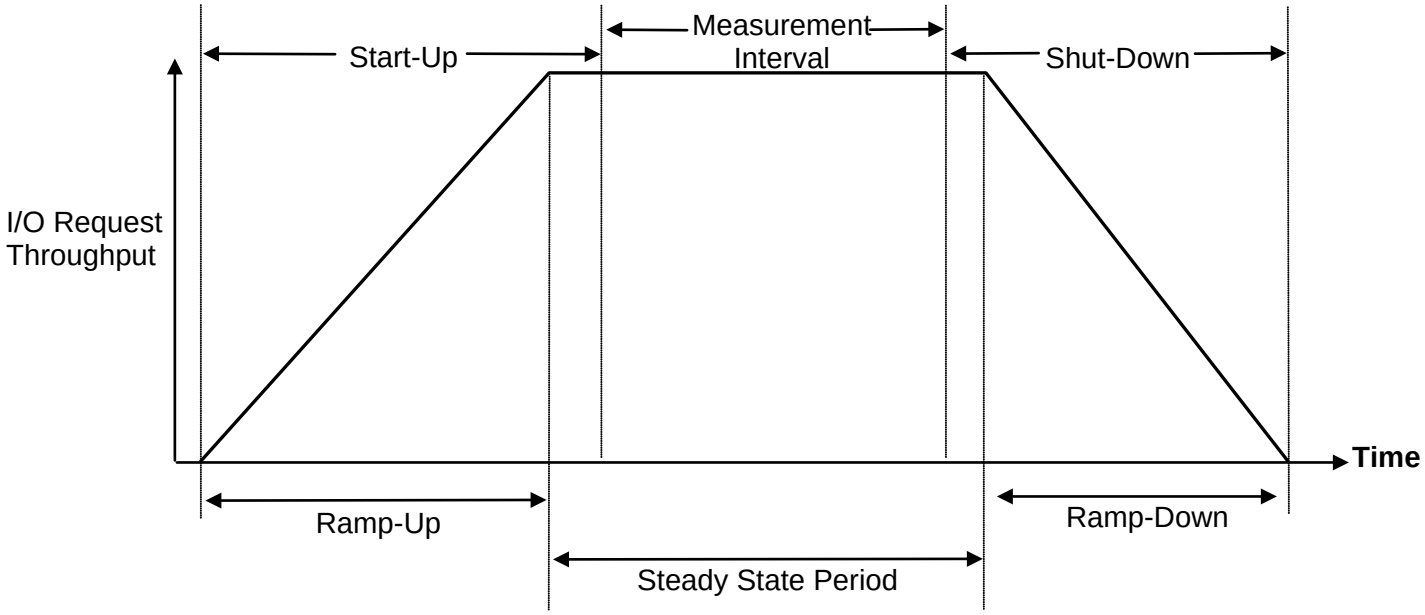
Test Run: The execution of SPC-1 for the purpose of producing or supporting an SPC-1 test result. SPC-1 Test Runs may have a finite and measured Ramp-Up period, Start-Up period, Shut-Down period, and Ramp-Down period as illustrated in the "SPC-1 Test Run Components" below. All SPC-1 Test Runs shall have a Steady State period and a Measurement Interval.

Test Phase: A collection of one or more SPC-1 Test Runs sharing a common objective and intended to be run in a specific sequence.

I/O Completion Types



SPC-1 Test Run Components



APPENDIX B: CUSTOMER TUNABLE PARAMETERS AND OPTIONS

The following customer tunable parameters/options were changed from their default values for the submitted SPC-1 measurements as documented in Appendix C: Tested Storage Configuration (TSC) Creation on page 70.

Parameter/Option	Default Value	New Value
Linux I/O Scheduler *The default "Completely Fair Queueing" (CFQ) scheduler attempts to balance fairness, performance, and timely servicing of I/O requests. The noop scheduler inserts all incoming I/O requests into a simple FIFO queue and implements request merging.*	**cfq**	**noop**
TCP Maximum Queue Depth ***(net.core.somaxconn)***	***128***	***8192***
HBA hba queue depth on each Host System ***(lpfc_hba_queue_depth)***	**8192**	**512**

APPENDIX C: TESTED STORAGE CONFIGURATION (TSC) CREATION

All referenced scripts will appear at the end of this appendix in the TSC Creation/Configuration Scripts section.

1. Initial Installation and Configuration - Customer Support Engineer

The initial installation and configuration of the **Hitachi Virtual Storage Platform G1000** ***(with Hitachi Accelerated Flash)*** is typically done by a customer support engineer. That initial installation and configuration was completed according to the following diagram:

1-1	1-2	1-3	1-4	2-1	2-2	2-3	2-4	3-1	3-2	3-3	3-4	4-1	4-2	4-3	4-4

Each box above represents a physical RAID-10 *(2D+2D)* Parity Group with four storage devices. The physical Parity Groups are then paired up and combined to form logical RAID-10 *(4D+4D)* Parity Groups with the logical identifier highlighted in bold, red below.

1-1 & 2-1	**1-2** & 2-2	**1-3** & 2-3	**1-4** & 2-4	**3-1** & 4-1	**3-2** & 4-2	**3-3** & 4-3	**3-4** & 4-4

2. Create Logical Devices

Mount the **"Hitachi Command Control Interface Software"** CD-ROM on one of the Host Systems. As the root user, unpack the contents of the RMHORC archive, where **/media/HS042_52** is the mount point for the CD-ROM, as follows:

```
cd /
cpio -idmu < /media/HS042_52/LINUX/X64/RMHORC
```

Change to the **HORCM** directory and execute the installer script as follows:

Edit the **/etc/horcm.conf** file, replacing the sample contents with the following, where 172.17.47.24 is the IP address of the storage array's service processor:

```
HORCM_MON
localhost      11099        1000        3000

HORCM_CMD
\\.\IPCMD-172.17.47.24-31001
```

Start the Hitachi RAID Manager CLI by executing the following command:

```
/usr/bin/horcmstart.sh
```

Execute the **ldevcreate.sh** RAID Manager CLI script to create 144 logical devices.

3. Format Logical Devices

Format the Logical Devices by executing the **ldevformat.sh** RAID Manager CLI script.

4. Map Logical Devices to Host Ports

After the formatting of the logical devices is finished, map them to host ports by executing the **lunmap.sh** RAID Manager CLI script.

5. Modify RHEL I/O Scheduler

Change the I/O scheduler from the default of ***cfq*** to ***noop*** on each Host System, which will result in all incoming I/O requests inserted into a simple, unordered FIFO queue. This was done by adding the following parameter in **/boot/grub/grub.conf** at the end of the kernel line on each Host System.

elevator=noop

6. Change HBA Queue Depth

Change the HBA driver queue depth from a default of 8192 to 512 on all HBA ports by adding the follower parameter in **/etc/modprobe.d/lpfc.conf** at the end of the file on each Host System:

options lpfc lpfc_hba_queue_depth=512

7. Change the TCP Maximum Queue Depth

Add the following line to **/etc/rc.local** on each Host System to increase the TCP maximum queue depth (***net.core.somaxconn***) from a default value of 128 to 8192.

sysctl -w net.core.somaxconn=8192

8. Reboot Host Systems

In order to make the changes in steps #5, #6 and #7 effective, each Host System must be rebooted.

9. Initialize LVM Physical Volumes, Create LVM Volume Group, Create LVM Logical Volumes

Log in as **root** on any Host System and initialize physical volumes, create the LVM volume groups, and create logical volumes using the **setlvm.pl** script:

setlvm.pl pvcreate *(LVM Physical Volumes)*
setlvm.pl vgcreate *(LVM Volume Groups)*
setlvm.pl lvcreate *(LVM Logical Volumes)*

The LVM software on the remaining Host Systems will automatically detect the configuration changes.

10. Verify LVM Logical Volume Availability

On each Host System, verify that the LVM Logical Volumes are available by executing the following CLI command:

lvs | grep asu

The expected output is shown below

```
asu1_1 vg0  -wi-a---- 17.07t
asu2_1 vg1  -wi-a---- 17.07t
asu3_1 vg2  -wi-a---- 17.07t
```

If any logical volumes are missing the **"a"** attribute anf, as a result not available, issue the following command for each of them:

lvchange -ay /dev/<VGNAME>/<LVNAME>

The value for ***<VGNAME>*** is the name of the volume group in column #2 of the ***lvs*** command output.

The value for ***<LVNAME>*** is the name of the logical volume in column #1 of the ***lvs*** command output.

TSC Creation/Configuration Scripts

ldevcreate.sh

```
#!/bin/bash

raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0000 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0001 -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0002 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0003 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0004 -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0005 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0006 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0007 -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-1 -ldev_id 0x0008 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x0009 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000A -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000B -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000C -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000D -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000E -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x000F -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x0010 -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-2 -ldev_id 0x0011 -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0012 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0013 -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0014 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0015 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0016 -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0017 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0018 -capacity 763538090 -mp_blade_id
0x0
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x0019 -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-3 -ldev_id 0x001A -capacity 763538090 -mp_blade_id
0x2
```

```
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x001B -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x001C -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x001D -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x001E -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x001F -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x0020 -capacity 763538090 -mp_blade_id
0x2
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x0021 -capacity 763538090 -mp_blade_id
0x3
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x0022 -capacity 763538090 -mp_blade_id
0x1
raidcom add ldev -parity_grp_id 1-4 -ldev_id 0x0023 -capacity 763538090 -mp_blade_id
0x2

raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0024 -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0025 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0026 -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0027 -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0028 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x0029 -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x002A -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x002B -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-1 -ldev_id 0x002C -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x002D -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x002E -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x002F -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0030 -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0031 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0032 -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0033 -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0034 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-2 -ldev_id 0x0035 -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x0036 -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x0037 -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x0038 -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x0039 -capacity 763538090 -mp_blade_id
0x4
```

```
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x003A -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x003B -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x003C -capacity 763538090 -mp_blade_id
0x4
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x003D -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-3 -ldev_id 0x003E -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x003F -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0040 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0041 -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0042 -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0043 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0044 -capacity 763538090 -mp_blade_id
0x6
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0045 -capacity 763538090 -mp_blade_id
0x7
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0046 -capacity 763538090 -mp_blade_id
0x5
raidcom add ldev -parity_grp_id 2-4 -ldev_id 0x0047 -capacity 763538090 -mp_blade_id
0x6

raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x0048 -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x0049 -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004A -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004B -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004C -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004D -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004E -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x004F -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-1 -ldev_id 0x0050 -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0051 -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0052 -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0053 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0054 -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0055 -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0056 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0057 -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0058 -capacity 763538090 -mp_blade_id
0x9
```

```
raidcom add ldev -parity_grp_id 3-2 -ldev_id 0x0059 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005A -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005B -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005C -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005D -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005E -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x005F -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x0060 -capacity 763538090 -mp_blade_id
0x8
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x0061 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-3 -ldev_id 0x0062 -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0063 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0064 -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0065 -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0066 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0067 -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0068 -capacity 763538090 -mp_blade_id
0xA
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x0069 -capacity 763538090 -mp_blade_id
0xB
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x006A -capacity 763538090 -mp_blade_id
0x9
raidcom add ldev -parity_grp_id 3-4 -ldev_id 0x006B -capacity 763538090 -mp_blade_id
0xA

raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x006C -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x006D -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x006E -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x006F -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x0070 -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x0071 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x0072 -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x0073 -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-1 -ldev_id 0x0074 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x0075 -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x0076 -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x0077 -capacity 763538090 -mp_blade_id
0xF
```

```
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x0078 -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x0079 -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x007A -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x007B -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x007C -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-2 -ldev_id 0x007D -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x007E -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x007F -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0080 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0081 -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0082 -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0083 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0084 -capacity 763538090 -mp_blade_id
0xC
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0085 -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-3 -ldev_id 0x0086 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x0087 -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x0088 -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x0089 -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008A -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008B -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008C -capacity 763538090 -mp_blade_id
0xE
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008D -capacity 763538090 -mp_blade_id
0xF
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008E -capacity 763538090 -mp_blade_id
0xD
raidcom add ldev -parity_grp_id 4-4 -ldev_id 0x008F -capacity 763538090 -mp_blade_id
0xE
```

ldevformat.sh

```
#!/bin/bash

raidcom initialize ldev -ldev_id 0x0000 -operation fmt
raidcom initialize ldev -ldev_id 0x0001 -operation fmt
raidcom initialize ldev -ldev_id 0x0002 -operation fmt
raidcom initialize ldev -ldev_id 0x0003 -operation fmt
raidcom initialize ldev -ldev_id 0x0004 -operation fmt
raidcom initialize ldev -ldev_id 0x0005 -operation fmt
raidcom initialize ldev -ldev_id 0x0006 -operation fmt
raidcom initialize ldev -ldev_id 0x0007 -operation fmt
raidcom initialize ldev -ldev_id 0x0008 -operation fmt
raidcom initialize ldev -ldev_id 0x0009 -operation fmt
raidcom initialize ldev -ldev_id 0x000A -operation fmt
raidcom initialize ldev -ldev_id 0x000B -operation fmt
raidcom initialize ldev -ldev_id 0x000C -operation fmt
raidcom initialize ldev -ldev_id 0x000D -operation fmt
raidcom initialize ldev -ldev_id 0x000E -operation fmt
raidcom initialize ldev -ldev_id 0x000F -operation fmt
raidcom initialize ldev -ldev_id 0x0010 -operation fmt
raidcom initialize ldev -ldev_id 0x0011 -operation fmt
raidcom initialize ldev -ldev_id 0x0012 -operation fmt
raidcom initialize ldev -ldev_id 0x0013 -operation fmt
raidcom initialize ldev -ldev_id 0x0014 -operation fmt
raidcom initialize ldev -ldev_id 0x0015 -operation fmt
raidcom initialize ldev -ldev_id 0x0016 -operation fmt
raidcom initialize ldev -ldev_id 0x0017 -operation fmt
raidcom initialize ldev -ldev_id 0x0018 -operation fmt
raidcom initialize ldev -ldev_id 0x0019 -operation fmt
raidcom initialize ldev -ldev_id 0x001A -operation fmt
raidcom initialize ldev -ldev_id 0x001B -operation fmt
raidcom initialize ldev -ldev_id 0x001C -operation fmt
raidcom initialize ldev -ldev_id 0x001D -operation fmt
raidcom initialize ldev -ldev_id 0x001E -operation fmt
raidcom initialize ldev -ldev_id 0x001F -operation fmt
raidcom initialize ldev -ldev_id 0x0020 -operation fmt
raidcom initialize ldev -ldev_id 0x0021 -operation fmt
raidcom initialize ldev -ldev_id 0x0022 -operation fmt
raidcom initialize ldev -ldev_id 0x0023 -operation fmt

raidcom initialize ldev -ldev_id 0x0024 -operation fmt
raidcom initialize ldev -ldev_id 0x0025 -operation fmt
raidcom initialize ldev -ldev_id 0x0026 -operation fmt
raidcom initialize ldev -ldev_id 0x0027 -operation fmt
raidcom initialize ldev -ldev_id 0x0028 -operation fmt
raidcom initialize ldev -ldev_id 0x0029 -operation fmt
raidcom initialize ldev -ldev_id 0x002A -operation fmt
raidcom initialize ldev -ldev_id 0x002B -operation fmt
raidcom initialize ldev -ldev_id 0x002C -operation fmt
raidcom initialize ldev -ldev_id 0x002D -operation fmt
raidcom initialize ldev -ldev_id 0x002E -operation fmt
raidcom initialize ldev -ldev_id 0x002F -operation fmt
raidcom initialize ldev -ldev_id 0x0030 -operation fmt
raidcom initialize ldev -ldev_id 0x0031 -operation fmt
raidcom initialize ldev -ldev_id 0x0032 -operation fmt
raidcom initialize ldev -ldev_id 0x0033 -operation fmt
raidcom initialize ldev -ldev_id 0x0034 -operation fmt
raidcom initialize ldev -ldev_id 0x0035 -operation fmt
raidcom initialize ldev -ldev_id 0x0036 -operation fmt
raidcom initialize ldev -ldev_id 0x0037 -operation fmt
```

```
raidcom initialize ldev -ldev_id 0x0038 -operation fmt
raidcom initialize ldev -ldev_id 0x0039 -operation fmt
raidcom initialize ldev -ldev_id 0x003A -operation fmt
raidcom initialize ldev -ldev_id 0x003B -operation fmt
raidcom initialize ldev -ldev_id 0x003C -operation fmt
raidcom initialize ldev -ldev_id 0x003D -operation fmt
raidcom initialize ldev -ldev_id 0x003E -operation fmt
raidcom initialize ldev -ldev_id 0x003F -operation fmt
raidcom initialize ldev -ldev_id 0x0040 -operation fmt
raidcom initialize ldev -ldev_id 0x0041 -operation fmt
raidcom initialize ldev -ldev_id 0x0042 -operation fmt
raidcom initialize ldev -ldev_id 0x0043 -operation fmt
raidcom initialize ldev -ldev_id 0x0044 -operation fmt
raidcom initialize ldev -ldev_id 0x0045 -operation fmt
raidcom initialize ldev -ldev_id 0x0046 -operation fmt
raidcom initialize ldev -ldev_id 0x0047 -operation fmt

raidcom initialize ldev -ldev_id 0x0048 -operation fmt
raidcom initialize ldev -ldev_id 0x0049 -operation fmt
raidcom initialize ldev -ldev_id 0x004A -operation fmt
raidcom initialize ldev -ldev_id 0x004B -operation fmt
raidcom initialize ldev -ldev_id 0x004C -operation fmt
raidcom initialize ldev -ldev_id 0x004D -operation fmt
raidcom initialize ldev -ldev_id 0x004E -operation fmt
raidcom initialize ldev -ldev_id 0x004F -operation fmt
raidcom initialize ldev -ldev_id 0x0050 -operation fmt
raidcom initialize ldev -ldev_id 0x0051 -operation fmt
raidcom initialize ldev -ldev_id 0x0052 -operation fmt
raidcom initialize ldev -ldev_id 0x0053 -operation fmt
raidcom initialize ldev -ldev_id 0x0054 -operation fmt
raidcom initialize ldev -ldev_id 0x0055 -operation fmt
raidcom initialize ldev -ldev_id 0x0056 -operation fmt
raidcom initialize ldev -ldev_id 0x0057 -operation fmt
raidcom initialize ldev -ldev_id 0x0058 -operation fmt
raidcom initialize ldev -ldev_id 0x0059 -operation fmt
raidcom initialize ldev -ldev_id 0x005A -operation fmt
raidcom initialize ldev -ldev_id 0x005B -operation fmt
raidcom initialize ldev -ldev_id 0x005C -operation fmt
raidcom initialize ldev -ldev_id 0x005D -operation fmt
raidcom initialize ldev -ldev_id 0x005E -operation fmt
raidcom initialize ldev -ldev_id 0x005F -operation fmt
raidcom initialize ldev -ldev_id 0x0060 -operation fmt
raidcom initialize ldev -ldev_id 0x0061 -operation fmt
raidcom initialize ldev -ldev_id 0x0062 -operation fmt
raidcom initialize ldev -ldev_id 0x0063 -operation fmt
raidcom initialize ldev -ldev_id 0x0064 -operation fmt
raidcom initialize ldev -ldev_id 0x0065 -operation fmt
raidcom initialize ldev -ldev_id 0x0066 -operation fmt
raidcom initialize ldev -ldev_id 0x0067 -operation fmt
raidcom initialize ldev -ldev_id 0x0068 -operation fmt
raidcom initialize ldev -ldev_id 0x0069 -operation fmt
raidcom initialize ldev -ldev_id 0x006A -operation fmt
raidcom initialize ldev -ldev_id 0x006B -operation fmt

raidcom initialize ldev -ldev_id 0x006C -operation fmt
raidcom initialize ldev -ldev_id 0x006D -operation fmt
raidcom initialize ldev -ldev_id 0x006E -operation fmt
raidcom initialize ldev -ldev_id 0x006F -operation fmt
raidcom initialize ldev -ldev_id 0x0070 -operation fmt
raidcom initialize ldev -ldev_id 0x0071 -operation fmt
raidcom initialize ldev -ldev_id 0x0072 -operation fmt
raidcom initialize ldev -ldev_id 0x0073 -operation fmt
raidcom initialize ldev -ldev_id 0x0074 -operation fmt
```

```
raidcom initialize ldev -ldev_id 0x0075 -operation fmt
raidcom initialize ldev -ldev_id 0x0076 -operation fmt
raidcom initialize ldev -ldev_id 0x0077 -operation fmt
raidcom initialize ldev -ldev_id 0x0078 -operation fmt
raidcom initialize ldev -ldev_id 0x0079 -operation fmt
raidcom initialize ldev -ldev_id 0x007A -operation fmt
raidcom initialize ldev -ldev_id 0x007B -operation fmt
raidcom initialize ldev -ldev_id 0x007C -operation fmt
raidcom initialize ldev -ldev_id 0x007D -operation fmt
raidcom initialize ldev -ldev_id 0x007E -operation fmt
raidcom initialize ldev -ldev_id 0x007F -operation fmt
raidcom initialize ldev -ldev_id 0x0080 -operation fmt
raidcom initialize ldev -ldev_id 0x0081 -operation fmt
raidcom initialize ldev -ldev_id 0x0082 -operation fmt
raidcom initialize ldev -ldev_id 0x0083 -operation fmt
raidcom initialize ldev -ldev_id 0x0084 -operation fmt
raidcom initialize ldev -ldev_id 0x0085 -operation fmt
raidcom initialize ldev -ldev_id 0x0086 -operation fmt
raidcom initialize ldev -ldev_id 0x0087 -operation fmt
raidcom initialize ldev -ldev_id 0x0088 -operation fmt
raidcom initialize ldev -ldev_id 0x0089 -operation fmt
raidcom initialize ldev -ldev_id 0x008A -operation fmt
raidcom initialize ldev -ldev_id 0x008B -operation fmt
raidcom initialize ldev -ldev_id 0x008C -operation fmt
raidcom initialize ldev -ldev_id 0x008D -operation fmt
raidcom initialize ldev -ldev_id 0x008E -operation fmt
raidcom initialize ldev -ldev_id 0x008F -operation fmt
```

lunmap.sh

```
#!/bin/bash

raidcom add lun -port CL1-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL1-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL1-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL1-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL1-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL1-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL1-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL1-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL1-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL1-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL1-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL1-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL1-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL1-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL1-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL1-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL1-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL1-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL1-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL1-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL1-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL1-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL1-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL1-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL1-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL1-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL1-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL1-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL1-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL1-A -ldev_id 0x001D -lun_id 11
```

```
raidcom add lun -port CL1-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL1-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL1-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL1-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL1-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL1-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL1-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL1-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL1-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL1-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL1-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL1-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL1-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL1-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL1-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL1-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL1-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL1-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL1-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL1-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL1-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL1-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL1-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL1-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL1-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL1-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL1-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL1-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL1-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL1-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL1-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL1-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL1-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL1-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL1-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL1-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL1-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL1-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL1-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL1-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL1-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL1-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL1-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL1-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL1-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL1-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL1-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL1-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL1-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL1-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL1-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL1-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL1-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL1-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL1-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL1-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL1-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL1-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL1-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL1-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL1-C -ldev_id 0x005A -lun_id 6
```

```
raidcom add lun -port CL1-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL1-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL1-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL1-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL1-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL1-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL1-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL1-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL1-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL1-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL1-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL1-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL1-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL1-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL1-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL1-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL1-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL1-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL1-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL1-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL1-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL1-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL1-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL1-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL1-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL1-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL1-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL1-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL1-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL1-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL1-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL1-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL1-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL1-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL1-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL1-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL1-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL1-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL1-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL1-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL1-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL1-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL1-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL1-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL1-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL1-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL1-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL1-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL1-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL1-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL1-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL1-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL1-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL3-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL3-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL3-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL3-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL3-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL3-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL3-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL3-A -ldev_id 0x0007 -lun_id 25
```

```
raidcom add lun -port CL3-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL3-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL3-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL3-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL3-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL3-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL3-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL3-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL3-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL3-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL3-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL3-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL3-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL3-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL3-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL3-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL3-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL3-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL3-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL3-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL3-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL3-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL3-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL3-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL3-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL3-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL3-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL3-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL3-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL3-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL3-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL3-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL3-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL3-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL3-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL3-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL3-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL3-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL3-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL3-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL3-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL3-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL3-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL3-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL3-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL3-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL3-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL3-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL3-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL3-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL3-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL3-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL3-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL3-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL3-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL3-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL3-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL3-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL3-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL3-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL3-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL3-B -ldev_id 0x0045 -lun_id 33
```

```
raidcom add lun -port CL3-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL3-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL3-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL3-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL3-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL3-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL3-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL3-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL3-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL3-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL3-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL3-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL3-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL3-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL3-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL3-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL3-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL3-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL3-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL3-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL3-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL3-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL3-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL3-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL3-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL3-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL3-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL3-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL3-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL3-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL3-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL3-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL3-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL3-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL3-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL3-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL3-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL3-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL3-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL3-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL3-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL3-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL3-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL3-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL3-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL3-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL3-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL3-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL3-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL3-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL3-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL3-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL3-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL3-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL3-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL3-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL3-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL3-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL3-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL3-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL3-D -ldev_id 0x0082 -lun_id 19
```

```
raidcom add lun -port CL3-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL3-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL3-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL3-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL3-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL3-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL3-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL3-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL3-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL3-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL3-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL3-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL3-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL2-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL2-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL2-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL2-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL2-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL2-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL2-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL2-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL2-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL2-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL2-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL2-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL2-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL2-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL2-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL2-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL2-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL2-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL2-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL2-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL2-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL2-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL2-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL2-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL2-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL2-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL2-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL2-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL2-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL2-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL2-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL2-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL2-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL2-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL2-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL2-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL2-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL2-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL2-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL2-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL2-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL2-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL2-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL2-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL2-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL2-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL2-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL2-B -ldev_id 0x002F -lun_id 5
```

```
raidcom add lun -port CL2-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL2-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL2-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL2-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL2-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL2-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL2-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL2-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL2-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL2-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL2-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL2-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL2-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL2-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL2-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL2-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL2-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL2-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL2-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL2-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL2-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL2-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL2-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL2-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL2-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL2-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL2-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL2-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL2-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL2-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL2-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL2-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL2-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL2-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL2-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL2-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL2-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL2-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL2-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL2-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL2-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL2-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL2-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL2-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL2-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL2-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL2-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL2-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL2-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL2-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL2-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL2-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL2-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL2-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL2-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL2-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL2-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL2-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL2-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL2-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL2-D -ldev_id 0x006C -lun_id 0
```

```
raidcom add lun -port CL2-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL2-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL2-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL2-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL2-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL2-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL2-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL2-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL2-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL2-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL2-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL2-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL2-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL2-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL2-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL2-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL2-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL2-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL2-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL2-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL2-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL2-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL2-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL2-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL2-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL2-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL2-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL2-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL2-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL2-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL2-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL2-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL2-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL2-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL2-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL4-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL4-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL4-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL4-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL4-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL4-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL4-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL4-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL4-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL4-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL4-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL4-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL4-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL4-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL4-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL4-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL4-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL4-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL4-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL4-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL4-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL4-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL4-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL4-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL4-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL4-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL4-A -ldev_id 0x001A -lun_id 32
```

```
raidcom add lun -port CL4-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL4-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL4-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL4-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL4-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL4-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL4-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL4-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL4-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL4-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL4-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL4-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL4-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL4-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL4-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL4-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL4-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL4-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL4-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL4-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL4-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL4-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL4-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL4-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL4-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL4-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL4-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL4-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL4-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL4-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL4-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL4-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL4-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL4-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL4-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL4-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL4-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL4-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL4-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL4-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL4-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL4-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL4-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL4-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL4-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL4-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL4-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL4-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL4-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL4-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL4-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL4-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL4-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL4-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL4-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL4-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL4-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL4-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL4-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL4-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL4-C -ldev_id 0x0057 -lun_id 27
```

```
raidcom add lun -port CL4-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL4-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL4-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL4-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL4-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL4-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL4-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL4-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL4-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL4-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL4-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL4-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL4-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL4-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL4-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL4-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL4-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL4-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL4-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL4-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL4-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL4-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL4-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL4-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL4-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL4-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL4-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL4-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL4-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL4-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL4-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL4-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL4-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL4-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL4-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL4-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL4-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL4-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL4-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL4-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL4-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL4-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL4-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL4-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL4-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL4-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL4-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL4-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL4-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL4-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL4-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL4-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL4-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL4-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL4-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL4-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL1-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL1-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL1-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL1-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL1-J -ldev_id 0x0004 -lun_id 13
```

```
raidcom add lun -port CL1-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL1-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL1-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL1-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL1-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL1-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL1-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL1-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL1-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL1-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL1-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL1-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL1-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL1-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL1-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL1-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL1-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL1-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL1-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL1-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL1-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL1-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL1-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL1-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL1-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL1-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL1-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL1-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL1-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL1-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL1-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL1-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL1-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL1-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL1-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL1-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL1-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL1-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL1-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL1-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL1-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL1-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL1-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL1-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL1-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL1-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL1-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL1-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL1-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL1-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL1-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL1-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL1-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL1-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL1-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL1-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL1-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL1-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL1-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL1-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL1-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL1-K -ldev_id 0x0042 -lun_id 21
```

```
raidcom add lun -port CL1-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL1-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL1-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL1-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL1-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL1-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL1-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL1-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL1-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL1-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL1-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL1-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL1-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL1-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL1-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL1-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL1-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL1-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL1-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL1-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL1-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL1-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL1-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL1-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL1-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL1-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL1-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL1-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL1-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL1-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL1-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL1-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL1-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL1-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL1-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL1-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL1-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL1-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL1-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL1-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL1-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL1-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL1-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL1-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL1-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL1-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL1-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL1-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL1-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL1-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL1-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL1-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL1-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL1-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL1-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL1-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL1-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL1-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL1-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL1-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL1-M -ldev_id 0x007F -lun_id 7
```

```
raidcom add lun -port CL1-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL1-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL1-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL1-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL1-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL1-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL1-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL1-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL1-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL1-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL1-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL1-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL1-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL1-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL1-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL1-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL3-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL3-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL3-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL3-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL3-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL3-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL3-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL3-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL3-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL3-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL3-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL3-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL3-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL3-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL3-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL3-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL3-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL3-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL3-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL3-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL3-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL3-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL3-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL3-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL3-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL3-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL3-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL3-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL3-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL3-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL3-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL3-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL3-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL3-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL3-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL3-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL3-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL3-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL3-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL3-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL3-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL3-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL3-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL3-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL3-K -ldev_id 0x002C -lun_id 26
```

```
raidcom add lun -port CL3-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL3-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL3-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL3-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL3-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL3-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL3-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL3-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL3-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL3-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL3-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL3-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL3-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL3-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL3-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL3-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL3-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL3-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL3-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL3-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL3-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL3-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL3-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL3-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL3-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL3-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL3-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL3-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL3-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL3-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL3-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL3-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL3-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL3-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL3-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL3-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL3-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL3-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL3-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL3-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL3-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL3-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL3-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL3-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL3-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL3-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL3-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL3-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL3-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL3-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL3-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL3-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL3-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL3-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL3-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL3-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL3-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL3-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL3-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL3-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL3-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL3-L -ldev_id 0x006A -lun_id 34
```

```
raidcom add lun -port CL3-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL3-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL3-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL3-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL3-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL3-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL3-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL3-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL3-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL3-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL3-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL3-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL3-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL3-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL3-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL3-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL3-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL3-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL3-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL3-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL3-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL3-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL3-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL3-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL3-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL3-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL3-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL3-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL3-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL3-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL3-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL3-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL3-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL3-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL3-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL3-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL3-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL2-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL2-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL2-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL2-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL2-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL2-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL2-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL2-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL2-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL2-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL2-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL2-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL2-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL2-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL2-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL2-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL2-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL2-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL2-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL2-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL2-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL2-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL2-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL2-J -ldev_id 0x0017 -lun_id 20
```

```
raidcom add lun -port CL2-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL2-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL2-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL2-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL2-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL2-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL2-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL2-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL2-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL2-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL2-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL2-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL2-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL2-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL2-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL2-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL2-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL2-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL2-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL2-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL2-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL2-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL2-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL2-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL2-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL2-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL2-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL2-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL2-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL2-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL2-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL2-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL2-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL2-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL2-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL2-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL2-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL2-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL2-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL2-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL2-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL2-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL2-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL2-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL2-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL2-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL2-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL2-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL2-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL2-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL2-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL2-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL2-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL2-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL2-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL2-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL2-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL2-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL2-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL2-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL2-L -ldev_id 0x0054 -lun_id 15
```

```
raidcom add lun -port CL2-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL2-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL2-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL2-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL2-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL2-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL2-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL2-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL2-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL2-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL2-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL2-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL2-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL2-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL2-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL2-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL2-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL2-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL2-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL2-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL2-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL2-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL2-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL2-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL2-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL2-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL2-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL2-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL2-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL2-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL2-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL2-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL2-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL2-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL2-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL2-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL2-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL2-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL2-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL2-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL2-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL2-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL2-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL2-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL2-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL2-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL2-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL2-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL2-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL2-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL2-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL2-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL2-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL2-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL2-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL2-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL2-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL2-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL2-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL4-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL4-J -ldev_id 0x0001 -lun_id 1
```

```
raidcom add lun -port CL4-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL4-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL4-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL4-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL4-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL4-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL4-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL4-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL4-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL4-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL4-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL4-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL4-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL4-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL4-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL4-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL4-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL4-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL4-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL4-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL4-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL4-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL4-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL4-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL4-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL4-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL4-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL4-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL4-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL4-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL4-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL4-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL4-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL4-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL4-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL4-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL4-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL4-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL4-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL4-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL4-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL4-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL4-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL4-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL4-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL4-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL4-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL4-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL4-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL4-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL4-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL4-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL4-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL4-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL4-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL4-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL4-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL4-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL4-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL4-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL4-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL4-K -ldev_id 0x003F -lun_id 9
```

```
raidcom add lun -port CL4-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL4-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL4-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL4-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL4-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL4-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL4-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL4-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL4-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL4-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL4-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL4-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL4-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL4-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL4-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL4-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL4-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL4-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL4-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL4-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL4-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL4-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL4-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL4-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL4-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL4-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL4-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL4-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL4-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL4-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL4-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL4-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL4-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL4-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL4-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL4-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL4-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL4-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL4-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL4-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL4-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL4-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL4-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL4-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL4-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL4-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL4-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL4-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL4-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL4-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL4-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL4-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL4-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL4-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL4-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL4-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL4-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL4-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL4-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL4-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL4-M -ldev_id 0x007C -lun_id 28
```

```
raidcom add lun -port CL4-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL4-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL4-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL4-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL4-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL4-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL4-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL4-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL4-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL4-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL4-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL4-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL4-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL4-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL4-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL4-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL4-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL4-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL4-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL5-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL5-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL5-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL5-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL5-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL5-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL5-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL5-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL5-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL5-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL5-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL5-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL5-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL5-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL5-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL5-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL5-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL5-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL5-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL5-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL5-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL5-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL5-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL5-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL5-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL5-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL5-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL5-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL5-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL5-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL5-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL5-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL5-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL5-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL5-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL5-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL5-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL5-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL5-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL5-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL5-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL5-B -ldev_id 0x0029 -lun_id 14
```

```
raidcom add lun -port CL5-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL5-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL5-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL5-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL5-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL5-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL5-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL5-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL5-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL5-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL5-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL5-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL5-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL5-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL5-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL5-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL5-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL5-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL5-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL5-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL5-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL5-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL5-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL5-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL5-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL5-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL5-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL5-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL5-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL5-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL5-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL5-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL5-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL5-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL5-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL5-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL5-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL5-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL5-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL5-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL5-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL5-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL5-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL5-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL5-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL5-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL5-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL5-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL5-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL5-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL5-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL5-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL5-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL5-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL5-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL5-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL5-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL5-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL5-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL5-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL5-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL5-C -ldev_id 0x0067 -lun_id 22
```

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raidcom add lun -port CL5-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL5-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL5-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL5-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL5-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL5-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL5-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL5-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL5-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL5-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL5-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL5-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL5-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL5-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL5-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL5-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL5-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL5-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL5-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL5-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL5-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL5-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL5-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL5-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL5-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL5-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL5-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL5-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL5-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL5-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL5-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL5-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL5-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL5-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL5-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL5-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL5-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL5-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL5-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL5-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL7-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL7-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL7-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL7-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL7-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL7-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL7-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL7-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL7-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL7-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL7-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL7-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL7-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL7-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL7-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL7-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL7-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL7-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL7-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL7-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL7-A -ldev_id 0x0014 -lun_id 8
```

```
raidcom add lun -port CL7-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL7-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL7-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL7-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL7-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL7-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL7-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL7-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL7-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL7-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL7-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL7-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL7-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL7-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL7-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL7-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL7-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL7-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL7-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL7-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL7-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL7-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL7-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL7-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL7-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL7-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL7-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL7-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL7-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL7-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL7-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL7-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL7-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL7-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL7-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL7-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL7-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL7-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL7-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL7-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL7-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL7-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL7-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL7-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL7-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL7-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL7-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL7-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL7-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL7-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL7-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL7-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL7-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL7-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL7-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL7-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL7-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL7-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL7-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL7-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL7-C -ldev_id 0x0051 -lun_id 3
```

```
raidcom add lun -port CL7-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL7-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL7-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL7-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL7-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL7-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL7-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL7-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL7-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL7-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL7-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL7-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL7-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL7-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL7-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL7-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL7-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL7-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL7-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL7-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL7-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL7-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL7-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL7-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL7-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL7-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL7-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL7-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL7-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL7-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL7-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL7-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL7-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL7-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL7-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL7-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL7-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL7-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL7-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL7-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL7-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL7-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL7-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL7-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL7-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL7-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL7-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL7-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL7-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL7-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL7-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL7-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL7-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL7-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL7-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL7-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL7-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL7-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL7-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL7-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL7-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL7-D -ldev_id 0x008F -lun_id 35
```

```
raidcom add lun -port CL6-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL6-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL6-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL6-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL6-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL6-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL6-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL6-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL6-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL6-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL6-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL6-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL6-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL6-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL6-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL6-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL6-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL6-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL6-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL6-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL6-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL6-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL6-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL6-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL6-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL6-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL6-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL6-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL6-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL6-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL6-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL6-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL6-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL6-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL6-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL6-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL6-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL6-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL6-B -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL6-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL6-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL6-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL6-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL6-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL6-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL6-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL6-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL6-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL6-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL6-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL6-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL6-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL6-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL6-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL6-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL6-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL6-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL6-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL6-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL6-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL6-B -ldev_id 0x003C -lun_id 30
```

```
raidcom add lun -port CL6-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL6-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL6-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL6-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL6-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL6-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL6-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL6-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL6-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL6-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL6-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL6-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL6-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL6-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL6-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL6-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL6-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL6-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL6-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL6-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL6-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL6-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL6-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL6-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL6-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL6-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL6-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL6-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL6-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL6-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL6-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL6-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL6-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL6-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL6-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL6-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL6-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL6-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL6-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL6-C -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL6-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL6-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL6-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL6-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL6-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL6-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL6-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL6-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL6-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL6-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL6-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL6-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL6-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL6-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL6-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL6-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL6-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL6-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL6-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL6-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL6-D -ldev_id 0x0079 -lun_id 16
```

```
raidcom add lun -port CL6-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL6-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL6-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL6-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL6-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL6-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL6-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL6-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL6-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL6-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL6-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL6-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL6-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL6-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL6-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL6-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL6-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL6-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL6-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL6-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL6-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL6-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL8-A -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL8-A -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL8-A -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL8-A -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL8-A -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL8-A -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL8-A -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL8-A -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL8-A -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL8-A -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL8-A -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL8-A -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL8-A -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL8-A -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL8-A -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL8-A -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL8-A -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL8-A -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL8-A -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL8-A -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL8-A -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL8-A -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL8-A -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL8-A -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL8-A -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL8-A -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL8-A -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL8-A -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL8-A -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL8-A -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL8-A -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL8-A -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL8-A -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL8-A -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL8-A -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL8-A -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL8-B -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL8-B -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL8-B -ldev_id 0x0026 -lun_id 2
```

```
raidcom add lun -port CL8-B -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL8-B -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL8-B -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL8-B -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL8-B -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL8-B -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL8-B -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL8-B -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL8-B -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL8-B -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL8-B -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL8-B -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL8-B -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL8-B -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL8-B -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL8-B -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL8-B -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL8-B -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL8-B -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL8-B -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL8-B -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL8-B -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL8-B -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL8-B -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL8-B -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL8-B -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL8-B -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL8-B -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL8-B -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL8-B -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL8-B -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL8-B -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL8-B -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL8-C -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL8-C -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL8-C -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL8-C -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL8-C -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL8-C -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL8-C -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL8-C -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL8-C -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL8-C -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL8-C -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL8-C -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL8-C -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL8-C -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL8-C -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL8-C -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL8-C -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL8-C -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL8-C -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL8-C -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL8-C -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL8-C -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL8-C -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL8-C -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL8-C -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL8-C -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL8-C -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL8-C -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL8-C -ldev_id 0x0064 -lun_id 10
```

```
raidcom add lun -port CL8-C -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL8-C -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL8-C -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL8-C -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL8-C -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL8-C -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL8-C -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL8-D -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL8-D -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL8-D -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL8-D -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL8-D -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL8-D -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL8-D -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL8-D -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL8-D -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL8-D -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL8-D -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL8-D -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL8-D -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL8-D -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL8-D -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL8-D -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL8-D -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL8-D -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL8-D -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL8-D -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL8-D -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL8-D -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL8-D -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL8-D -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL8-D -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL8-D -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL8-D -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL8-D -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL8-D -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL8-D -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL8-D -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL8-D -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL8-D -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL8-D -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL8-D -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL8-D -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL5-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL5-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL5-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL5-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL5-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL5-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL5-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL5-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL5-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL5-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL5-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL5-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL5-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL5-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL5-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL5-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL5-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL5-J -ldev_id 0x0011 -lun_id 29
```

```
raidcom add lun -port CL5-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL5-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL5-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL5-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL5-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL5-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL5-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL5-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL5-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL5-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL5-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL5-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL5-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL5-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL5-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL5-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL5-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL5-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL5-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL5-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL5-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL5-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL5-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL5-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL5-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL5-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL5-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL5-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL5-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL5-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL5-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL5-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL5-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL5-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL5-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL5-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL5-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL5-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL5-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL5-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL5-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL5-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL5-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL5-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL5-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL5-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL5-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL5-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL5-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL5-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL5-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL5-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL5-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL5-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL5-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL5-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL5-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL5-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL5-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL5-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL5-L -ldev_id 0x004E -lun_id 24
```

```
raidcom add lun -port CL5-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL5-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL5-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL5-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL5-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL5-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL5-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL5-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL5-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL5-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL5-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL5-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL5-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL5-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL5-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL5-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL5-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL5-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL5-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL5-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL5-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL5-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL5-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL5-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL5-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL5-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL5-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL5-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL5-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL5-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL5-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL5-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL5-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL5-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL5-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL5-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL5-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL5-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL5-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL5-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL5-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL5-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL5-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL5-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL5-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL5-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL5-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL5-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL5-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL5-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL5-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL5-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL5-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL5-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL5-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL5-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL5-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL5-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL5-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL5-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL5-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL5-M -ldev_id 0x008C -lun_id 23
```

```
raidcom add lun -port CL5-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL5-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL5-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL7-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL7-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL7-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL7-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL7-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL7-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL7-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL7-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL7-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL7-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL7-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL7-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL7-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL7-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL7-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL7-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL7-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL7-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL7-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL7-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL7-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL7-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL7-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL7-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL7-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL7-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL7-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL7-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL7-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL7-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL7-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL7-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL7-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL7-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL7-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL7-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL7-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL7-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL7-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL7-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL7-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL7-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL7-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL7-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL7-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL7-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL7-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL7-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL7-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL7-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL7-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL7-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL7-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL7-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL7-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL7-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL7-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL7-K -ldev_id 0x0039 -lun_id 18
```

```
raidcom add lun -port CL7-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL7-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL7-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL7-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL7-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL7-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL7-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL7-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL7-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL7-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL7-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL7-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL7-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL7-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL7-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL7-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL7-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL7-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL7-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL7-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL7-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL7-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL7-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL7-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL7-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL7-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL7-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL7-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL7-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL7-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL7-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL7-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL7-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL7-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL7-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL7-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL7-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL7-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL7-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL7-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL7-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL7-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL7-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL7-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL7-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL7-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL7-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL7-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL7-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL7-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL7-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL7-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL7-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL7-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL7-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL7-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL7-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL7-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL7-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL7-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL7-M -ldev_id 0x0076 -lun_id 4
```

```
raidcom add lun -port CL7-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL7-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL7-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL7-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL7-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL7-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL7-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL7-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL7-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL7-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL7-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL7-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL7-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL7-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL7-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL7-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL7-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL7-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL7-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL7-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL7-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL7-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL7-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL7-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL7-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL6-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL6-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL6-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL6-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL6-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL6-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL6-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL6-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL6-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL6-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL6-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL6-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL6-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL6-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL6-J -ldev_id 0x000E -lun_id 17
raidcom add lun -port CL6-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL6-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL6-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL6-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL6-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL6-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL6-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL6-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL6-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL6-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL6-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL6-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL6-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL6-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL6-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL6-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL6-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL6-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL6-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL6-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL6-J -ldev_id 0x0023 -lun_id 35
```

```
raidcom add lun -port CL6-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL6-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL6-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL6-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL6-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL6-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL6-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL6-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL6-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL6-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL6-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL6-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL6-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL6-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL6-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL6-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL6-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL6-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL6-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL6-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL6-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL6-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL6-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL6-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL6-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL6-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL6-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL6-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL6-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL6-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL6-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL6-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL6-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL6-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL6-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL6-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL6-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL6-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL6-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL6-L -ldev_id 0x004B -lun_id 12
raidcom add lun -port CL6-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL6-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL6-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL6-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL6-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL6-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL6-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL6-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL6-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL6-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL6-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL6-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL6-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL6-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL6-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL6-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL6-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL6-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL6-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL6-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL6-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL6-L -ldev_id 0x0061 -lun_id 31
```

```
raidcom add lun -port CL6-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL6-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL6-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL6-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL6-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL6-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL6-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL6-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL6-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL6-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL6-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL6-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL6-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL6-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL6-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL6-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL6-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL6-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL6-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL6-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL6-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL6-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL6-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL6-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL6-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL6-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL6-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL6-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL6-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL6-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL6-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL6-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL6-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL6-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL6-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL6-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL6-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL6-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL6-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL6-M -ldev_id 0x0089 -lun_id 11
raidcom add lun -port CL6-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL6-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL6-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL6-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL6-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL6-M -ldev_id 0x008F -lun_id 35

raidcom add lun -port CL8-J -ldev_id 0x0000 -lun_id 0
raidcom add lun -port CL8-J -ldev_id 0x0001 -lun_id 1
raidcom add lun -port CL8-J -ldev_id 0x0002 -lun_id 2
raidcom add lun -port CL8-J -ldev_id 0x0003 -lun_id 12
raidcom add lun -port CL8-J -ldev_id 0x0004 -lun_id 13
raidcom add lun -port CL8-J -ldev_id 0x0005 -lun_id 14
raidcom add lun -port CL8-J -ldev_id 0x0006 -lun_id 24
raidcom add lun -port CL8-J -ldev_id 0x0007 -lun_id 25
raidcom add lun -port CL8-J -ldev_id 0x0008 -lun_id 26
raidcom add lun -port CL8-J -ldev_id 0x0009 -lun_id 3
raidcom add lun -port CL8-J -ldev_id 0x000A -lun_id 4
raidcom add lun -port CL8-J -ldev_id 0x000B -lun_id 5
raidcom add lun -port CL8-J -ldev_id 0x000C -lun_id 15
raidcom add lun -port CL8-J -ldev_id 0x000D -lun_id 16
raidcom add lun -port CL8-J -ldev_id 0x000E -lun_id 17
```

```
raidcom add lun -port CL8-J -ldev_id 0x000F -lun_id 27
raidcom add lun -port CL8-J -ldev_id 0x0010 -lun_id 28
raidcom add lun -port CL8-J -ldev_id 0x0011 -lun_id 29
raidcom add lun -port CL8-J -ldev_id 0x0012 -lun_id 6
raidcom add lun -port CL8-J -ldev_id 0x0013 -lun_id 7
raidcom add lun -port CL8-J -ldev_id 0x0014 -lun_id 8
raidcom add lun -port CL8-J -ldev_id 0x0015 -lun_id 18
raidcom add lun -port CL8-J -ldev_id 0x0016 -lun_id 19
raidcom add lun -port CL8-J -ldev_id 0x0017 -lun_id 20
raidcom add lun -port CL8-J -ldev_id 0x0018 -lun_id 30
raidcom add lun -port CL8-J -ldev_id 0x0019 -lun_id 31
raidcom add lun -port CL8-J -ldev_id 0x001A -lun_id 32
raidcom add lun -port CL8-J -ldev_id 0x001B -lun_id 9
raidcom add lun -port CL8-J -ldev_id 0x001C -lun_id 10
raidcom add lun -port CL8-J -ldev_id 0x001D -lun_id 11
raidcom add lun -port CL8-J -ldev_id 0x001E -lun_id 21
raidcom add lun -port CL8-J -ldev_id 0x001F -lun_id 22
raidcom add lun -port CL8-J -ldev_id 0x0020 -lun_id 23
raidcom add lun -port CL8-J -ldev_id 0x0021 -lun_id 33
raidcom add lun -port CL8-J -ldev_id 0x0022 -lun_id 34
raidcom add lun -port CL8-J -ldev_id 0x0023 -lun_id 35

raidcom add lun -port CL8-K -ldev_id 0x0024 -lun_id 0
raidcom add lun -port CL8-K -ldev_id 0x0025 -lun_id 1
raidcom add lun -port CL8-K -ldev_id 0x0026 -lun_id 2
raidcom add lun -port CL8-K -ldev_id 0x0027 -lun_id 12
raidcom add lun -port CL8-K -ldev_id 0x0028 -lun_id 13
raidcom add lun -port CL8-K -ldev_id 0x0029 -lun_id 14
raidcom add lun -port CL8-K -ldev_id 0x002A -lun_id 24
raidcom add lun -port CL8-K -ldev_id 0x002B -lun_id 25
raidcom add lun -port CL8-K -ldev_id 0x002C -lun_id 26
raidcom add lun -port CL8-K -ldev_id 0x002D -lun_id 3
raidcom add lun -port CL8-K -ldev_id 0x002E -lun_id 4
raidcom add lun -port CL8-K -ldev_id 0x002F -lun_id 5
raidcom add lun -port CL8-K -ldev_id 0x0030 -lun_id 15
raidcom add lun -port CL8-K -ldev_id 0x0031 -lun_id 16
raidcom add lun -port CL8-K -ldev_id 0x0032 -lun_id 17
raidcom add lun -port CL8-K -ldev_id 0x0033 -lun_id 27
raidcom add lun -port CL8-K -ldev_id 0x0034 -lun_id 28
raidcom add lun -port CL8-K -ldev_id 0x0035 -lun_id 29
raidcom add lun -port CL8-K -ldev_id 0x0036 -lun_id 6
raidcom add lun -port CL8-K -ldev_id 0x0037 -lun_id 7
raidcom add lun -port CL8-K -ldev_id 0x0038 -lun_id 8
raidcom add lun -port CL8-K -ldev_id 0x0039 -lun_id 18
raidcom add lun -port CL8-K -ldev_id 0x003A -lun_id 19
raidcom add lun -port CL8-K -ldev_id 0x003B -lun_id 20
raidcom add lun -port CL8-K -ldev_id 0x003C -lun_id 30
raidcom add lun -port CL8-K -ldev_id 0x003D -lun_id 31
raidcom add lun -port CL8-K -ldev_id 0x003E -lun_id 32
raidcom add lun -port CL8-K -ldev_id 0x003F -lun_id 9
raidcom add lun -port CL8-K -ldev_id 0x0040 -lun_id 10
raidcom add lun -port CL8-K -ldev_id 0x0041 -lun_id 11
raidcom add lun -port CL8-K -ldev_id 0x0042 -lun_id 21
raidcom add lun -port CL8-K -ldev_id 0x0043 -lun_id 22
raidcom add lun -port CL8-K -ldev_id 0x0044 -lun_id 23
raidcom add lun -port CL8-K -ldev_id 0x0045 -lun_id 33
raidcom add lun -port CL8-K -ldev_id 0x0046 -lun_id 34
raidcom add lun -port CL8-K -ldev_id 0x0047 -lun_id 35

raidcom add lun -port CL8-L -ldev_id 0x0048 -lun_id 0
raidcom add lun -port CL8-L -ldev_id 0x0049 -lun_id 1
raidcom add lun -port CL8-L -ldev_id 0x004A -lun_id 2
raidcom add lun -port CL8-L -ldev_id 0x004B -lun_id 12
```

```
raidcom add lun -port CL8-L -ldev_id 0x004C -lun_id 13
raidcom add lun -port CL8-L -ldev_id 0x004D -lun_id 14
raidcom add lun -port CL8-L -ldev_id 0x004E -lun_id 24
raidcom add lun -port CL8-L -ldev_id 0x004F -lun_id 25
raidcom add lun -port CL8-L -ldev_id 0x0050 -lun_id 26
raidcom add lun -port CL8-L -ldev_id 0x0051 -lun_id 3
raidcom add lun -port CL8-L -ldev_id 0x0052 -lun_id 4
raidcom add lun -port CL8-L -ldev_id 0x0053 -lun_id 5
raidcom add lun -port CL8-L -ldev_id 0x0054 -lun_id 15
raidcom add lun -port CL8-L -ldev_id 0x0055 -lun_id 16
raidcom add lun -port CL8-L -ldev_id 0x0056 -lun_id 17
raidcom add lun -port CL8-L -ldev_id 0x0057 -lun_id 27
raidcom add lun -port CL8-L -ldev_id 0x0058 -lun_id 28
raidcom add lun -port CL8-L -ldev_id 0x0059 -lun_id 29
raidcom add lun -port CL8-L -ldev_id 0x005A -lun_id 6
raidcom add lun -port CL8-L -ldev_id 0x005B -lun_id 7
raidcom add lun -port CL8-L -ldev_id 0x005C -lun_id 8
raidcom add lun -port CL8-L -ldev_id 0x005D -lun_id 18
raidcom add lun -port CL8-L -ldev_id 0x005E -lun_id 19
raidcom add lun -port CL8-L -ldev_id 0x005F -lun_id 20
raidcom add lun -port CL8-L -ldev_id 0x0060 -lun_id 30
raidcom add lun -port CL8-L -ldev_id 0x0061 -lun_id 31
raidcom add lun -port CL8-L -ldev_id 0x0062 -lun_id 32
raidcom add lun -port CL8-L -ldev_id 0x0063 -lun_id 9
raidcom add lun -port CL8-L -ldev_id 0x0064 -lun_id 10
raidcom add lun -port CL8-L -ldev_id 0x0065 -lun_id 11
raidcom add lun -port CL8-L -ldev_id 0x0066 -lun_id 21
raidcom add lun -port CL8-L -ldev_id 0x0067 -lun_id 22
raidcom add lun -port CL8-L -ldev_id 0x0068 -lun_id 23
raidcom add lun -port CL8-L -ldev_id 0x0069 -lun_id 33
raidcom add lun -port CL8-L -ldev_id 0x006A -lun_id 34
raidcom add lun -port CL8-L -ldev_id 0x006B -lun_id 35

raidcom add lun -port CL8-M -ldev_id 0x006C -lun_id 0
raidcom add lun -port CL8-M -ldev_id 0x006D -lun_id 1
raidcom add lun -port CL8-M -ldev_id 0x006E -lun_id 2
raidcom add lun -port CL8-M -ldev_id 0x006F -lun_id 12
raidcom add lun -port CL8-M -ldev_id 0x0070 -lun_id 13
raidcom add lun -port CL8-M -ldev_id 0x0071 -lun_id 14
raidcom add lun -port CL8-M -ldev_id 0x0072 -lun_id 24
raidcom add lun -port CL8-M -ldev_id 0x0073 -lun_id 25
raidcom add lun -port CL8-M -ldev_id 0x0074 -lun_id 26
raidcom add lun -port CL8-M -ldev_id 0x0075 -lun_id 3
raidcom add lun -port CL8-M -ldev_id 0x0076 -lun_id 4
raidcom add lun -port CL8-M -ldev_id 0x0077 -lun_id 5
raidcom add lun -port CL8-M -ldev_id 0x0078 -lun_id 15
raidcom add lun -port CL8-M -ldev_id 0x0079 -lun_id 16
raidcom add lun -port CL8-M -ldev_id 0x007A -lun_id 17
raidcom add lun -port CL8-M -ldev_id 0x007B -lun_id 27
raidcom add lun -port CL8-M -ldev_id 0x007C -lun_id 28
raidcom add lun -port CL8-M -ldev_id 0x007D -lun_id 29
raidcom add lun -port CL8-M -ldev_id 0x007E -lun_id 6
raidcom add lun -port CL8-M -ldev_id 0x007F -lun_id 7
raidcom add lun -port CL8-M -ldev_id 0x0080 -lun_id 8
raidcom add lun -port CL8-M -ldev_id 0x0081 -lun_id 18
raidcom add lun -port CL8-M -ldev_id 0x0082 -lun_id 19
raidcom add lun -port CL8-M -ldev_id 0x0083 -lun_id 20
raidcom add lun -port CL8-M -ldev_id 0x0084 -lun_id 30
raidcom add lun -port CL8-M -ldev_id 0x0085 -lun_id 31
raidcom add lun -port CL8-M -ldev_id 0x0086 -lun_id 32
raidcom add lun -port CL8-M -ldev_id 0x0087 -lun_id 9
raidcom add lun -port CL8-M -ldev_id 0x0088 -lun_id 10
raidcom add lun -port CL8-M -ldev_id 0x0089 -lun_id 11
```

```
raidcom add lun -port CL8-M -ldev_id 0x008A -lun_id 21
raidcom add lun -port CL8-M -ldev_id 0x008B -lun_id 22
raidcom add lun -port CL8-M -ldev_id 0x008C -lun_id 23
raidcom add lun -port CL8-M -ldev_id 0x008D -lun_id 33
raidcom add lun -port CL8-M -ldev_id 0x008E -lun_id 34
raidcom add lun -port CL8-M -ldev_id 0x008F -lun_id 35
```

setlvm.pl

```
#!/usr/bin/perl

#-------------------------------------------------------------------------------
# Global Value
#-------------------------------------------------------------------------------

my @VGMAP = ();
my @ret = split("\n",`lsscsi|grep HITACHI|sed "s/\\[//g"|sed "s/\\]//g"|awk '{print
\$1,\$6}'`);
my %PVOL = {};
foreach (@ret) {
        @val = split(" ", $_);
        $PVOL{$val[0]} = $val[1];
}

my $dry_mode = 0;

my @ASU = (
"asu1_1","asu2_1","asu3_1"
);

my $STRIPE_SIZE  = 4096;  # volume stripe size [kB]  (4-32768)

my @ASU_STRIPES = (
  48,48,48
);

#-------------------------------------------------------------------------------
&CreateVgMap();                 # Create PV to VG map

if ($ARGV[1] eq "dry") {
        $dry_mode = 1;
}

# Check argument...
if ($ARGV[0] eq "pvcreate") {
&Pv_Create();
} elsif ($ARGV[0] eq "vgcreate") {
&Vg_Create();
} elsif ($ARGV[0] eq "lvcreate") {
&Lv_Create();
} elsif ($ARGV[0] eq "pvremove") {
&Pv_Remove();
} elsif ($ARGV[0] eq "vgclean") {
&Vg_Clean();
} elsif ($ARGV[0] eq "vgremove") {
&Vg_Remove();
} elsif ($ARGV[0] eq "lvremove") {
&Lv_Remove();
} elsif ($ARGV[0] eq "lvactive") {
&Lv_Active();
} elsif ($ARGV[0] eq "lvdeactive") {
&Lv_Deactive();
} elsif ($ARGV[0] eq "qdepth") {
&Qd_Change();
} else {
        print "hoge\n";
}
```

```
exit 0;
#-------------------------------------------------------------------------------
sub CreateVgMap {
        my $lunid_min = 0;
        my $lunid_max = 35;

        my @lunid_step_pattern = (
                                    12,12,12
                                  );
        my $scsiid_min = 0;
        my $scsiid_max = 18;

        my $x = 0, $y = 0;
        for (my $lunid = $lunid_min; $lunid <= $lunid_max;
$lunid+=$lunid_step_pattern[$x-1]) {
                $y = 0;
                for (my $scsiid = $scsiid_min; $scsiid <= $scsiid_max; $scsiid++) {
                        for (my $sublunid = $lunid; $sublunid <
$lunid+$lunid_step_pattern[$x]; $sublunid++) {
                                $VGMAP[$x][$y] = "$scsiid:0:0:$sublunid";
                                $y++;
                        }
                }
                $x++;
        }

        print "Create VGMAP done. \n"
}

# Create Physical Volumes
sub Pv_Create {
        foreach (values(%PVOL)) {
                if ($dry_mode){
                        print "pvcreate $_\n";
                } else {
                        system "pvcreate $_";
                }
        }
}

# Remove Physical Volumes
sub Pv_Remove {
        foreach (values(%PVOL)) {
                if ($dry_mode){
                        print"pvremove $_\n";
                } else {
                        system "pvremove $_";
                }
        }
}

# Create Volume Groups
sub Vg_Create {
        my $vgnum = 0;
        my $vgprefix = "vg";
        foreach (@VGMAP) {
                my $cmd = "";

                $cmd = $cmd . "vgcreate $vgprefix$vgnum ";
                foreach (@$_) {
                        $cmd = $cmd ."$PVOL{$_} ";
                }
```

```
                $cmd = $cmd . "\n";

                if ($dry_mode) {
                        print $cmd;
                } else {
                        system $cmd;
                }

                $vgnum++;
        }
}

# Remove Volume Groups device files /dev/vgXX
sub Vg_Clean {
        my $vgnum = 0;
        my $vgprefix = "vg";
        foreach (@VGMAP) {
                if ($dry_mode) {
                        print"rm -rf /dev/$vgprefix$vgnum \n";
                } else {
                        system "rm -rf /dev/$vgprefix$vgnum \n";
                }

                $vgnum++;
        }
}

# Remove Volume Groups
sub Vg_Remove {
        my $vgnum = 0;
        my $vgprefix = "vg";
        foreach (@VGMAP) {
                if ($dry_mode) {
                        print "vgchange -an $vgprefix$vgnum \n";
                        print "vgremove $vgprefix$vgnum \n";
                } else {
                        system "vgchange -an $vgprefix$vgnum \n";
                        system "vgremove $vgprefix$vgnum \n";
                }
                $vgnum++;
        }
}

# Create Logical volumes
sub Lv_Create {
        my $vgnum = 0;
        foreach (@ASU) {
                my $cmd = "lvcreate -l 100%FREE -i $ASU_STRIPES[$vgnum] -I
$STRIPE_SIZE -n $_ vg$vgnum";
                if ($dry_mode) {
                        print $cmd;
                } else {
                        system $cmd;
                }
                $vgnum++;
        }
}

# Remove Logical volumes
sub Lv_Remove {
        my $vgnum = 0;
        foreach (@ASU){
                if ($dry_mode) {
```

```
                        system "lvchange -an /dev/vg$vgnum/$_";
                        system "lvremove -f /dev/vg$vgnum/$_";
                } else {
                        system "lvchange -an /dev/vg$vgnum/$_";
                        system "lvremove -f /dev/vg$vgnum/$_";
                }
                $vgnum++;
        }
}

# Active Logical volumes
sub Lv_Active {
        my $vgnum = 0;
        foreach (@ASU){
                if ($dry_mode) {
                        print "lvchange -ay /dev/vg$vgnum/$_\n";
                } else {
                        system "lvchange -ay /dev/vg$vgnum/$_";
                }
                $vgnum++;
        }
}

# Deactive Logical volumes
sub Lv_Deactive {
        my $vgnum = 0;
        foreach (@ASU){
                if ($dry_mode) {
                        print "lvchange -an /dev/vg$vgnum/$_\n";
                } else {
                        system "lvchange -an /dev/vg$vgnum/$_";
                }
                $vgnum++;
        }
}

# Change queuedepth
sub Qd_Change {
        foreach (@VGMAP) {

                foreach (@$_) {
                        @hoge = split(/\//, $PVOL{$_});
                        $cmd = "echo 32 > /sys/block/$hoge[2]/device/queue_depth\n";
                        if ($dry_mode) {
                                print $cmd;
                        } else {
                                system $cmd;
                        }
                }
        }
}
```

APPENDIX D: SPC-1 WORKLOAD GENERATOR STORAGE COMMANDS AND PARAMETERS

ASU Pre-Fill

The content of command and parameter file, used in this benchmark to execute the required ASU pre-fill, is listed below.

```
sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168,openflags=o_direct
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168,openflags=o_direct
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808,openflags=o_direct
wd=wd_raw,sd=(asu1_1,asu2_1,asu3_1),seekpct=eof
rd=rd_rd1,wd=wd_raw,elapsed=144000,interval=5,forxfersize=(512k),forrdpct=(0),forthr
eads=(1),iorate=max
```

Common Command Lines – Primary Metrics and Repeatability Tests

The following command lines appear at the beginning of each command and parameter file for the Primary Metrics and Repeatability Test. The command lines are only listed below to eliminate redundancy.

```
host=master
slaves=(cb14_1,cb14_2,cb14_3,cb14_4,cb14_5,cb14_6,cb14_7,cb14_8,cb14_9,cb14_10,cb14_
11,cb14_12,cb14_13,cb14_14,cb14_15,cb14_16,cb14_17,cb14_18,cb14_19,cb14_20,cb14_21,c
b14_22,cb14_23,cb14_24,cb14_25,cb14_26,cb15_1,cb15_2,cb15_3,cb15_4,cb15_5,cb15_6,cb1
5_7,cb15_8,cb15_9,cb15_10,cb15_11,cb15_12,cb15_13,cb15_14,cb15_15,cb15_16,cb15_17,cb
15_18,cb15_19,cb15_20,cb15_21,cb15_22,cb15_23,cb15_24,cb15_25,cb15_26,cb16_1,cb16_2,
cb16_3,cb16_4,cb16_5,cb16_6,cb16_7,cb16_8,cb16_9,cb16_10,cb16_11,cb16_12,cb16_13,cb1
6_14,cb16_15,cb16_16,cb16_17,cb16_18,cb16_19,cb16_20,cb16_21,cb16_22,cb16_23,cb16_24
,cb16_25,cb16_26,cb17_1,cb17_2,cb17_3,cb17_4,cb17_5,cb17_6,cb17_7,cb17_8,cb17_9,cb17
_10,cb17_11,cb17_12,cb17_13,cb17_14,cb17_15,cb17_16,cb17_17,cb17_18,cb17_19,cb17_20,
cb17_21,cb17_22,cb17_23,cb17_24,cb17_25,cb17_26,cb18_1,cb18_2,cb18_3,cb18_4,cb18_5,c
b18_6,cb18_7,cb18_8,cb18_9,cb18_10,cb18_11,cb18_12,cb18_13,cb18_14,cb18_15,cb18_16,c
b18_17,cb18_18,cb18_19,cb18_20,cb18_21,cb18_22,cb18_23,cb18_24,cb18_25,cb18_26,cb19_
1,cb19_2,cb19_3,cb19_4,cb19_5,cb19_6,cb19_7,cb19_8,cb19_9,cb19_10,cb19_11,cb19_12,cb
19_13,cb19_14,cb19_15,cb19_16,cb19_17,cb19_18,cb19_19,cb19_20,cb19_21,cb19_22,cb19_2
3,cb19_24,cb19_25,cb19_26,cb20_1,cb20_2,cb20_3,cb20_4,cb20_5,cb20_6,cb20_7,cb20_8,cb
20_9,cb20_10,cb20_11,cb20_12,cb20_13,cb20_14,cb20_15,cb20_16,cb20_17,cb20_18,cb20_19
,cb20_20,cb20_21,cb20_22,cb20_23,cb20_24,cb20_25,cb20_26,cb21_1,cb21_2,cb21_3,cb21_4
,cb21_5,cb21_6,cb21_7,cb21_8,cb21_9,cb21_10,cb21_11,cb21_12,cb21_13,cb21_14,cb21_15,
cb21_16,cb21_17,cb21_18,cb21_19,cb21_20,cb21_21,cb21_22,cb21_23,cb21_24,cb21_25,cb21
_26,cb26_1,cb26_2,cb26_3,cb26_4,cb26_5,cb26_6,cb26_7,cb26_8,cb26_9,cb26_10,cb26_11,c
b26_12,cb26_13,cb26_14,cb26_15,cb26_16,cb26_17,cb26_18,cb26_19,cb26_20,cb26_21,cb26_
22,cb26_23,cb26_24,cb26_25,cb26_26,cb27_1,cb27_2,cb27_3,cb27_4,cb27_5,cb27_6,cb27_7,
cb27_8,cb27_9,cb27_10,cb27_11,cb27_12,cb27_13,cb27_14,cb27_15,cb27_16,cb27_17,cb27_1
8,cb27_19,cb27_20,cb27_21,cb27_22,cb27_23,cb27_24,cb27_25,cb27_26,cb28_1,cb28_2,cb28
_3,cb28_4,cb28_5,cb28_6,cb28_7,cb28_8,cb28_9,cb28_10,cb28_11,cb28_12,cb28_13,cb28_14
,cb28_15,cb28_16,cb28_17,cb28_18,cb28_19,cb28_20,cb28_21,cb28_22,cb28_23,cb28_24,cb2
8_25,cb28_26,cb29_1,cb29_2,cb29_3,cb29_4,cb29_5,cb29_6,cb29_7,cb29_8,cb29_9,cb29_10,
cb29_11,cb29_12,cb29_13,cb29_14,cb29_15,cb29_16,cb29_17,cb29_18,cb29_19,cb29_20,cb29
_21,cb29_22,cb29_23,cb29_24,cb29_25,cb29_26,cb30_1,cb30_2,cb30_3,cb30_4,cb30_5,cb30_
6,cb30_7,cb30_8,cb30_9,cb30_10,cb30_11,cb30_12,cb30_13,cb30_14,cb30_15,cb30_16,cb30_
17,cb30_18,cb30_19,cb30_20,cb30_21,cb30_22,cb30_23,cb30_24,cb30_25,cb30_26,cb31_1,cb
31_2,cb31_3,cb31_4,cb31_5,cb31_6,cb31_7,cb31_8,cb31_9,cb31_10,cb31_11,cb31_12,cb31_1
3,cb31_14,cb31_15,cb31_16,cb31_17,cb31_18,cb31_19,cb31_20,cb31_21,cb31_22,cb31_23,cb
31_24,cb31_25,cb31_26,cb32_1,cb32_2,cb32_3,cb32_4,cb32_5,cb32_6,cb32_7,cb32_8,cb32_9
,cb32_10,cb32_11,cb32_12,cb32_13,cb32_14,cb32_15,cb32_16,cb32_17,cb32_18,cb32_19,cb3
2_20,cb32_21,cb32_22,cb32_23,cb32_24,cb32_25,cb32_26,cb33_1,cb33_2,cb33_3,cb33_4,cb3
3_5,cb33_6,cb33_7,cb33_8,cb33_9,cb33_10,cb33_11,cb33_12,cb33_13,cb33_14,cb33_15,cb33
_16,cb33_17,cb33_18,cb33_19,cb33_20,cb33_21,cb33_22,cb33_23,cb33_24,cb33_25,cb33_26)

sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808
```

Primary Metrics Test: Sustainability Test Phase/Test Run

common commands

```
rd=sustain,bsus=40100,startup=240,elapsed=28800,interval=60
```

Primary Metrics Test: IOPS Test Phase (100% Test Run)

common commands

```
rd=ramp_100,bsus=40100,startup=240,elapsed=600,interval=60
```

Primary Metrics Test: Response Time Ramp Test Phase *(95% Test Run)*

common commands

```
rd=ramp_95,bsus=38095,startup=240,elapsed=600,interval=60
```

Primary Metrics Test: Response Time Ramp Test Phase *(90% Test Run)*

common commands

```
rd=ramp_90,bsus=36090,startup=240,elapsed=600,interval=60
```

Primary Metrics Test: Response Time Ramp Test Phase *(80% Test Run)*

common commands

```
rd=ramp_80,bsus=32080,startup=240,elapsed=600,interval=60
```

Primary Metrics Test: Response Time Ramp Test Phase *(50% Test Run)*

common commands

```
rd=ramp_50,bsus=20050,startup=240,elapsed=600,interval=60
```

Repeatability Test: Repeatability Test Phase 1 *(10% Test Run)*

common commands

```
rd=repeat1_lrt,bsus=4010,startup=240,elapsed=600,interval=60
```

Repeatability Test: Repeatability Test Phase 1 *(100% Test Run)*

common commands

```
rd=repeat1_iops,bsus=40100,startup=240,elapsed=600,interval=60
```

Repeatability Test: Repeatability Test Phase 2 *(10% Test Run)*

common commands

```
rd=repeat2_lrt,bsus=4010,startup=240,elapsed=600,interval=60
```

Repeatability Test: Repeatability Test Phase 2 *(100% Test Run)*

```
common commands

rd=repeat2_iops,bsus=40100,startup=240,elapsed=600,interval=600
```

SPC-1 Persistence Test Run 1

The content of SPC-1 Workload Generator command and parameter file, used in this benchmark to execute a reduced level SPC-1 Persistence Test Run 1, is listed below.

```
sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808
```

SPC-2 Persistence Test

If approved by the SPC Auditor, the SPC-2 Persistence Test may be used to meet the SPC-1 persistence requirements. Both the SPC-1 and SPC-2 Persistence Tests provide the same level of functionality and verification of data integrity.

SPC-2 Persistence Test Run 1 *(write phase)*

```
host=localhost,jvms=8,maxstreams=1337

sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808

maxlatestart=1
reportinginterval=5
segmentlength=512m
rd=default,rampup=180,periods=90,measurement=300,runout=0,rampdown=0,buffers=1
rd=default,rdpct=0,xfersize=1024k
rd=TR1-5s_SPC-2-persist-w,streams=1337
```

SPC-2 Persistence Test Run 2 *(read phase)*

```
host=localhost,jvms=8,maxstreams=1337

sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808


maxlatestart=1
reportinginterval=5
segmentlength=512m
maxpersistenceerrors=10
rd=default,buffers=1,rdpct=100,xfersize=1024k
rd=TR1-200s_SPC-2-persist-r
```

Slave JVMs

Each Slave JVM was invoked with a command and parameter file similar to the example listed below. The only difference in each file was **host** parameter value, which was unique to each Slave JVM, e.g. ***cb14_1…cb33_26***.

```
host=cb14_1
master=cb26
sd=asu1_1,lun=/dev/vg0/asu1_1,size=13933011347168
sd=asu2_1,lun=/dev/vg1/asu2_1,size=13933011347168
sd=asu3_1,lun=/dev/vg2/asu3_1,size=3096224743808
```

APPENDIX E: SPC-1 WORKLOAD GENERATOR INPUT PARAMETERS

The following script, **run_all.sh**, calls the standard **vdbench** script to execute the required ASU pre-fill and upon completion of that first step, invokes the commands to execute the Primary Metrics Test *(Sustainability Test Phase, IOPS Test Phase, and Response Time Ramp Test Phase)*, the Repeatability Test *(Repeatability Test Phase 1 and Repeatability Test Phase 2)*, a reduced level SPC-1 Persistence Test Run 1 *(write phase)* and SPC-2 Persistence Test Run 1 *(write phase)* in an uninterrupted sequence.

run_all.sh

```
#!/bin/bash
# Environment Variables

export LD_LIBRARY_PATH=/spc/spc1_v2_4
export LIBPATH=/spc/spc1_v2_4
export CLASSPATH=/spc/spc1_v2_4
export PATH=/usr/java64/jre1.6.0_45/bin:$PATH

# Java Settings
XMS=6000m
XMX=6000m
XSS=256k

#Run ASU Prefill Using Vdbench 5.03 RC11
cd /spc/vdbench503rc11/vdbench503rc11
vdbench -f spc1_64FMD_prefill.txt -o prefill_spc1_v2_4

cd /spc/spc1_v2_4
ROOTDIR='/spc/spc1_v2_4/'
#Increased BSU count slightly to give us a better chance of achieving 2M IOPS even
if we have a stuck slave
BSU=40100
SUSTAIN_TIME=28800
#Reduced sustain-time for testing. Audit sustain time will be 28800 as shown above
#SUSTAIN_TIME=3600
TIME=600
STARTUP=240
INTERVAL=60
PHASES='sustain:100 ramp_100:100 ramp_95:95 ramp_90:90 ramp_80:80 ramp_50:50
ramp_10:10 repeat1_lrt:10 repeat1_iops:100 repeat2_lrt:10 repeat2_iops:100'

echo "Preparing files"

cp -p spc1.main.cfg spc1.cfg
# creating main tests files
for phase in $PHASES; do
   NAME=${phase%:*}
   FACTOR=${phase#*:}

   if [ $NAME = "sustain" ]; then
      ACTUAL_TIME=$SUSTAIN_TIME
   else
      ACTUAL_TIME=$TIME
   fi
   cat "spc1.cfg" > $NAME".txt"
   echo "rd=$NAME,bsus=$[$BSU * $FACTOR /
      100],startup=$STARTUP,elapsed=$ACTUAL_TIME,interval=$INTERVAL" >> $NAME".txt"
done
```

```
#Ensure no slaves are running before we start
/spc/spc1_v2_4/stopallslaves.sh

echo "Running test phases through repeat2"
for phase in $PHASES; do
   /spc/spc1_v2_4/start_all_slaves.sh
   sleep 10
   NAME=${phase%:*}
   CMD="java -Xms$XMS -Xmx$XMX -Xss$XSS spc1 -w SPC1 -f $NAME.txt -o $NAME SPCOut"
   echo $CMD
   $CMD
   RC=$?
   mkdir /vdbench/output/spc1common_save_data/$NAME
   mv /vdbench/output/spc1common/slave.* /vdbench/output/spc1common_save_data/$NAME
   # Check the run return code
   if [ $RC -gt 0 ]; then
      echo "Test ended with error code $RC. Stopping run."
      exit $RC
   fi
   if [ `tail $ROOTDIR$NAME/logfile.html | egrep "(Exception|Error)" | wc -l` -gt 0
]; then
      echo "Found an error - waiting"
      sleep 300
      if [ `grep "Task IO_task stopped after 3 minutes"
/vdbench/output/spc1common/slave.cb*/slave*/logfile.html | wc -l` -gt 0 ]; then
         echo "There was a stuck slave. We can proceed with the next phase"
      else
         echo "An error detected in phase $NAME"
         exit 1
      fi
   fi
   /spc/spc1_v2_4/stopallslaves.sh
done

#Save the multi-host config file
cp -p spc1.cfg spc1.main.cfg

#Copy in the single-jvm config file for SPC-1 persistence1
cp -p spc1.persist.cfg spc1.cfg

#Change to the HNAS directory for fast I/O to journal and map files
cd /vdbench/output/spc1common

#Execute SPC-1 persistence1 at 5% of sustainability BSUs
PBSUs=$(($BSU / 20));
java -Xms$XMS -Xmx$XMX -Xss$XSS persist1 -b $PBSUs

export LD_LIBRARY_PATH=/spc/spc2
export LIBPATH=/spc/spc2
export CLASSPATH=/spc/spc2
cd /spc/spc2
/spc/spc2/spc2 -f persistw.cfg -init -o persistinit
/spc/spc2/spc2 -f persistw.cfg -o persist1-spc2

# SPC-2 persistence2 test (read phase), will be run from  a separate script
following power cycle.
exit
```

The **start_all_slaves.sh** and **stopallslaves.sh** scripts were invoked by **run_all.sh** to start and stop the Slave JVMs. The **startslaves.sh** script was invoked by **start_all_slaves.sh** to actually start each Slave JVM on the appropriate Host System.

start_all_slaves.sh

```
#!/bin/bash

ssh cb14 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb15 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb16 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb17 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb18 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb19 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb20 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb21 '/vdbench/output/spc1common/startslaves.sh 27' &



ssh cb26 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb27 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb28 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb29 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb30 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb31 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb32 '/vdbench/output/spc1common/startslaves.sh 27' &
ssh cb33 '/vdbench/output/spc1common/startslaves.sh 27' &
```

startslaves.sh

```
#!/bin/bash
# Environment Settings
# startslaves.sh 27 [0]
export LD_LIBRARY_PATH=/spc/spc1_v2_4
export LIBPATH=/spc/spc1_v2_4
export CLASSPATH=/spc/spc1_v2_4
export PATH=/usr/java64/jre1.6.0_45/bin:$PATH
DATE=`date +%Y%m%d-%H%M`
SPCDIR=/spc/spc1_v2_4
#OUTDIR=$SPCDIR/slave.`hostname -s`.$DATE
OUTDIR=/vdbench/output/spc1common/slave.`hostname -s`
# Java Settings
#-Xms$XMS -Xmx$XMX -Xss$XSS

XMS=1536m
XMX=2048m
XSS=256k
# Create Output Directory
mkdir -p $OUTDIR
# Start Java Slave Processes
cd $SPCDIR
for (( i=1;i< $1;i++ )) do
      nohup java -Xms$XMS -Xmx$XMX -Xss$XSS spc1 -f slave$i.cfg -o $OUTDIR/slave$i
1>/dev/null 2>&1 &
      sleep 1
      #nohup java spc1 -f slave$i.cfg -o $OUTDIR/slave$i 1>/dev/null 2>&1 &
      #nohup  java  -Xms$XMS  -Xmx$XMX  spc1  -f  slave$i.cfg  -o  $OUTDIR/slave$i
1>/dev/null 2>&1 &
done
```

stopallslaves.sh

```
#!/bin/bash

ssh cb14 'pkill java'
ssh cb15 'pkill java'
ssh cb16 'pkill java'
ssh cb17 'pkill java'
ssh cb18 'pkill java'
ssh cb19 'pkill java'
ssh cb20 'pkill java'
ssh cb21 'pkill java'
ssh cb26 'pkill java'
ssh cb27 'pkill java'
ssh cb28 'pkill java'
ssh cb29 'pkill java'
ssh cb30 'pkill java'
ssh cb31 'pkill java'
ssh cb32 'pkill java'
ssh cb33 'pkill java'


sleep 10
```

SPC-2 Persistence Test Run 2

The following script is executed to invoke the SPC-2 Persistence Test Run 2 *(read phase)* after completion of the required TSC power off/power on cycle.

run_persist2.sh

```
#!/bin/bash
export LD_LIBRARY_PATH=/spc/spc2
export LIBPATH=/spc/spc2
export CLASSPATH=/spc/spc2
export PATH=/usr/java64/jre1.6.0_45/bin:$PATH

cd /spc/spc2
/spc/spc2/spc2 -f persistr.cfg -o persist2-spc2
```