SPC BENCHMARK 2™
FULL DISCLOSURE REPORT

HEWLETT-PACKARD COMPANY
HP P9500 XP DISK ARRAY

SPC-2™ V1.3

Submitted for Review: March 7, 2012
Submission Identifier: B00056

First Edition – March 2012

Trademarks

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Table of Contents

AUDIT CERTIFICATION

Chuck Paridon
Hewlett-Packard Company
8000 Foothills Blvd.
M/S 5785
Roseville, CA 95757-5785

March 6, 2012

The SPC Benchmark 2™ results listed below for the HP P9500 XP Disk Array produced in compliance with the SPC Benchmark 2™ V1.3 Onsite Audit requirements.

SPC Benchmark 2™ V1.3 Reported Data	
Tested Storage Product (TSP) Name: HP P9500 XP Disk Array	
Metric	**Reported Result**
SPC-2 MBPS™	13,147.87
SPC-2 Price-Performance	$88.34/SPC-2 MBPS™
ASU Capacity	129,11.985 GB
Data Protection Level	Protected *(RAID-5)*
Total Price (including three-year maintenance)	$1,161,503.90

The following SPC Benchmark 2™ Onsite Audit requirements were reviewed and found compliant with V1.3 of the SPC Benchmark 2™ specification:

- A Letter of Good Faith, signed by a senior executive.
- The following Data Repository storage items were verified by physical inspection and documentation supplied by Hewlett-Packard Company:
  - ✓ Physical Storage Capacity and related requirements.
  - ✓ Configured Storage Capacity and related requirements.
  - ✓ Addressable Storage Capacity and related requirements.
  - ✓ Capacity of each Logical Volume and related requirements.
  - ✓ Capacity of the Application Storage Unit (ASU) and related requirements.
- The Application Storage Unit (ASU) Capacity was filled with random data using Vdbench 5.03 prior to the execution of the SPC-2 Tests.
- An appropriate diagram of the Benchmark Configuration (BC)/Tested Storage Configuration (TSC).

Storage Performance Council
643 Bair Island Road, Suite 103
Redwood City, CA 94062
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650.556.9384

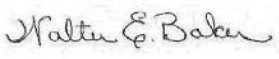
AUDIT CERTIFICATION *(CONT.)*

- Physical verification of the components to match the above diagram.
- Listings and commands used to create and configure the Benchmark Configuration/Tested Storage Configuration.
- Documentation that no customer tunable parameter or option was changed from its default value.
- The following Host System items were verified by physical inspection and documentation supplied by Hewlett-Packard Company:
  - ✓ Required Host System configuration information.
  - ✓ The TSC boundary within the Host System.
- The following SPC-2 Workload Generator information was verified by documentation supplied by Hewlett-Packard Company:
  - ✓ The presence and version number of the Workload Generator on each Host System.
  - ✓ Commands and parameters used to configure the SPC-2 Workload Generator.
- The execution of each Test, Test Phase, and Test Run was observed and found compliant with all of the requirements and constraints of Clauses 6 and 7 of the SPC-2 Benchmark Specification.
- The Test Results Files and resultant Summary Results Files received from Hewlett-Packard Company for each of the following were authentic, accurate, and compliant with all of the requirements and constraints of Clauses 6 and 7 of the SPC-2 Benchmark Specification:
  - ✓ Data Persistence Test
  - ✓ Large File Processing Test
  - ✓ Large Database Query Test
  - ✓ Video on Demand Delivery Test
- There were no differences between the Tested Storage Configuration and Priced Storage Configuration.
- The submitted pricing information met all of the requirements and constraints of Clause 9 of the SPC-2 Benchmark Specification.
- The Full Disclosure Report (FDR) met all of the requirements in Clause 10 of the SPC-2 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: January 12, 2012

From: Chuck Paridon, Solutions Performance Team; 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-2 Letter of Good Faith for the HP StorageWorks P9500 Disk Array

Hewlett-Packard is the SPC-2 Test Sponsor for the above listed product. To the best of our knowledge and belief, the required SPC-2 benchmark results and materials we have submitted for that product are complete, accurate, and in full compliance with V1.3 of the SPC-2 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-2 benchmark specification.

Signed: Neil B MacDonald

Neil MacDonald, Vice President, Data Center Development Unit, HP Storage

Date: 12/22/11

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. M/S 5785 Roseville, CA 95757-5785 Phone: (916) 785-5155 FAX: (916) 785-1648
Test Sponsor Alternate Contact	Hewlett-Packard Company – http://www.hp.com Mike Fuhrman – michael.fuhrman@hp.com M/S 5216 Roseville, CA 95757-5785 Phone: (916) 785-3167 FAX: (916) 785-1648
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-2 Specification revision number	V1.3
SPC-2 Workload Generator revision number	V1.0
Date Results were first used publicly	March 7, 2012
Date FDR was submitted to the SPC	March 7, 2012
Date the TSC will be available for shipment to customers	currently available
Date the TSC completed audit certification	March 6, 2012

Tested Storage Product (TSP) Description

The HP P9500 XP Disk Array 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 cannot afford any downtime, the P9500 combines a high-performance online scalable fully redundant hardware platform with unique data replication capabilities integrated with clustering solutions for complete business continuity.

The P9500 is the latest enterprise disk array product to come from HP's long-term, joint engineering and original equipment manufacturer relationship with Hitachi Limited of Japan.

SPC-2 Reported Data

SPC-2 Reported Data consists of three groups of information:

- The following SPC-2 Primary Metrics, which characterize the overall benchmark result:
  - SPC-2 MBPS™
  - SPC-2 Price Performance
  - Application Storage Unit (ASU) Capacity
- Supplemental data to the SPC-2 Primary Metrics.
  - Total Price
  - Data Protection Level
- Reported Data for each SPC Test: Large File Processing (LFP), Large Database Query (LDQ), and Video on Demand Delivery (VOD) Test.

SPC-2 Reported Data				
HP StorageWorks P9500 XP Disk Array				
SPC-2 MBPS™	**SPC-2 Price-Performance**	**ASU Capacity (GB)**	**Total Price**	**Data Protection Level**
13,147.87	$88.34	129,111.985	$1,161,503.90	Protected *(RAID-5)*
The above SPC-2 MBPS™ value represents the aggregate data rate of all three SPC-2 workloads: Large File Processing (LFP), Large Database Query (LDQ), and Video On Demand (VOD)				
SPC-2 Large File Processing (LFP) Reported Data				
	Data Rate *(MB/second)*	**Number of Streams**	**Data Rate per Stream**	**Price-Performance**
LFP Composite	10,664.91			$108.91
Write Only:				
1024 KiB Transfer	7,322.38	400	18.31	
256 KiB Transfer	7,317.11	400	18.29	
Read-Write:				
1024 KiB Transfer	9,977.15	400	24.94	
256 KiB Transfer	9,945.56	400	24.86	
Read Only:				
1024 KiB Transfer	14,489.20	400	36.22	
256 KiB Transfer	14,938.05	400	37.35	
The above SPC-2 Data Rate value for LFP Composite represents the aggregate performance of all three LFP Test Phases: (Write Only, Read-Write, and Read Only).				
SPC-2 Large Database Query (LDQ) Reported Data				
	Data Rate *(MB/second)*	**Number of Streams**	**Data Rate per Stream**	**Price-Performance**
LDQ Composite	14,622.89			$79.43
1024 KiB Transfer Size				
4 I/Os Outstanding	14,485.63	400	36.21	
1 I/O Outstanding	14,352.60	400	35.88	
64 KiB Transfer Size				
4 I/Os Outstanding	14,656.82	400	36.64	
1 I/O Outstanding	14,996.52	400	37.49	
The above SPC-2 Data Rate value for LDQ Composite represents the aggregate performance of the two LDQ Test Phases: (1024 KiB and 64 KiB Transfer Sizes).				
SPC-2 Video On Demand (VOD) Reported Data				
	Data Rate *(MB/second)*	**Number of Streams**	**Data Rate per Stream**	**Price-Performance**
	14,155.80	18,000	0.79	$82.05

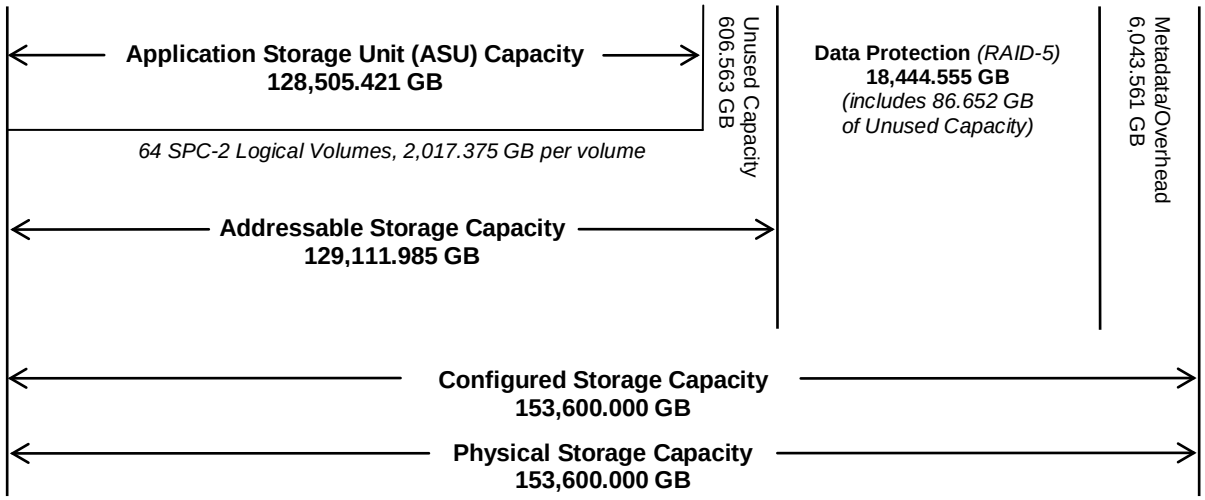
SPC-2 MBPS™ represents the aggregate data rate, in megabytes per second, of all three SPC-2 workloads: Large File Processing (LFP), Large Database Query (LDQ), and Video on Demand (VOD).

ASU *(Application Storage Unit)* **Capacity** represents the total storage capacity read and written in the course of executing the SPC-2 benchmark.

A **Data Protection Level** of **Protected** using ***RAID-5*** provides data protection by distributing check data corresponding to user data across multiple disks in the form of bit-by-bit parity.

Storage Capacities and Relationships

The following diagram *(not to scale)* 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.



SPC-1 Storage Capacity Utilization	
Application Utilization	83.66%
Protected Application Utilization	95.61%
Unused Storage Ratio	0.45%

Application Utilization: Total ASU Capacity *(128,505.421 GB)* divided by Physical Storage Capacity *(153,600.00 GB)*

Protected Application Utilization: Total ASU Capacity *(128,505.421 GB)* plus total Data Protection Capacity *(18,444.555 GB)* minus unused Data Protection Capacity *(86.652 GB)* divided by Physical Storage Capacity *(128,505.421 GB)*.

Unused Storage Ratio: Total Unused Capacity *(693.215 GB)* divided by Physical Storage Capacity *(128,505.421 GB)* and may not exceed 45%.

Detailed information for the various storage capacities and utilizations is available on pages 24-25 in the Full Disclosure Report.

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

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

Priced Storage Configuration Pricing

Qty	Part No.	Description	List Price	Ext. Price	Discount	Price
1	AV399A	HP P9500 Disk Array	$1.00	$1.00	50.00%	$0.50
1	AV400A	HP P9500 Disk Array DKC Module-0 Rack*	$117,894.00	$117,894.00	50.00%	$58,947.00
2	AV404A	HP P9500 3-phase 24A 60Hz w/Cords PDU	$1,850.00	$3,700.00	50.00%	$1,850.00
1	AV415A	HP P9500 60Hz DKC Jumper Cable Kit	$495.00	$495.00	50.00%	$247.50
2	AV416A	HP P9500 60Hz DKU Jumper Cable Kit	$495.00	$990.00	50.00%	$495.00
4	AV423A	HP P9500 16-port 2-8Gbps FC CHA	$19,083.00	$76,332.00	50.00%	$38,166.00
1	AV440A	HP P9500 Processor Blade	$30,333.00	$30,333.00	50.00%	$15,166.50
1	AV443A	HP P9500 2nd SVP High Reliability Kit	$8,731.00	$8,731.00	50.00%	$4,365.50
3	AV444A	HP P9500 Cache Memory Adapter	$62,187.00	$186,561.00	50.00%	$93,280.50
16	AV447A	HP P9500 16GB Cache Memory Module	$2,445.00	$39,120.00	50.00%	$19,560.00
4	AV451A	HP P9500 64GB Cache Backup Memory Module	$25,843.00	$103,372.00	50.00%	$51,686.00
2	AV455A	HP P9500 SAS DKA Drive Adapter	$12,323.00	$24,646.00	50.00%	$12,323.00
1	AV458A	HP P9500 Express Switch Adapter	$23,448.00	$23,448.00	50.00%	$11,724.00
1	AV413A	HP P9500 Drive Chassis SAS Switch Kit	$9,120.00	$9,120.00	50.00%	$4,560.00
1	AV414A	HP P9500 Drive Chassis Drive Power Kit	$2,116.00	$2,116.00	50.00%	$1,058.00
3	AV459A	HP P9500 Additional DKC-DKU Power Supply	$6,536.00	$19,608.00	50.00%	$9,804.00
1	AV462A	HP P9500 Perf 1st Drive Chassis Cable	$3,550.00	$3,550.00	50.00%	$1,775.00
1	AV463A	HP P9500 Standard Drive Chassis Cable	$7,000.00	$7,000.00	50.00%	$3,500.00
1	AV464A	HP P9500 Performance Drive Chassis Cable	$5,600.00	$5,600.00	50.00%	$2,800.00
256	AV474A	HP P9500 300GB SAS 10K 2.5in DP HDD	$948.00	$242,688.00	50.00%	$121,344.00
1	AV401A	HP P9500 Disk Array DKC Module-1 Rack*	$146,256.00	$146,256.00	50.00%	$73,128.00
2	AV404A	HP P9500 3-phase 24A 60Hz w/Cords PDU	$1,850.00	$3,700.00	50.00%	$1,850.00
1	AV415A	HP P9500 60Hz DKC Jumper Cable Kit	$495.00	$495.00	50.00%	$247.50
2	AV416A	HP P9500 60Hz DKU Jumper Cable Kit	$495.00	$990.00	50.00%	$495.00
4	AV424A	HP P9500 16-port 2-8Gbps FC CHA	$19,083.00	$76,332.00	50.00%	$38,166.00
1	AV440A	HP P9500 Processor Blade	$30,333.00	$30,333.00	50.00%	$15,166.50
1	AV442A	HP P9500 DKC Hub Kit	$13,196.00	$13,196.00	50.00%	$6,598.00
3	AV444A	HP P9500 Cache Memory Adapter	$62,187.00	$186,561.00	50.00%	$93,280.50
16	AV447A	HP P9500 16GB Cache Memory Module	$2,445.00	$39,120.00	50.00%	$19,560.00
4	AV451A	HP P9500 64GB Cache Backup Memory Module	$25,843.00	$103,372.00	50.00%	$51,686.00
2	AV455A	HP P9500 SAS DKA Drive Adapter	$12,323.00	$24,646.00	50.00%	$12,323.00
1	AV458A	HP P9500 Express Switch Adapter	$23,448.00	$23,448.00	50.00%	$11,724.00
1	AV413A	HP P9500 Drive Chassis SAS Switch Kit	$9,120.00	$9,120.00	50.00%	$4,560.00
1	AV414A	HP P9500 Drive Chassis Drive Power Kit	$2,116.00	$2,116.00	50.00%	$1,058.00
3	AV459A	HP P9500 Additional DKC-DKU Power Supply	$6,536.00	$19,608.00	50.00%	$9,804.00
1	AV460A	HP P9500 Inter-controller Cable	$7,600.00	$7,600.00	50.00%	$3,800.00
1	AV462A	HP P9500 Perf 1st Drive Chassis Cable	$3,550.00	$3,550.00	50.00%	$1,775.00
1	AV463A	HP P9500 Standard Drive Chassis Cable	$7,000.00	$7,000.00	50.00%	$3,500.00
1	AV464A	HP P9500 Performance Drive Chassis Cable	$5,600.00	$5,600.00	50.00%	$2,800.00
256	AV474A	HP P9500 300GB SAS 10K 2.5in DP HDD	$948.00	$242,688.00	50.00%	$121,344.00
1	AE242A	HP P9500/XP No Remote Device Access Supp	$1.00	$1.00	50.00%	$0.50
2	TB502A	HP P9000 Inter-Controller Cable LTU	$63,011.00	$126,022.00	50.00%	$63,011.00
1	TB514AA	HP P9000 Array Manager SW Base LTU	$309.00	$309.00	50.00%	$154.50
1	HA114A1	HP Installation and Startup Service			50.00%	$0.00
1	Opt. 55U	HP Startup P9000 Array DKC Mod-0 SVC	$19,250.00	$19,250.00	50.00%	$9,625.00
1	Opt. 55V	HP Startup P9000 Array DKC/DKU Exp SVC	$1,550.00	$1,550.00	50.00%	$775.00
8	Opt. 55W	HP Startup P9000 Array Expansion SVC	$775.00	$6,200.00	50.00%	$3,100.00
1	Opt. 5PK	HP Startup P9000 Software Type 1 SVC 0.00 1	$1,325.00	$1,325.00	50.00%	$662.50
116	TB514AE	HP P9000 Array Mgr SW 1TB 101-250TB LTU	$1,498.00	$173,768.00	50.00%	$86,884.00
1	HA110A3	HP 3y Support Plus 24 SVC	$0.00	$0.00	50.00%	$0.00
116	Opt. 2LG	P9000 Array Mgr 1TB 101-250TB LTU SWSupp	$397.00	$46,052.00	50.00%	$23,026.00
		Totals		***$2,225,513.00***	***50.00%***	***$1,112,756.50***
		Additional Hardware				
32	221692-B23	Storage Works LC/LC 15m Cable	$135.00	$4,320.00	35.00%	$2,808.00
32	456972-B21	HP BLc Emulex LPe1205 8Gb FC HBA Opt	$849.00	$27,168.00	35.00%	$17,659.20
4	AJ821A	Brocade HPB series 8/24c Blade SAN Switch	$9,285.00	$37,140.00	35.00%	$24,141.00
32	AJ716A	HP 8Gb Shortwave B-series FC SFP	$199.00	$6,368.00	35.00%	$4,139.20
		Grand Totals		***$2,300,509.00***		**$1,161,503.90**

The above pricing includes the following:

- Acknowledgement of new and existing hardware and/or software problems within four hours.
- Onsite presence of a qualified maintenance engineer or provision of a customer replaceable part within four hours of the above acknowledgement for any hardware failure that results in an inoperative Priced Storage Configuration component.

HP P9500 Disk Array DKC Module Enumerated Part List (*)

The HP P9500 Disk Array DKC Module, DKC-0 *(part number AV400A)*, consists of a DKC-0 Rack Assembly with:

- 19" 42U custom rack
- Controller Chassis
- Processor Blade
- Express Switch Adapter
- Cache Memory Adapter
- Service Process (SPV-0)
- One Drive Chassis equipped to support up to 128 drives
- One Drive Chassis without DKUPS, SSWs and HDDPWR
- Std Performance Device I/F cabling to first Disk Chassis

The HP P9500 Disk Array DKC Module, DKC-1 *(part number AV401A)*, consists of a DKC-1 Rack Assembly with:

- 19" 42U custom rack
- Controller Chassis
- Processor Blade
- Express Switch Adapter
- Cache Memory Adapter
- Hub kit
- One Drive Chassis equipped to support up to 128 drives
- One Drive Chassis without DKUPS, SSWs and HDDPWR
- Std Performance Device I/F cabling to first Disk Chassis
- Std Performance inter-controller cable to connect to the DKC Module-0 rack

DKC-0 and DKC-1 are independently configurable with HW. SW is configured at the system level *(DKC-0 and DKC-1 combined).*

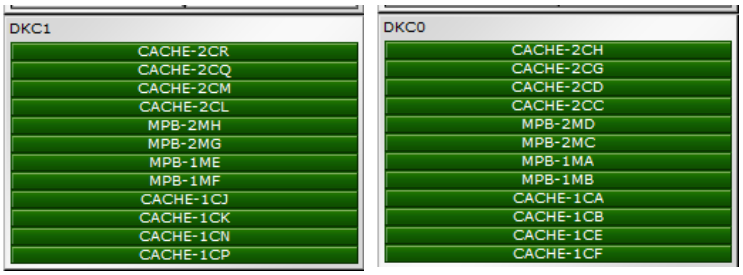
Priced Storage Configuration Diagram

HP P9500 Disk Array

4 – drive chassis *(2 base chassis plus 2 chassis)*
128 – 300 GB 10K RPM disk drives per chassis
(512 disk drives total)

front view

2 – HP P9500 Disk Array DKC Modules *(DKC-0 and DKC-1)*
32 – HP BLc Emulex dual-port 8 Gb FC HBAs *(64 ports total, 32 used)*
4 – Brocade HPB series 8/24c Blade SAN Switches
8 – HP P9500 Channel Host Adapters (CHA) pairs *(16 adapters total)*
(*16 – 8 Gbps ports per adapter, 256 ports total, 32 ports used)*
4 – HP P9500 SAS Drive Adapters (DKA) pairs *(8 adapters total)*



rear view

4 – HP P9500 Processor Blade (MPB) pairs *(8 blades total)*
(*1 – quad-core processor per blade, 32 cores total)*
8 – HP P9500 Cache Memory Adapter pairs *(16 adapters total)*
(2 cache modules per adapter, 32 modules total,
16 GB per module, 512 GB total)

Priced Storage Configuration Components

Priced Storage Configuration:
32 – dual port 8 Gb FC HBAs *(64 ports total, 32 ports used)*
32 – 8 Gb Shortwave FC SFPs
4 –Brocade 24 Port, 8 Gb zoned Blade Enclosure switches
HP P9500 Disk Array 8 – HP P9500 Processor Blade (MPB) pairs *(8 blades total, 1 – quad-core processor per blade, 32 cores total)* 8 – HP9500 Cache Memory Adapter pairs *(16 adapters total) (2 cache modules per adapter, 32 modules total, 16 GB per module, 512 GB total)* 2 – HP P9500 Disk Array DKC Modules *(DKC-0 and DKC-1) (**enumerated parts list**)*
8 – HP P9500 16-port 8 Gbps FC Channel Host Adapters (CHA) pairs *(16 adapters total, 16 – 8 Gbps ports per adapter, 256 ports total, 32 ports used)*
4 – HP P9500 SAS Drive Adapter (DKA) pairs *(8 adapters total) (8 – 8 Gbps FC-over-Copper connections per adapter, 64 total connections, 32 connections used)*
8 – HP P9500 64 GB Cache Backup Memory Modules *(512 GB total)*
512 – 300 GB 10K RPM disk drives *(128 disk drives per disk chassis)*

CONFIGURATION INFORMATION

This portion of the Full Disclosure Report documents and illustrates the detailed information necessary to recreate the Benchmark Configuration (BC), including the Tested Storage Configuration (TSC), so that the SPC-2 benchmark result produced by the BC may be independently reproduced.

In each of the following sections of this document, the appropriate Full Disclosure Report requirement, from the SPC-2 benchmark specification, is stated in italics followed by the information to fulfill the stated requirement.

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

Clause 10.6.6

The FDR will contain a one page BC/TSC diagram that illustrates all major components of the BC/TSC.

The Benchmark Configuration (BC)/Tested Storage Configuration (TSC) is illustrated on page 21.

Storage Network Configuration

Clause 10.6.6.1

If a storage network was configured as a part of the Tested Storage Configuration and the Benchmark Configuration described in Clause 10.6.6 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 10.11.

The Benchmark Configuration (BC)/Tested Storage Configuration (TSC) storage network configuration information is included on page 21.

Host System and Tested Storage Configuration Table

Clause 10.6.6.2

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

The components that comprise each Host System and the Tested Storage Configuration are listed in the table that appears on page 22.

Benchmark Configuration/Tested Storage Configuration Diagram

HP P9500 Disk Array

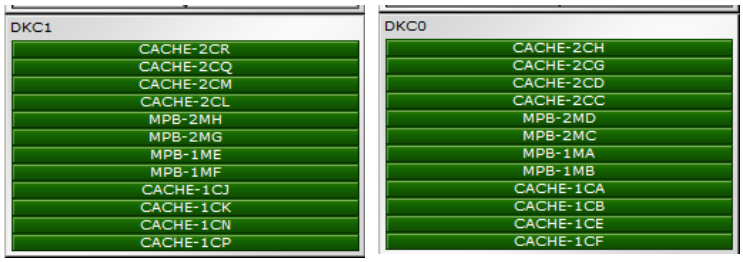
4 – drive chassis *(2 base chassis plus 2 chassis)*
128 – 300 GB 10K RPM disk drives per chassis
(512 disk drives total)

front view

32 – 8 Gbps Fibre connections
(32 HBA ports , 1 per HBA **to** *32 switch ports, 8 per switch* **to** *32 Channel Host Adapter ports, 4 per adapter)*

HP Blade System c7000 Enclosure
16 – HP ProLiant BL 460c G7 Servers

2 – HP P9500 Disk Array DKC Modules *(DKC-0 and DKC-1)*
32 – HP BLc Emulex dual-port 8 Gb FC HBAs *(64 ports total, 32 used)*
4 – Brocade HPB series 8/24c Blade SAN Switches
8 – HP P9500 Channel Host Adapters (CHA) pairs *(16 adapters total)*
(16 – 8 Gbps ports per adapter, 256 ports total, 32 ports used)
4 – HP P9500 SAS Drive Adapters (DKA) pairs *(8 adapters total)*



rear view

4 – HP P9500 Processor Blade (MPB) pairs *(8 blades total)*
(1 – quad-core processor per blade, 32 cores total)
8 – HP P9500 Cache Memory Adapter pairs *(16 adapters total)*
(2 cache modules per adapter, 32 modules total, 16 GB per module, 512 GB total)

Host System and Tested Storage Configuration Components

Host Systems:	Tested Storage Configuration (TSC)
1 – HP BladeSystem c7000 Enclosure	32 – dual port 8 Gb FC HBAs *(64 ports total, 32 ports used)*
16 – HP ProLiant BL460c G7 Servers Each server included: 2 – Intel® Xeon® E5645 2.4 GHz six core processors with 12 MB of Intel Smart Cache per processor 95.9 GB main memory Microsoft Windows Server 2003 R2 Enterprise x64 w/SP2	32 – 8 Gb Shortwave FC SFPs
	4 –Brocade 24 Port, 8 Gb Blade Enclosure switches
	HP P9500 Disk Array 8 – HP P9500 Processor Blade (MPB) pairs *(8 blades total,* *1 – quad-core processor per blade, 32 cores total)* 8 – HP9500 Cache Memory Adapter pairs *(16 adapters total)* *(2 cache modules per adapter, 32 modules total,* *16 GB per module, 512 GB total)* 2 – HP P9500 Disk Array DKC Modules *(DKC-0 and DKC-1) (**enumerated parts list**)*
	8 – HP P9500 16-port 8 Gbps FC Channel Host Adapters (CHA) pairs *(16 adapters total,* *16 – 8 Gbps ports per adapter,* *256 ports total, 32 ports used)*
	4 – HP P9500 SAS Drive Adapter (DKA) pairs *(8 adapters total)* *(8 – 8 Gbps FC-over-Copper connections per adapter,* *64 total connections, 32 connections used)*
	8 – HP P9500 64 GB Cache Backup Memory Modules *(512 GB total)*
	512 – 300 GB 10K RPM disk drives *(128 disk drives per disk chassis)*

Customer Tunable Parameters and Options

Clause 10.6.6.1

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 99 contains the customer tunable parameters and options that have been altered from their default values for this benchmark.

Tested Storage Configuration (TSC) Description

Clause 10.6.6.2

The Full Disclosure Report must include sufficient information to recreate the logical representation of the Tested Storage Configuration (TSC). In addition to customer tunable parameters and options (Clause10.6.6.1), 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 10.6.5.7 and the Storage Network Configuration Diagram in Clause 10.6.5.8.*
  - *The logical representation of the TSC, configured from the above components that will be presented to the SPC-2 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 100 contains the detailed information that describes how to create and configure the logical TSC.

SPC-2 Workload Generator Storage Configuration

Clause 10.6.6.3

The Full Disclosure Report will include all SPC-2 Workload Generator storage configuration commands and parameters used in the SPC-2 benchmark measurement.

The SPC-2 Workload Generator storage configuration commands and parameters for this measurement appear in "Appendix D: SPC-2 Workload Generator Storage Commands and Parameters" on page 113.

SPC-2 DATA REPOSITORY

This portion of the Full Disclosure Report presents the detailed information that fully documents the various SPC-2 storage capacities and mappings used in the Tested Storage Configuration. "SPC-2 Data Repository Definitions" on page 94 contains definitions of terms specific to the SPC-2 Data Repository.

In each of the following sections of this document, the appropriate Full Disclosure Report requirement, from the SPC-2 benchmark specification, is stated in italics followed by the information to fulfill the stated requirement.

SPC-2 Storage Capacities and Relationships

Two tables and an illustration documenting the storage capacities and relationships of the SPC-2 Storage Hierarchy (Clause 2.1) shall be included in the FDR.

SPC-2 Storage Capacities

SPC-2 Storage Capacities		
Storage Hierarchy Component	**Units**	**Capacity**
Total ASU Capacity	Gigabytes (GB)	128,505.421
Addressable Storage Capacity	Gigabytes (GB)	129,111.985
Configured Storage Capacity	Gigabytes (GB)	153,600.000
Physical Storage Capacity	Gigabytes (GB)	153,600.000
Data Protection *(RAID-5)*	Gigabytes (GB)	18,444.555
Required Storage *(metadata/overhead)*	Gigabytes (GB)	6,043.561
Global Storage Overhead	Gigabytes (GB)	0.000
Total Unused Storage	Gigabytes (GB)	693.215

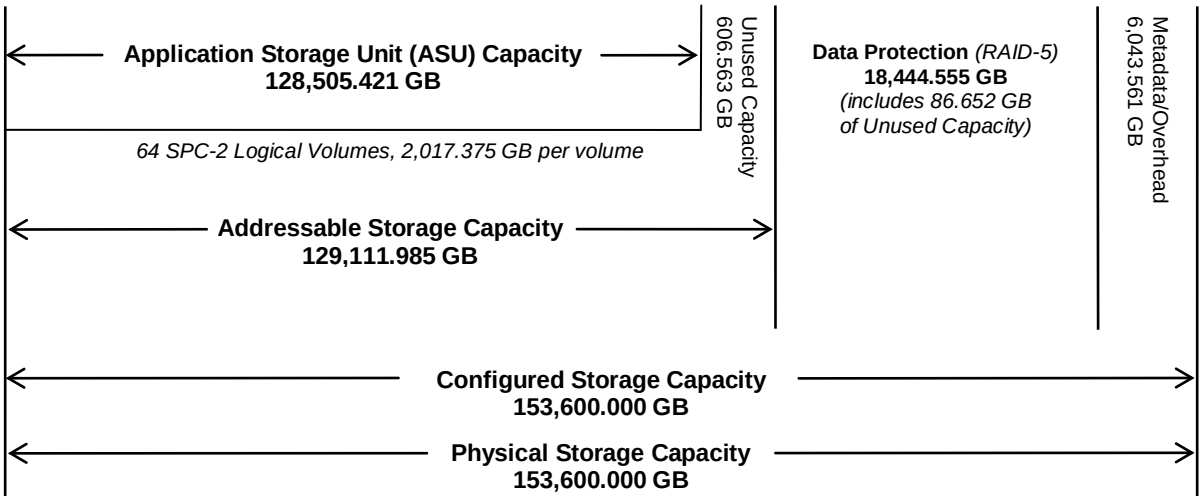
SPC-2 Storage Hierarchy Ratios

	Addressable Storage Capacity	Configured Storage Capacity	Physical Storage Capacity
Total ASU Capacity	99.53%	83.66%	83.66%
Data Protection *(RAID-5)*		12.01%	12.01%
Addressable Storage Capacity		84.06%	84.06%
Required Storage *(metadata/overhead)*		3.93%	3.93%
Configured Storage Capacity			100.00%
Global Storage Overhead			0.00%
Unused Storage:			
Addressable	0.47%		
Configured		0.00%	
Physical			0.00%

The Physical Storage Capacity consisted of 153,600.00 GB distributed over 512 disk drives each with a formatted capacity of 300.00 GB. There was 0.00 GB (0.00%) of Unused Storage within the Physical Storage Capacity. Global Storage Overhead consisted of 0.000 GB (0.00%) of the Physical Storage Capacity. There was 0.000 GB (0.00%) of Unused Storage within the Configured Storage Capacity. The Total ASU Capacity utilized 99.53% of the Addressable Storage Capacity resulting in 606.563 GB (0.47%) of Unused Storage within the Addressable Storage Capacity. The Data Protection *(RAID-5)* capacity was 18,444.555 GB of which 18,357.903 GB was utilized. The total Unused Storage was 693.215 GB.

SPC-2 Storage Capacities and Relationships Illustration

The various storage capacities configured in the benchmark result are illustrated below (*not to scale)*.



Storage Capacity Utilization

Clause 10.6.8.2

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	83.66%
Protected Application Utilization	95.61%
Unused Storage Ratio	0.45%

Logical Volume Capacity and ASU Mapping

Clause 10.6.7.2

A table illustrating the capacity of the Application Storage Unit (ASU) and the mapping of Logical Volumes to ASU will be provided in the FDR. Capacity must be stated in gigabytes (GB) as a value with a minimum of two digits to the right of the decimal point. Each Logical Volume will be sequenced in the table from top to bottom per its position in the contiguous address space of the ASU. Each Logical Volume entry will list its total capacity, the portion of that capacity used for the ASU, and any unused capacity.

Logical Volume (LV) Capacity and Mapping			
ASU (128,505.421 GB)			
	Total Capacity *(GB)*	Capacity Used *(GB)*	Capacity Unused *(GB)*
Logical Volumes 1-64	2,017.375 per LV	2,007.897 per LV	9.478 per LV

See the Storage Definition (sd) entries in "Appendix D: SPC-2 Workload Generator Storage Commands and Parameters" on page 113 for more detailed configuration information.

SPC-2 TEST EXECUTION RESULTS

This portion of the Full Disclosure Report documents the results of the various SPC-2 Test, Test Phases, Test Run Sequences, and Test Runs. "SPC-2 Test Execution Definitions" on page 95 contains definitions of terms specific to the SPC-2 Data Repository.

In each of the following sections of this document, the appropriate Full Disclosure Report requirement, from the SPC-2 benchmark specification, is stated in italics followed by the information to fulfill the stated requirement.

SPC-2 Tests, Test Phases, Test Run Sequences, and Test Runs

The SPC-2 benchmark consists of the following Tests, Test Phases, Test Run Sequences, and Test Runs:

- **Data Persistence Test**
  - Data Persistence Test Run 1
  - Data Persistence Test Run 2
- **Large File Processing Test**
  - WRITE ONLY Test Phase
    - Test Run Sequence 1
      - ✓ Test Run 1 – 1024 KiB Transfer – maximum number of Streams
      - ✓ Test Run 2 – 1024 KiB Transfer – 50% of Test Run 1's Streams value
      - ✓ Test Run 3 – 1024 KiB Transfer – 25% of Test Run 1's Streams value
      - ✓ Test Run 4 – 1024 KiB Transfer – 12.5% of Test Run 1's Streams value
      - ✓ Test Run 5 – 1024 KiB Transfer – single (1) Stream
    - Test Run Sequence 2
      - ✓ Test Run 6 – 256 KiB Transfer – maximum number of Streams
      - ✓ Test Run 7 – 256 KiB Transfer – 50% of Test Run 6's Streams value
      - ✓ Test Run 8 – 256 KiB Transfer – 25% of Test Run 6's Streams value
      - ✓ Test Run 9 – 256 KiB Transfer – 12.5% of Test Run 6's Streams value
      - ✓ Test Run 10 – 256 KiB Transfer – single (1) Stream
  - READ-WRITE Test Phase
    - Test Run Sequence 3
      - ✓ Test Run 11 – 1024 KiB Transfer – maximum number of Streams
      - ✓ Test Run 12 – 1024 KiB Transfer – 50% of Test Run 11's Streams value
      - ✓ Test Run 13 – 1024 KiB Transfer – 25% of Test Run 11's Streams value
      - ✓ Test Run 14 – 1024 KiB Transfer – 12.5% of Test Run 11's Streams value
      - ✓ Test Run 15 – 1024 KiB Transfer – single (1) Stream
    - Test Run Sequence 4
      - ✓ Test Run 16 – 256 KiB Transfer – maximum number of Streams
      - ✓ Test Run 17 – 256 KiB Transfer – 50% of Test Run 16's Streams value
      - ✓ Test Run 18 – 256 KiB Transfer – 25% of Test Run 16's Streams value
      - ✓ Test Run 19 – 256 KiB Transfer – 12.5% of Test Run 16's Streams value
      - ✓ Test Run 20 – 256 KiB Transfer – single (1) Stream

- **Large File Processing Test *(continued)***
  - READ ONLY Test Phase
    - Test Run Sequence 5
      - ✓ Test Run 21 – 1024 KiB Transfer – maximum number of Streams
      - ✓ Test Run 22 – 1024 KiB Transfer – 50% of Test Run 21's Streams value
      - ✓ Test Run 23 – 1024 KiB Transfer – 25% of Test Run 21's Streams value
      - ✓ Test Run 24 – 1024 KiB Transfer – 12.5% of Test Run 21's Streams value
      - ✓ Test Run 25 – 1024 KiB Transfer – single (1) Stream
    - Test Run Sequence 6
      - ✓ Test Run 26 – 256 KiB Transfer – maximum number of Streams
      - ✓ Test Run 27 – 256 KiB Transfer – 50% of Test Run 26's Streams value
      - ✓ Test Run 28 – 256 KiB Transfer – 25% of Test Run 26's Streams value
      - ✓ Test Run 29 – 256 KiB Transfer – 12.5% of Test Run 26's Streams value
      - ✓ Test Run 30 – 256 KiB Transfer – single (1) Stream

- **Large Database Query Test**
  - 1024 KIB TRANSFER SIZE Test Phase
    - Test Run Sequence 1
      - ✓ Test Run 1 – 4 I/O Requests Outstanding – maximum number of Streams
      - ✓ Test Run 2 – 4 I/O Requests Outstanding – 50% of Test Run 1's Streams value
      - ✓ Test Run 3 – 4 I/O Requests Outstanding – 25% of Test Run 1's Streams value
      - ✓ Test Run 4 – 4 I/O Requests Outstanding – 12.5% of Test Run 1's Streams value
      - ✓ Test Run 5 – 4 I/O Requests Outstanding – single (1) Stream
    - Test Run Sequence 2
      - ✓ Test Run 6 – 1 I/O Request Outstanding – maximum number of Streams
      - ✓ Test Run 7 – 1 I/O Request Outstanding – 50% of Test Run 6's Streams value
      - ✓ Test Run 8 – 1 I/O Request Outstanding – 25% of Test Run 6's Streams value
      - ✓ Test Run 9 – 1 I/O Request Outstanding – 12.5% of Test Run 6's Streams value
      - ✓ Test Run 10 – 1 I/O Request Outstanding – single (1) Stream
  - 64 KIB TRANSFER SIZE Test Phase
    - Test Run Sequence 3
      - ✓ Test Run 11 – 4 I/O Requests Outstanding – maximum number of Streams
      - ✓ Test Run 12 – 4 I/O Requests Outstanding – 50% of Test Run 11's Streams value
      - ✓ Test Run 13 – 4 I/O Requests Outstanding – 25% of Test Run 11's Streams value
      - ✓ Test Run 14 – 4 I/O Requests Outstanding – 12.5% of Test Run 11's Streams value
      - ✓ Test Run 15 – 4 I/O Requests Outstanding – single (1) Stream
    - Test Run Sequence 4
      - ✓ Test Run 16 – 1 I/O Request Outstanding – maximum number of Streams
      - ✓ Test Run 17 – 1 I/O Request Outstanding – 50% of Test Run 16's Streams value
      - ✓ Test Run 18 – 1 I/O Request Outstanding – 25% of Test Run 16's Streams value
      - ✓ Test Run 19 – 1 I/O Request Outstanding – 12.5% of Test Run 16's Streams value
      - ✓ Test Run 20 – 1 I/O Request Outstanding – single (1) Stream

- **Video on Demand Delivery Test**
  - Video on Demand Delivery Test Run

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 Tests may be executed in any sequence.

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

Large File Processing Test

Clause 6.4.2.1

The Large File Processing Test consists of the I/O operations associated with the type of applications, in a wide range of fields, which require simple sequential processing of one or more large files. Specific examples of those types of applications include scientific computing and large-scale financial processing

Clause 6.4.2.2

The Large File Processing Test has three Test Phases, which shall be executed in the following uninterrupted sequence:

1. *WRITE ONLY*
2. *READ-WRITE*
3. *READ ONLY*

The BC shall not be restarted or manually disturbed, altered, or adjusted during the execution of the Large File Processing Test. If power is lost to the BC during this Test all results shall be rendered invalid and the Test re-run in its entirety.

Clause 10.6.8.1

The Full Disclosure Report will contain the following content for the Large File Processing Test:

1. *A listing of the SPC-2 Workload Generator commands and parameters used to execute each of the Test Runs in the Large File Processing Test.*
2. *The human readable SPC-2 Test Results File for each of the Test Runs in the Large File Processing Test.*
3. *A table that contains the following information for each Test Run in all three Test Phases of the Large File Processing Test:*
    - *The number Streams specified.*
    - *The Ramp-Up duration in seconds.*
    - *The Measurement Interval duration in seconds.*
    - *The average data rate, in MB per second, for the Measurement Interval.*
    - *The average data rate, in MB per second, per Stream for the Measurement Interval.*
4. *Average Data Rate and Average Data Rate per Stream graphs as defined in Clauses 10.1.1 and 10.1.2.*

SPC-2 Workload Generator Commands and Parameters

The SPC-2 Workload Generator commands and parameters for the Large File Processing Test Runs are documented in "Appendix E: SPC-2 Workload Generator Execution Commands and Parameters" on Page 138.

SPC-2 Test Results File

A link to the SPC-2 Test Results file generated from the Large File Processing Test Runs is listed below.

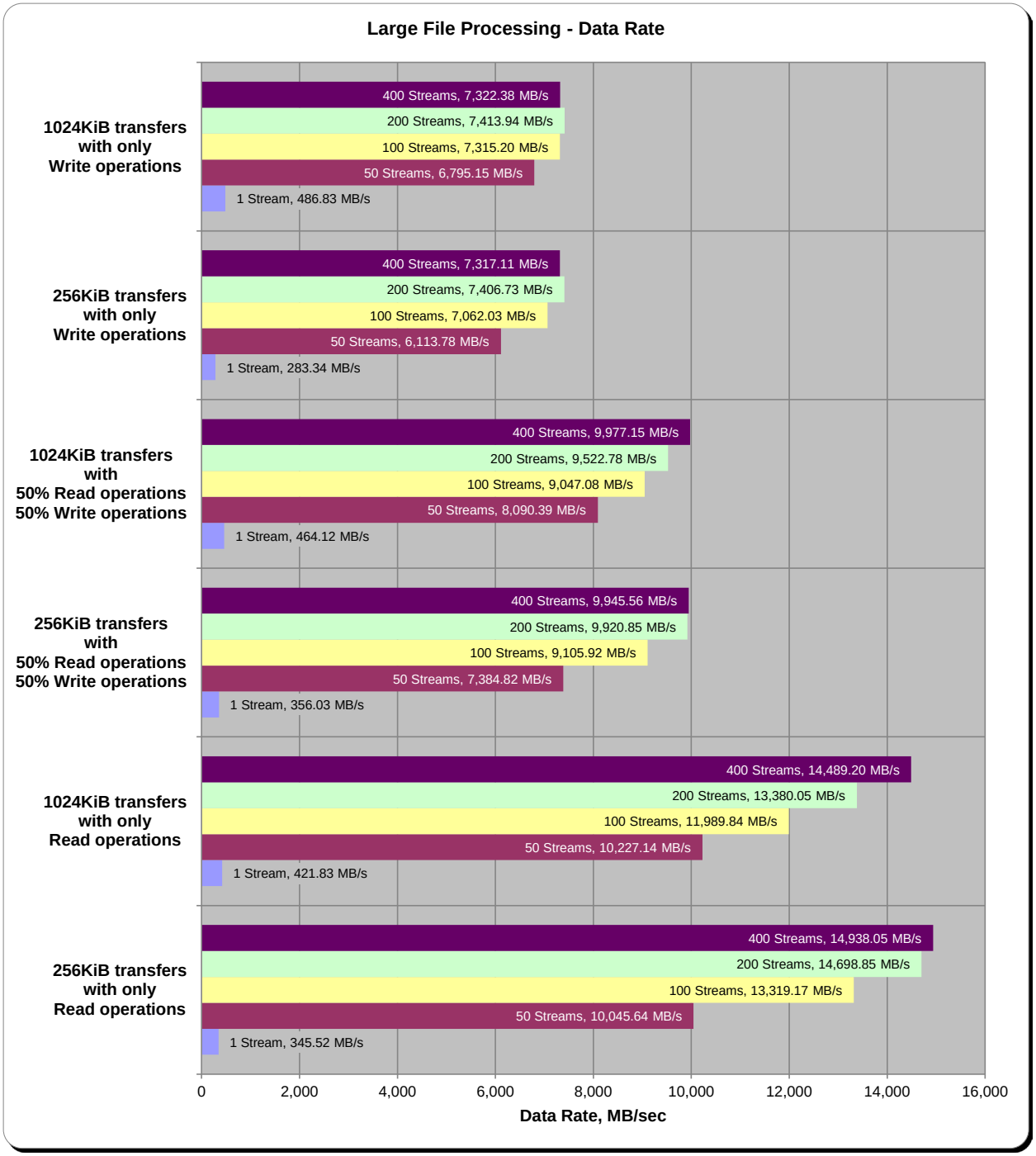
SPC-2 Large File Processing Test Results File

SPC-2 Large File Processing Average Data Rates (MB/s)

The average Data Rate (MB/s) for each Test Run in the three Test Phases of the SPC-2 Large File Processing Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
Write 1024KiB	486.83	6,795.15	7,315.20	7,413.94	7,322.38
Write 256KiB	283.34	6,113.78	7,062.03	7,406.73	7,317.11
Read/Write 1024KiB	464.12	8,090.39	9,047.08	9,522.78	9,977.15
Read/Write 256KiB	356.03	7,384.82	9,105.92	9,920.85	9,945.56
Read 1024KiB	421.83	10,227.14	11,989.84	13,380.05	14,489.20
Read 256KiB	345.52	10,045.64	13,319.17	14,698.85	14,938.05

SPC-2 Large File Processing Average Data Rates Graph

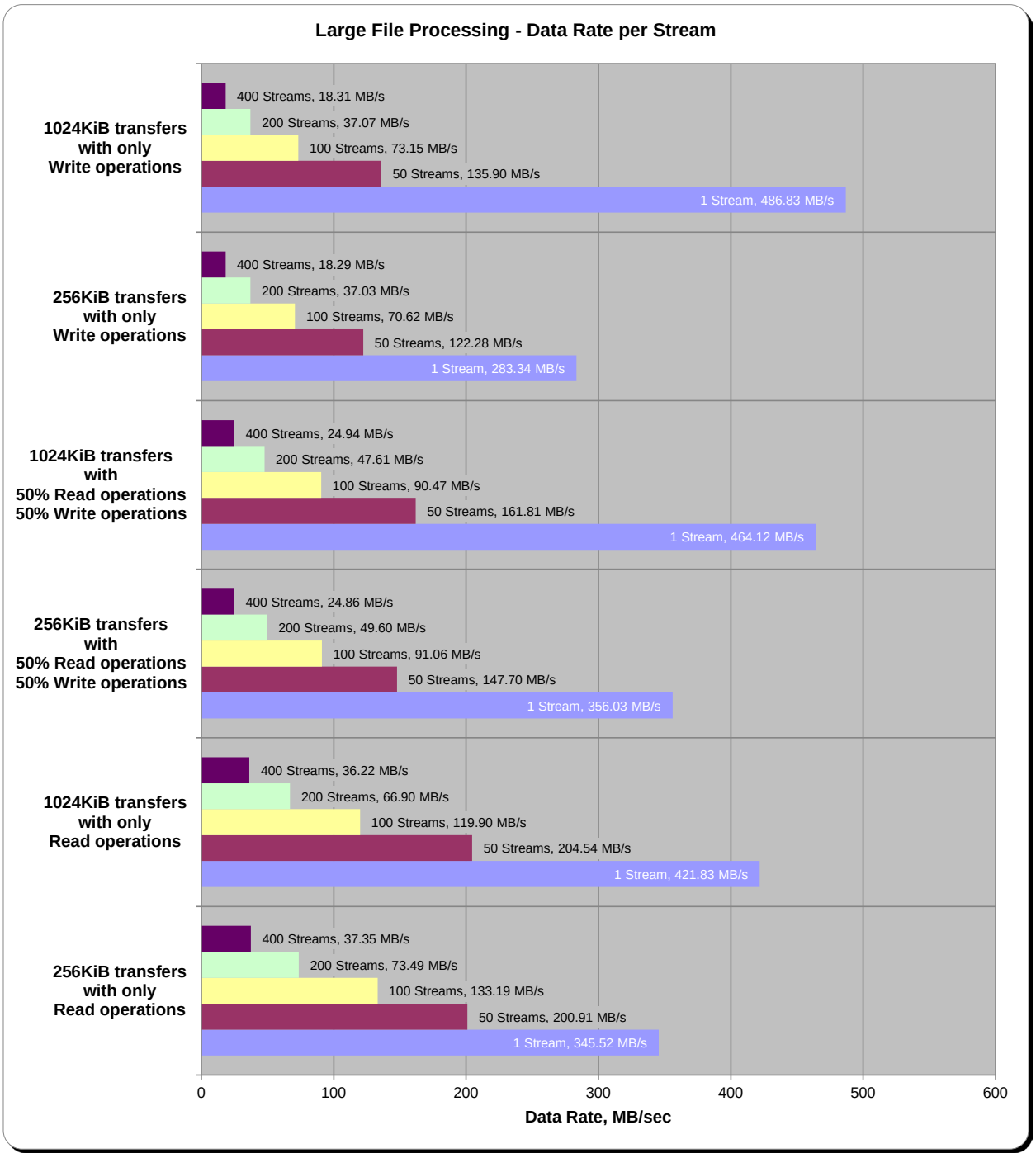


SPC-2 Large File Processing Average Data Rate per Stream

The average Data Rate per Stream for each Test Run in the three Test Phases of the SPC-2 Large File Processing Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
Write 1024KiB	486.83	135.90	73.15	37.07	18.31
Write 256KiB	283.34	122.28	70.62	37.03	18.29
Read/Write 1024KiB	464.12	161.81	90.47	47.61	24.94
Read/Write 256KiB	356.03	147.70	91.06	49.60	24.86
Read 1024KiB	421.83	204.54	119.90	66.90	36.22
Read 256KiB	345.52	200.91	133.19	73.49	37.35

SPC-2 Large File Processing Average Data Rate per Stream Graph

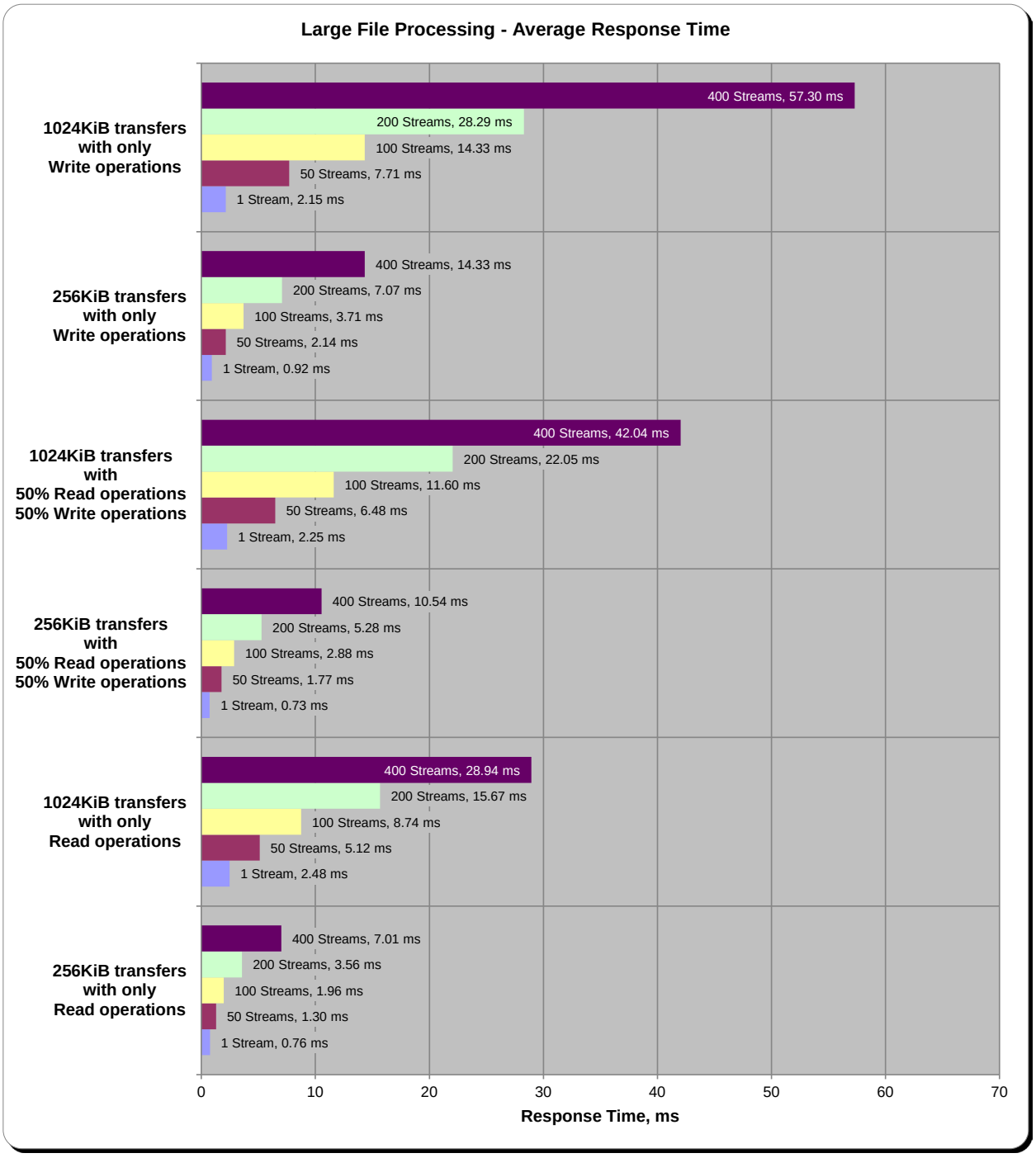


SPC-2 Large File Processing Average Response Time

The average Response Time, milliseconds (ms), for each Test Run in the three Test Phases of the SPC-2 Large File Processing Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
Write 1024KiB	2.15	7.71	14.33	28.29	57.30
Write 256KiB	0.92	2.14	3.71	7.07	14.33
Read/Write 1024KiB	2.25	6.48	11.60	22.05	42.04
Read/Write 256KiB	0.73	1.77	2.88	5.28	10.54
Read 1024KiB	2.48	5.12	8.74	15.67	28.94
Read 256KiB	0.76	1.30	1.96	3.56	7.01

SPC-2 Large File Processing Average Response Time Graph



Large File Processing Test – WRITE ONLY Test Phase

Clause 10.6.8.1.1

1. *A table that will contain the following information for each "WRITE ONLY, 1024 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
2. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "WRITE ONLY, 1024 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*
3. *A table that will contain the following information for each "WRITE ONLY, 256 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
4. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "WRITE ONLY, 256 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*

The SPC-2 "Large File Processing/WRITE ONLY/1024 KiB Transfer Size" Test Run data is contained in the table that appears on the next page. That table is followed by graphs illustrating the average Data Rate, average Data Rate per Stream, and average Response Time produced by the same Test Runs. The table and graphs present the data at five-second intervals.

Immediately following the SPC-2 "Large File Processing/WRITE ONLY/1024 KiB Transfer Size" table and graphs will be the SPC-2 "Large File Processing/WRITE ONLY/64 KiB Transfer Size" table and graphs. The table contains the Test Run data and the graphs illustrate the average Data Rate, average Data Rate per Stream, and average Response Time produced by the Test Runs.

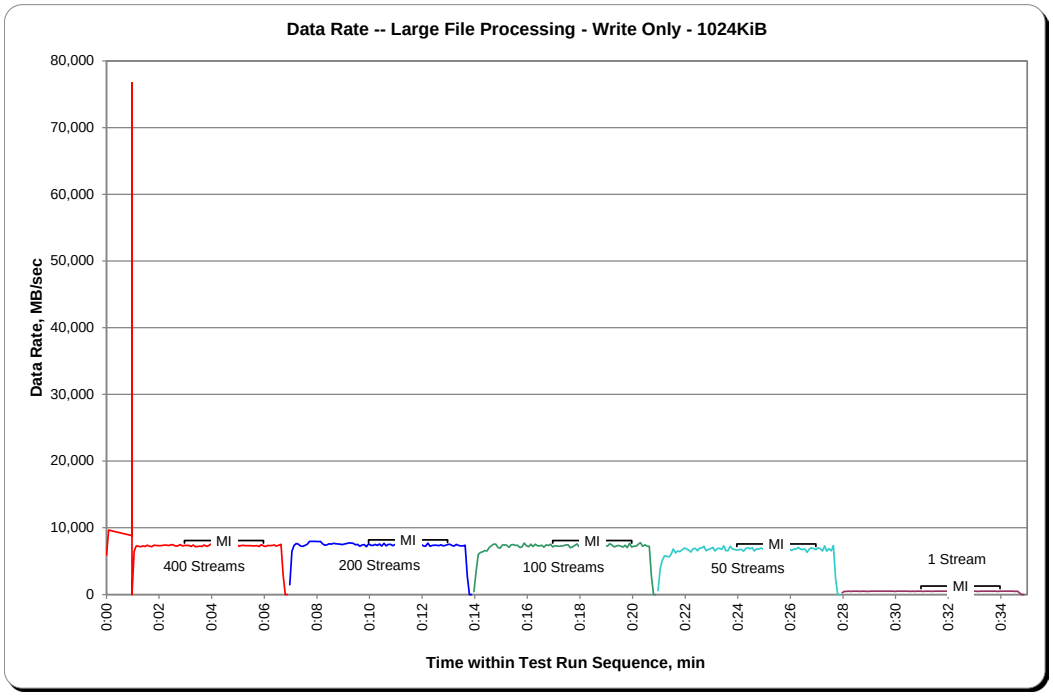
SPC-2 "Large File Processing/WRITE ONLY/1024 KiB Transfer Size" Test Run Data – Ramp-Up Period

TR1	400 Streams			TR2	200 Streams			TR3	100 Streams			TR4	50 Streams			TR5	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	5,905.16	120.51	4.15	0:06:58	1,455.84	132.35	2.82	0:13:58	445.44	111.36	2.96	0:20:58	583.64	97.27	2.74	0:27:58	278.50	278.50	2.24
0:00:05	9,647.53	117.65	7.45	0:07:03	6,487.75	240.29	3.47	0:14:03	3,386.69	225.78	2.73	0:21:03	3,907.41	355.22	2.60	0:28:03	477.94	477.94	2.19
0:00:58	8,820.83	77.38	11.44	0:07:08	7,362.47	156.65	4.89	0:14:08	5,973.32	259.71	3.14	0:21:08	5,160.67	322.54	2.92	0:28:08	474.17	474.17	2.21
0:00:58	76,730.81	229.05	31.58	0:07:13	7,630.91	121.13	7.69	0:14:13	6,300.05	203.23	4.37	0:21:13	5,789.61	275.70	3.26	0:28:13	485.28	485.28	2.16
0:00:59	1.68	0.01	44.29	0:07:18	7,558.56	96.90	9.87	0:14:18	6,380.79	177.24	5.46	0:21:18	5,732.77	249.25	4.02	0:28:18	482.76	482.76	2.17
0:01:03	6,471.81	18.76	49.48	0:07:23	7,265.58	81.64	11.88	0:14:23	6,599.32	146.65	6.42	0:21:23	5,611.56	207.84	4.59	0:28:23	484.86	484.86	2.16
0:01:08	7,307.95	20.41	50.75	0:07:28	7,236.43	70.26	13.65	0:14:28	6,510.82	120.57	7.87	0:21:28	6,037.07	194.74	4.89	0:28:28	490.94	490.94	2.13
0:01:13	7,221.12	19.57	52.69	0:07:33	7,341.50	64.40	15.45	0:14:33	7,063.00	117.72	8.63	0:21:33	6,812.60	212.89	4.88	0:28:33	486.33	486.33	2.15
0:01:18	7,178.97	18.74	54.08	0:07:38	7,550.80	59.93	16.65	0:14:38	7,282.15	107.09	9.13	0:21:38	6,240.29	183.54	5.54	0:28:38	482.55	482.55	2.17
0:01:23	7,282.78	18.44	56.69	0:07:43	7,972.74	60.86	16.69	0:14:43	7,542.41	104.76	9.79	0:21:43	6,510.61	166.94	5.91	0:28:43	487.17	487.17	2.15
0:01:28	7,186.52	17.97	57.19	0:07:48	7,971.69	53.50	18.25	0:14:48	7,545.55	103.36	10.11	0:21:48	6,440.35	157.08	6.65	0:28:48	488.43	488.43	2.14
0:01:33	7,402.32	18.51	57.79	0:07:53	7,956.18	49.73	20.47	0:14:53	7,070.13	91.82	11.09	0:21:53	6,670.41	155.13	6.52	0:28:53	476.26	476.26	2.20
0:01:38	7,254.05	18.14	57.15	0:07:58	7,976.31	48.34	21.41	0:14:58	6,951.85	86.90	11.87	0:21:58	6,972.82	158.47	6.46	0:28:58	482.14	482.14	2.17
0:01:43	7,171.42	17.93	57.84	0:08:03	7,921.57	45.79	22.45	0:15:03	7,423.08	90.53	11.38	0:22:03	6,833.78	151.86	6.80	0:29:03	487.80	487.80	2.14
0:01:48	7,387.43	18.47	57.79	0:08:08	7,964.77	44.50	23.26	0:15:08	7,464.39	82.94	12.10	0:22:08	6,644.20	141.37	7.19	0:29:08	486.96	486.96	2.15
0:01:53	7,354.92	18.39	56.07	0:08:13	7,604.69	41.11	24.91	0:15:13	7,380.51	80.22	12.85	0:22:13	6,374.50	127.49	7.86	0:29:13	485.28	485.28	2.16
0:01:58	7,335.21	18.34	58.02	0:08:18	7,383.65	38.66	26.48	0:15:18	7,082.50	74.55	13.77	0:22:18	6,851.61	137.03	7.66	0:29:18	485.28	485.28	2.16
0:02:03	7,317.59	18.29	56.43	0:08:23	7,467.54	37.91	27.33	0:15:23	7,436.50	75.12	13.73	0:22:23	6,923.75	138.47	7.58	0:29:23	486.54	486.54	2.15
0:02:08	7,346.11	18.37	57.63	0:08:28	7,604.27	38.02	27.59	0:15:28	7,483.06	74.83	13.96	0:22:28	6,564.92	131.30	7.97	0:29:28	485.49	485.49	2.15
0:02:13	7,409.45	18.52	56.50	0:08:33	7,547.44	37.74	27.80	0:15:33	7,369.39	73.69	14.21	0:22:33	6,927.31	138.55	7.56	0:29:33	487.80	487.80	2.15
0:02:18	7,383.02	18.46	56.91	0:08:38	7,662.36	38.31	27.24	0:15:38	7,387.01	73.87	14.18	0:22:38	6,959.19	139.18	7.52	0:29:38	484.44	484.44	2.16
0:02:23	7,358.70	18.40	58.15	0:08:43	7,627.34	38.14	27.64	0:15:43	7,022.73	70.23	14.97	0:22:43	7,224.90	144.50	7.28	0:29:43	488.64	488.64	2.14
0:02:28	7,472.15	18.68	55.91	0:08:48	7,587.29	37.94	27.67	0:15:48	7,158.00	71.58	14.69	0:22:48	6,548.15	130.96	7.97	0:29:48	488.43	488.43	2.14
0:02:33	7,418.47	18.55	56.06	0:08:53	7,557.09	37.79	27.72	0:15:53	7,700.11	77.00	13.56	0:22:53	6,750.94	135.02	7.78	0:29:53	487.59	487.59	2.15
0:02:38	7,261.39	18.15	57.55	0:08:58	7,473.83	37.37	27.92	0:15:58	7,324.30	73.24	14.32	0:22:58	6,890.19	137.80	7.63	0:29:58	481.30	481.30	2.17
0:02:43	7,288.23	18.22	57.19	0:09:03	7,578.27	37.89	27.78	0:16:03	7,174.99	71.75	14.59	0:23:03	7,052.93	141.06	7.41	0:30:03	485.70	485.70	2.15
0:02:48	7,476.14	18.69	57.87	0:09:08	7,652.51	38.26	27.40	0:16:08	7,561.49	75.61	13.86	0:23:08	6,532.42	130.65	8.00	0:30:08	486.12	486.12	2.15
0:02:53	7,287.81	18.22	56.48	0:09:13	7,724.86	38.62	27.02	0:16:13	7,208.33	72.08	14.51	0:23:13	6,862.72	137.25	7.62	0:30:13	489.68	489.68	2.14
				0:09:18	7,695.71	38.48	27.25	0:16:18	7,560.23	75.60	13.91	0:23:18	6,953.74	139.07	7.57	0:30:18	489.27	489.27	2.14
				0:09:23	7,685.22	38.43	27.42	0:16:23	7,305.43	73.05	14.40	0:23:23	6,791.63	135.83	7.68	0:30:23	486.12	486.12	2.15
				0:09:28	7,451.39	37.26	27.67	0:16:28	7,284.46	72.84	14.33	0:23:28	7,279.00	145.58	7.21	0:30:28	486.96	486.96	2.15
				0:09:33	7,523.74	37.62	28.04	0:16:33	7,381.35	73.81	14.21	0:23:33	6,556.33	131.13	8.01	0:30:33	481.09	481.09	2.17
				0:09:38	7,232.87	36.16	28.49	0:16:38	7,104.10	71.04	14.74	0:23:38	6,584.01	131.68	7.94	0:30:38	490.10	490.10	2.13
				0:09:43	7,424.76	37.12	28.87	0:16:43	7,453.07	74.53	14.06	0:23:43	7,229.72	144.59	7.23	0:30:43	481.09	481.09	2.17
				0:09:48	7,496.69	37.48	27.78	0:16:48	7,335.00	73.35	14.27	0:23:48	6,826.23	136.52	7.67	0:30:48	485.49	485.49	2.16
				0:09:53	7,178.76	35.89	29.29	0:16:53	7,536.74	75.37	13.96	0:23:53	6,753.25	135.06	7.80	0:30:53	485.07	485.07	2.16

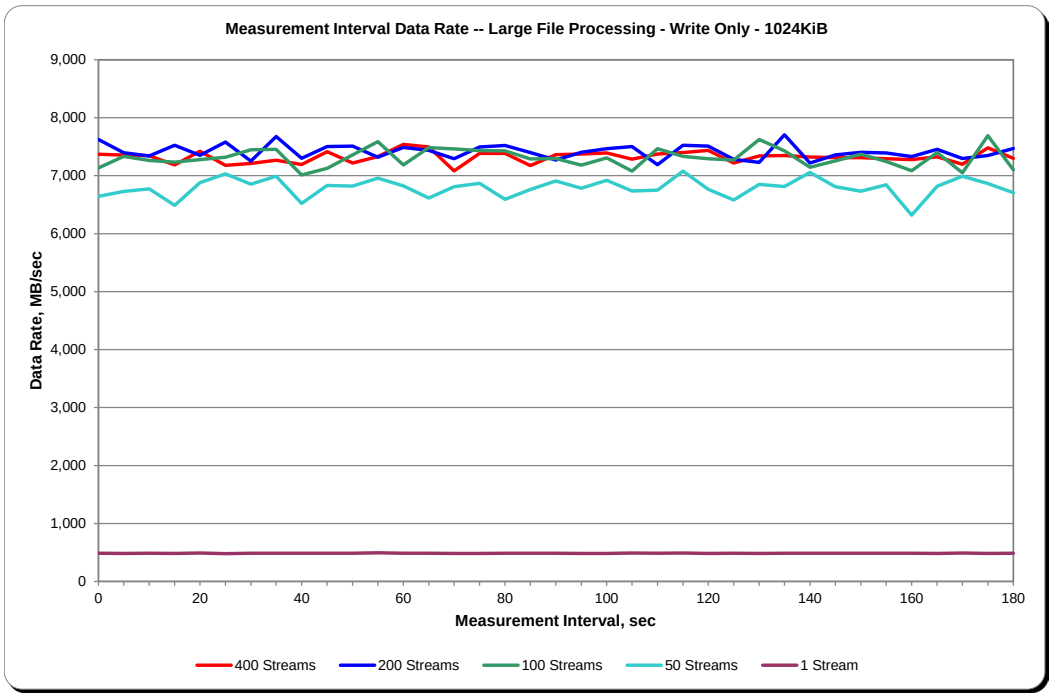
SPC-2 "Large File Processing/WRITE ONLY/1024 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR1	400 Streams			TR2	200 Streams			TR3	100 Streams			TR4	50 Streams			TR5	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:02:58	7,368.76	18.42	56.66	0:09:58	7,624.62	38.12	27.82	0:16:58	7,133.46	71.33	14.69	0:23:58	6,645.66	132.91	7.90	0:30:58	488.22	488.22	2.14
0:03:03	7,357.02	18.39	56.39	0:10:03	7,394.98	36.97	27.27	0:17:03	7,333.95	73.34	14.20	0:24:03	6,729.13	134.58	7.72	0:31:03	482.55	482.55	2.16
0:03:08	7,344.65	18.36	57.36	0:10:08	7,340.66	36.70	29.39	0:17:08	7,262.02	72.62	14.44	0:24:08	6,771.28	135.43	7.76	0:31:08	486.54	486.54	2.15
0:03:13	7,184.00	17.96	58.01	0:10:13	7,526.05	37.63	27.95	0:17:13	7,232.87	72.33	14.54	0:24:13	6,487.54	129.75	8.06	0:31:13	484.23	484.23	2.16
0:03:18	7,423.50	18.56	57.77	0:10:18	7,350.31	36.75	28.45	0:17:18	7,277.75	72.78	14.37	0:24:18	6,881.38	137.63	7.59	0:31:18	490.52	490.52	2.13
0:03:23	7,179.60	17.95	56.78	0:10:23	7,580.79	37.90	27.65	0:17:23	7,317.38	73.17	14.39	0:24:23	7,029.86	140.60	7.48	0:31:23	480.67	480.67	2.18
0:03:28	7,211.69	18.03	59.20	0:10:28	7,251.95	36.26	28.30	0:17:28	7,448.66	74.49	14.04	0:24:28	6,853.49	137.07	7.65	0:31:28	487.38	487.38	2.15
0:03:33	7,267.89	18.17	56.94	0:10:33	7,676.21	38.38	27.96	0:17:33	7,455.79	74.56	14.07	0:24:33	6,990.02	139.80	7.50	0:31:33	488.85	488.85	2.14
0:03:38	7,191.55	17.98	58.60	0:10:38	7,298.51	36.49	28.09	0:17:38	7,012.88	70.13	14.90	0:24:38	6,523.19	130.46	8.01	0:31:38	487.38	487.38	2.15
0:03:43	7,413.22	18.53	57.15	0:10:43	7,503.61	37.52	28.51	0:17:43	7,125.28	71.25	14.71	0:24:43	6,831.05	136.62	7.69	0:31:43	488.01	488.01	2.14
0:03:48	7,218.19	18.05	57.09	0:10:48	7,508.64	37.54	27.60	0:17:48	7,358.70	73.59	14.30	0:24:48	6,821.83	136.44	7.67	0:31:48	488.43	488.43	2.14
0:03:53	7,329.97	18.32	58.28	0:10:53	7,320.32	36.60	28.90	0:17:53	7,585.82	75.86	13.78	0:24:53	6,956.88	139.14	7.50	0:31:53	493.04	493.04	2.12
0:03:58	7,538.00	18.85	56.05	0:10:58	7,489.35	37.45	28.12	0:17:58	7,185.47	71.85	14.65	0:24:58	6,823.29	136.47	7.72	0:31:58	488.43	488.43	2.14
0:04:03	7,496.48	18.74	55.61	0:11:03	7,437.13	37.19	27.68	0:18:03	7,482.64	74.83	13.98	0:25:03	6,615.47	132.31	7.93	0:32:03	487.59	487.59	2.15
0:04:08	7,081.87	17.70	58.53	0:11:08	7,294.52	36.47	29.29	0:18:08	7,461.88	74.62	14.08	0:25:08	6,810.29	136.21	7.71	0:32:08	485.28	485.28	2.16
0:04:13	7,384.49	18.46	57.65	0:11:13	7,496.90	37.48	27.88	0:18:13	7,431.68	74.32	14.04	0:25:13	6,867.54	137.35	7.60	0:32:13	484.86	484.86	2.16
0:04:18	7,386.38	18.47	57.60	0:11:18	7,521.86	37.61	27.71	0:18:18	7,429.58	74.30	14.10	0:25:18	6,593.45	131.87	7.97	0:32:18	487.59	487.59	2.14
0:04:23	7,175.82	17.94	56.17	0:11:23	7,399.80	37.00	28.47	0:18:23	7,290.12	72.90	14.42	0:25:23	6,763.32	135.27	7.74	0:32:23	486.75	486.75	2.15
0:04:28	7,362.26	18.41	57.48	0:11:28	7,271.04	36.36	28.77	0:18:28	7,294.94	72.95	14.34	0:25:28	6,909.91	138.20	7.55	0:32:28	488.22	488.22	2.14
0:04:33	7,375.26	18.44	57.00	0:11:33	7,403.79	37.02	27.70	0:18:33	7,181.49	71.81	14.63	0:25:33	6,784.71	135.69	7.76	0:32:33	484.86	484.86	2.16
0:04:38	7,391.83	18.48	56.89	0:11:38	7,464.60	37.32	28.14	0:18:38	7,306.48	73.06	14.33	0:25:38	6,920.81	138.42	7.58	0:32:38	483.60	483.60	2.16
0:04:43	7,283.62	18.21	58.61	0:11:43	7,503.82	37.52	28.57	0:18:43	7,077.05	70.77	14.84	0:25:43	6,734.58	134.69	7.79	0:32:43	490.94	490.94	2.13
0:04:48	7,374.43	18.44	55.53	0:11:48	7,189.04	35.95	28.56	0:18:48	7,466.91	74.67	13.99	0:25:48	6,752.62	135.05	7.73	0:32:48	486.75	486.75	2.15
0:04:53	7,398.96	18.50	56.98	0:11:53	7,525.21	37.63	28.37	0:18:53	7,335.00	73.35	14.27	0:25:53	7,079.36	141.59	7.42	0:32:53	490.52	490.52	2.13
0:04:58	7,437.34	18.59	55.67	0:11:58	7,511.37	37.56	27.79	0:18:58	7,294.52	72.95	14.41	0:25:58	6,766.67	135.33	7.73	0:32:58	484.86	484.86	2.16
0:05:03	7,218.82	18.05	58.95	0:12:03	7,281.52	36.41	28.96	0:19:03	7,271.04	72.71	14.39	0:26:03	6,581.70	131.63	7.93	0:33:03	488.85	488.85	2.14
0:05:08	7,342.13	18.36	57.20	0:12:08	7,229.51	36.15	28.58	0:19:08	7,624.41	76.24	13.81	0:26:08	6,849.30	136.99	7.69	0:33:08	482.14	482.14	2.17
0:05:13	7,348.84	18.37	56.68	0:12:13	7,704.94	38.52	27.51	0:19:13	7,430.63	74.31	14.08	0:26:13	6,814.91	136.30	7.69	0:33:13	488.01	488.01	2.14
0:05:18	7,321.58	18.30	57.47	0:12:18	7,220.07	36.10	29.24	0:19:18	7,143.95	71.44	14.69	0:26:18	7,055.24	141.10	7.43	0:33:18	485.91	485.91	2.15
0:05:23	7,310.67	18.28	57.41	0:12:23	7,357.86	36.79	28.17	0:19:23	7,255.31	72.55	14.38	0:26:23	6,811.13	136.22	7.69	0:33:23	485.91	485.91	2.15
0:05:28	7,310.25	18.28	57.12	0:12:28	7,401.69	37.01	27.90	0:19:28	7,370.23	73.70	14.22	0:26:28	6,733.54	134.67	7.79	0:33:28	486.12	486.12	2.15
0:05:33	7,293.27	18.23	57.67	0:12:33	7,390.57	36.95	29.17	0:19:33	7,245.87	72.46	14.52	0:26:33	6,841.12	136.82	7.64	0:33:33	488.64	488.64	2.14
0:05:38	7,278.59	18.20	56.94	0:12:38	7,329.76	36.65	28.27	0:19:38	7,086.91	70.87	14.75	0:26:38	6,319.56	126.39	8.26	0:33:38	486.54	486.54	2.15
0:05:43	7,326.61	18.32	57.56	0:12:43	7,454.75	37.27	28.23	0:19:43	7,397.91	73.98	14.20	0:26:43	6,816.79	136.34	7.72	0:33:43	484.65	484.65	2.16
0:05:48	7,197.64	17.99	58.30	0:12:48	7,297.46	36.49	28.70	0:19:48	7,047.90	70.48	14.86	0:26:48	6,991.90	139.84	7.50	0:33:48	489.48	489.48	2.14
0:05:53	7,480.54	18.70	57.68	0:12:53	7,348.84	36.74	28.63	0:19:53	7,690.89	76.91	13.66	0:26:53	6,866.70	137.33	7.64	0:33:53	483.60	483.60	2.16
0:05:58	7,299.98	18.25	56.20	0:12:58	7,470.06	37.35	27.98	0:19:58	7,102.84	71.03	14.71	0:26:58	6,705.85	134.12	7.77	0:33:58	487.38	487.38	2.15
0:06:03	7,201.83	18.00	57.32	0:13:03	7,537.58	37.69	27.65	0:20:03	7,256.15	72.56	14.42	0:27:03	7,001.97	140.04	7.48	0:34:03	487.17	487.17	2.15
0:06:08	7,342.13	18.36	58.41	0:13:08	7,345.48	36.73	29.01	0:20:08	7,220.07	72.20	14.50	0:27:08	6,865.45	137.31	7.64	0:34:08	490.10	490.10	2.14
0:06:13	7,336.89	18.34	56.97	0:13:13	7,263.91	36.32	28.25	0:20:13	7,534.86	75.35	13.90	0:27:13	6,520.67	130.41	8.03	0:34:13	489.06	489.06	2.14
0:06:18	7,346.11	18.37	57.09	0:13:18	7,505.92	37.53	27.73	0:20:18	7,777.08	77.77	13.47	0:27:18	7,287.39	145.75	7.21	0:34:18	489.89	489.89	2.14
0:06:23	7,430.63	18.58	57.03	0:13:23	7,363.94	36.82	29.05	0:20:23	7,233.08	72.33	14.47	0:27:23	6,482.09	129.64	8.04	0:34:23	487.38	487.38	2.15
0:06:28	7,268.52	18.17	55.79	0:13:28	7,282.15	36.41	28.74	0:20:28	7,454.33	74.54	14.11	0:27:28	6,883.06	137.66	7.62	0:34:28	489.06	489.06	2.14
0:06:33	7,375.05	18.44	58.48	0:13:33	7,301.65	36.51	28.71	0:20:33	7,252.58	72.53	14.46	0:27:33	6,547.73	130.95	8.00	0:34:33	482.76	482.76	2.17
0:06:38	7,516.61	18.79	54.52	0:13:38	7,400.43	37.00	27.89	0:20:38	7,225.74	72.26	14.50	0:27:38	7,312.77	146.26	7.17	0:34:38	492.41	492.41	2.12
0:06:43	2,913.36	0.00	68.35	0:13:43	2,769.08	0.00	30.07	0:20:43	2,719.80	0.00	13.85	0:27:43	2,428.29	0.00	7.81	0:34:43	199.44	0.00	2.13
0:06:48	0.00	0.00	0.00	0:13:48	0.00	0.00	0.00	0:20:48	0.00	0.00	0.00	0:27:48	0.00	0.00	0.00	0:34:48	0.00	0.00	0.00
0:06:53	0.00	0.00	0.00	0:13:53	0.00	0.00	0.00	0:20:53	0.00	0.00	0.00	0:27:53	0.00	0.00	0.00	0:34:53	0.00	0.00	0.00

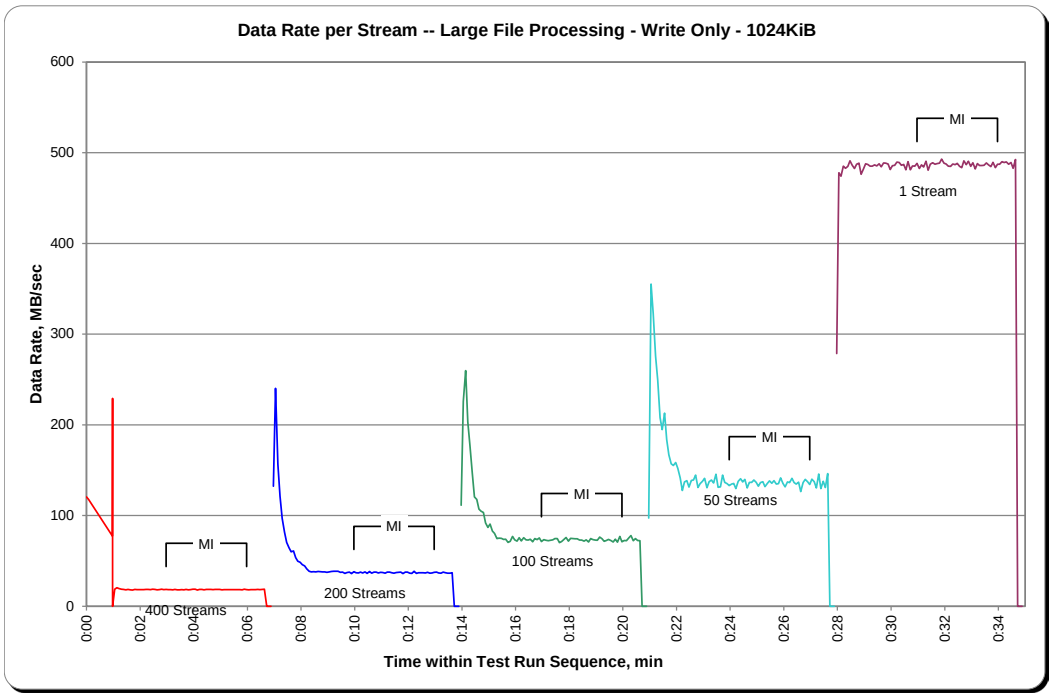
SPC-2 "Large File Processing/WRITE ONLY/1024 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



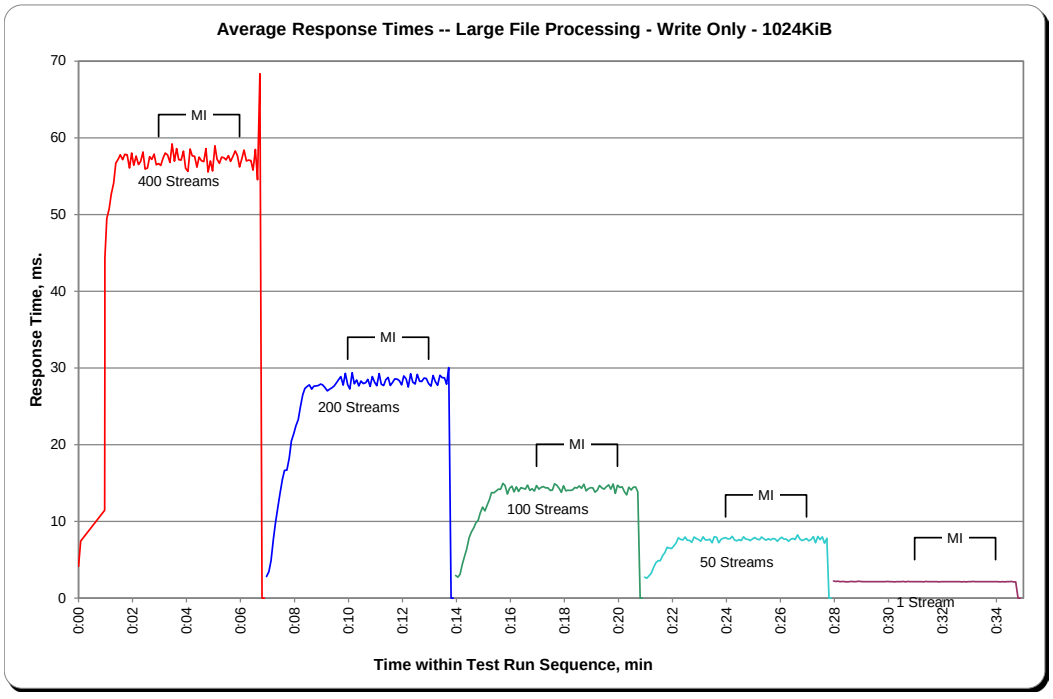
SPC-2 "Large File Processing/ WRITE ONLY /1024 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/ WRITE ONLY /1024 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/ WRITE ONLY /1024 KiB Transfer Size" Average Response Time Graph



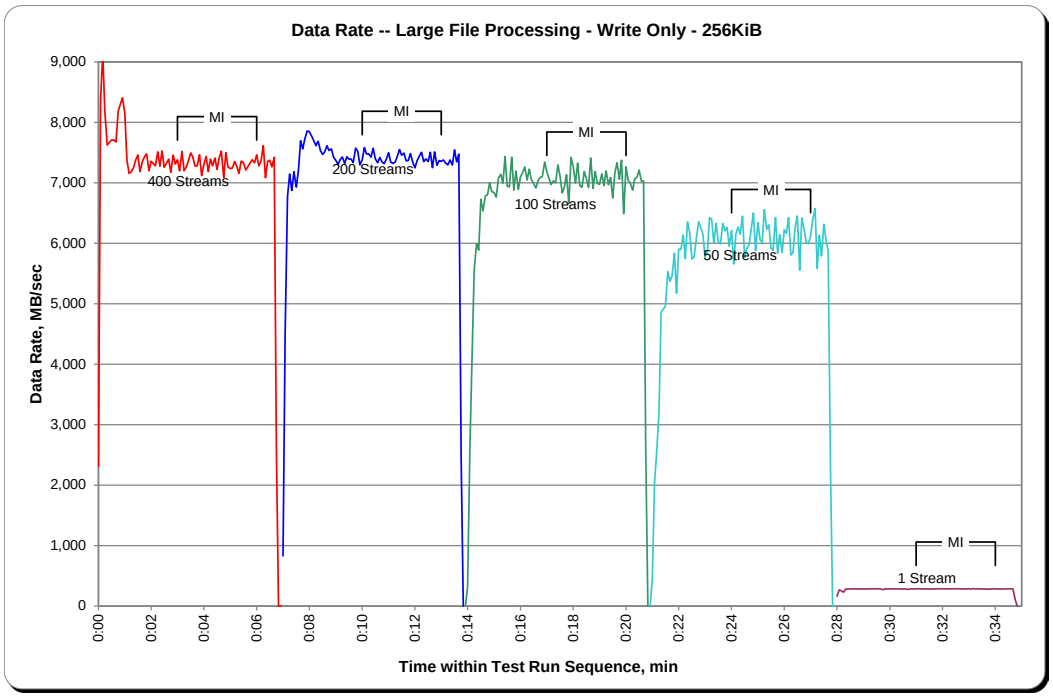
SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Test Run Data – Ramp-Up Period

TR6	400 Streams			TR7	200 Streams			TR8	100 Streams			TR9	50 Streams			TR10	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	2,310.59	72.21	1.19	0:07:00	827.85	82.79	1.11	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:28:00	161.27	161.27	0.96
0:00:05	8,365.38	105.89	1.67	0:07:05	4,520.41	141.26	1.22	0:14:00	312.58	62.52	0.96	0:21:00	457.34	114.33	0.94	0:28:05	268.70	268.70	0.97
0:00:10	9,147.41	76.87	2.80	0:07:10	6,771.86	141.08	1.60	0:14:05	2,633.24	175.55	1.03	0:21:05	2,017.04	201.70	1.09	0:28:10	248.72	248.72	1.05
0:00:15	8,172.29	54.48	4.25	0:07:15	7,141.64	113.36	2.11	0:14:10	4,132.86	172.20	1.18	0:21:10	2,534.51	194.96	1.23	0:28:15	227.33	227.33	1.15
0:00:20	7,622.47	45.10	5.44	0:07:20	6,872.52	85.91	2.71	0:14:15	5,568.31	174.01	1.33	0:21:15	3,206.91	188.64	1.24	0:28:20	281.86	281.86	0.93
0:00:25	7,667.76	39.94	6.21	0:07:25	7,183.48	76.42	3.10	0:14:20	5,992.87	149.82	1.58	0:21:20	4,859.99	211.30	1.09	0:28:25	279.13	279.13	0.93
0:00:30	7,705.04	34.86	7.04	0:07:30	6,929.30	62.43	3.92	0:14:25	5,885.55	122.62	1.96	0:21:25	4,909.22	175.33	1.36	0:28:30	284.58	284.58	0.92
0:00:35	7,709.34	32.81	7.81	0:07:35	7,201.99	60.02	4.21	0:14:30	6,725.83	106.76	2.22	0:21:30	4,955.26	159.85	1.58	0:28:35	282.33	282.33	0.92
0:00:40	7,674.27	30.33	8.29	0:07:40	7,694.56	59.19	4.27	0:14:35	6,530.27	91.98	2.66	0:21:35	5,528.56	153.57	1.60	0:28:40	283.27	283.27	0.92
0:00:45	8,182.09	29.33	8.48	0:07:45	7,560.39	55.19	4.61	0:14:40	6,784.13	92.93	2.77	0:21:40	5,370.23	145.14	1.79	0:28:45	279.92	279.92	0.93
0:00:50	8,295.13	27.38	9.27	0:07:50	7,741.64	54.14	4.76	0:14:45	6,798.34	87.16	2.94	0:21:45	5,457.63	147.50	1.77	0:28:50	283.06	283.06	0.92
0:00:55	8,403.03	26.68	9.45	0:07:55	7,856.46	51.35	4.89	0:14:50	6,997.36	87.47	2.95	0:21:50	5,833.65	149.58	1.70	0:28:55	284.32	284.32	0.92
0:01:00	8,160.86	24.73	10.33	0:08:00	7,844.19	49.33	5.24	0:14:55	6,852.55	78.76	3.17	0:21:55	5,172.15	120.28	2.08	0:29:00	281.28	281.28	0.93
0:01:05	7,373.17	20.65	12.09	0:08:05	7,770.37	44.92	5.59	0:15:00	6,835.77	76.81	3.39	0:22:00	5,903.95	131.20	1.97	0:29:05	281.23	281.23	0.93
0:01:10	7,153.70	19.49	13.08	0:08:10	7,690.73	42.03	6.09	0:15:05	6,760.22	72.69	3.58	0:22:05	5,891.37	130.92	2.00	0:29:10	282.33	282.33	0.92
0:01:15	7,180.91	19.05	13.77	0:08:15	7,612.87	40.71	6.32	0:15:10	7,077.52	74.50	3.44	0:22:10	6,132.07	130.47	1.96	0:29:15	284.32	284.32	0.92
0:01:20	7,253.00	18.74	13.61	0:08:20	7,688.00	39.22	6.60	0:15:15	7,138.97	73.60	3.50	0:22:15	5,742.79	122.19	2.14	0:29:20	283.69	283.69	0.92
0:01:25	7,376.05	18.58	13.98	0:08:25	7,528.88	37.83	6.86	0:15:20	6,992.85	71.36	3.66	0:22:20	6,351.70	129.63	1.97	0:29:25	283.69	283.69	0.92
0:01:30	7,457.89	18.64	14.25	0:08:30	7,468.48	37.34	6.98	0:15:25	7,432.20	74.32	3.48	0:22:25	6,186.28	123.73	2.09	0:29:30	283.22	283.22	0.92
0:01:35	7,184.21	17.96	14.30	0:08:35	7,511.79	37.56	6.96	0:15:30	6,945.56	69.46	3.77	0:22:30	5,737.97	114.76	2.28	0:29:35	284.43	284.43	0.92
0:01:40	7,348.94	18.37	14.26	0:08:40	7,612.19	38.06	6.92	0:15:35	6,930.04	69.30	3.78	0:22:35	5,775.66	115.51	2.27	0:29:40	280.70	280.70	0.93
0:01:45	7,428.58	18.57	14.53	0:08:45	7,531.29	37.66	6.93	0:15:40	7,422.76	74.23	3.54	0:22:40	6,067.22	121.34	2.16	0:29:45	269.17	269.17	0.97
0:01:50	7,474.72	18.69	14.07	0:08:50	7,561.39	37.81	6.93	0:15:45	6,879.55	68.80	3.79	0:22:45	6,353.69	127.07	2.06	0:29:50	283.12	283.12	0.92
0:01:55	7,195.01	17.99	14.22	0:08:55	7,422.29	37.11	7.09	0:15:50	7,193.70	71.94	3.65	0:22:50	6,255.54	125.11	2.09	0:29:55	282.17	282.17	0.92
0:02:00	7,353.61	18.38	14.32	0:09:00	7,372.33	36.86	7.10	0:15:55	6,890.19	68.90	3.81	0:22:55	6,151.42	123.03	2.13	0:30:00	283.22	283.22	0.92
0:02:05	7,321.00	18.30	14.25	0:09:05	7,300.76	36.50	7.13	0:16:00	7,096.55	70.97	3.67	0:23:00	5,771.31	115.43	2.26	0:30:05	282.12	282.12	0.92
0:02:10	7,279.00	18.20	14.29	0:09:10	7,383.18	36.92	7.14	0:16:05	7,165.76	71.66	3.65	0:23:05	5,863.53	117.27	2.23	0:30:10	284.74	284.74	0.92
0:02:15	7,509.27	18.77	14.26	0:09:15	7,427.54	37.14	7.05	0:16:10	7,258.77	72.59	3.61	0:23:10	6,423.79	128.48	2.04	0:30:15	284.69	284.69	0.92
0:02:20	7,273.55	18.18	14.01	0:09:20	7,321.47	36.61	7.13	0:16:15	7,044.91	70.45	3.73	0:23:15	6,392.96	127.86	2.05	0:30:20	281.86	281.86	0.93
0:02:25	7,525.58	18.81	14.24	0:09:25	7,428.53	37.14	7.03	0:16:20	7,222.91	72.23	3.61	0:23:20	6,009.97	120.20	2.18	0:30:25	285.47	285.47	0.91
0:02:30	7,254.57	18.14	14.57	0:09:30	7,392.25	36.96	7.15	0:16:25	7,051.57	70.52	3.72	0:23:25	6,325.27	126.51	2.07	0:30:30	279.24	279.24	0.93
0:02:35	7,323.62	18.31	14.16	0:09:35	7,390.36	36.95	7.04	0:16:30	6,990.80	69.91	3.75	0:23:30	6,021.66	120.43	2.18	0:30:35	283.17	283.17	0.92
0:02:40	7,390.26	18.48	14.10	0:09:40	7,333.58	36.67	7.13	0:16:35	6,914.00	69.14	3.77	0:23:35	5,988.47	119.77	2.18	0:30:40	274.67	274.67	0.95
0:02:45	7,171.95	17.93	14.55	0:09:45	7,570.19	37.85	6.98	0:16:40	7,032.90	70.33	3.72	0:23:40	6,324.54	126.49	2.07	0:30:45	281.12	281.12	0.93
0:02:50	7,457.84	18.64	14.31	0:09:50	7,520.96	37.60	6.96	0:16:45	7,087.01	70.87	3.70	0:23:45	6,202.75	124.05	2.11	0:30:50	284.64	284.64	0.92
0:02:55	7,309.36	18.27	14.23	0:09:55	7,295.05	36.48	7.14	0:16:50	7,101.69	71.02	3.70	0:23:50	6,259.16	125.18	2.09	0:30:55	281.18	281.18	0.93
								0:16:55	7,341.87	73.42	3.55	0:23:55	5,952.45	119.05	2.20				

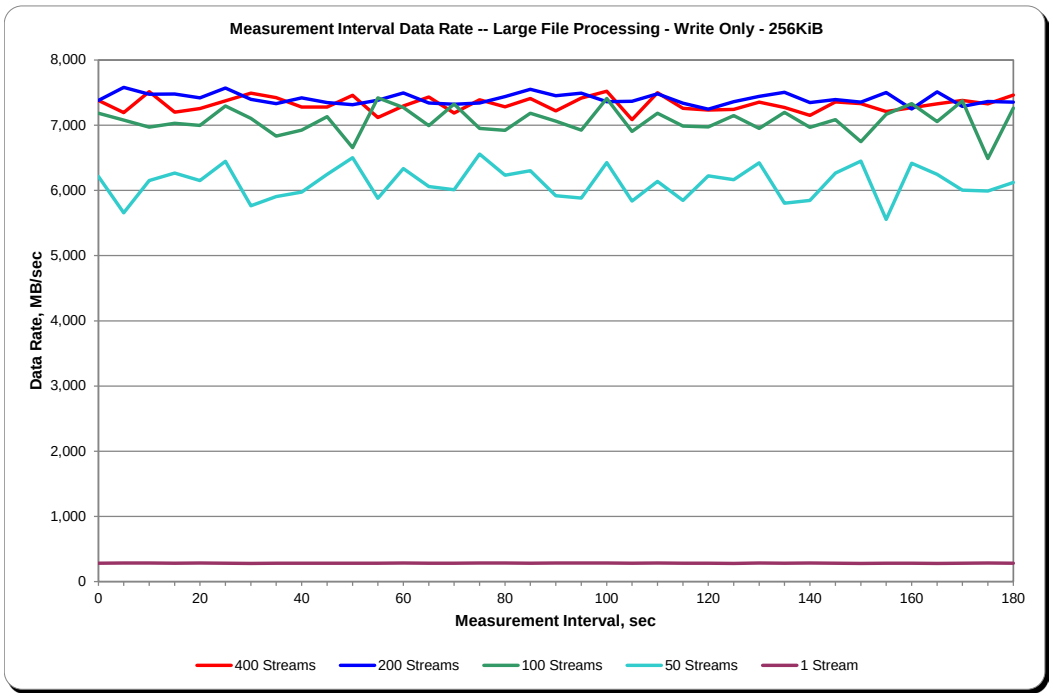
SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR6	400 Streams			TR7	200 Streams			TR8	100 Streams			TR9	50 Streams			TR10	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:00	7,378.83	18.45	14.37	0:10:00	7,379.04	36.90	7.12	0:17:00	7,182.22	71.82	3.64	0:24:00	6,212.13	124.24	2.10	0:31:00	284.01	284.01	0.92
0:03:05	7,194.65	17.99	14.29	0:10:05	7,581.62	37.91	6.93	0:17:05	7,080.40	70.80	3.71	0:24:05	5,655.18	113.10	2.32	0:31:05	284.37	284.37	0.92
0:03:10	7,515.88	18.79	14.06	0:10:10	7,476.71	37.38	7.01	0:17:10	6,969.26	69.69	3.75	0:24:10	6,152.41	123.05	2.12	0:31:10	285.00	285.00	0.92
0:03:15	7,200.10	18.00	14.63	0:10:15	7,479.86	37.40	6.98	0:17:15	7,028.97	70.29	3.71	0:24:15	6,267.44	125.35	2.09	0:31:15	282.59	282.59	0.92
0:03:20	7,254.63	18.14	14.14	0:10:20	7,420.77	37.10	7.01	0:17:20	6,997.25	69.97	3.76	0:24:20	6,151.63	123.03	2.13	0:31:20	284.58	284.58	0.92
0:03:25	7,374.22	18.44	14.52	0:10:25	7,570.56	37.85	7.00	0:17:25	7,294.21	72.94	3.60	0:24:25	6,446.70	128.93	2.02	0:31:25	282.91	282.91	0.92
0:03:30	7,493.02	18.73	14.14	0:10:30	7,397.18	36.99	7.08	0:17:30	7,105.15	71.05	3.68	0:24:30	5,763.39	115.27	2.27	0:31:30	280.70	280.70	0.93
0:03:35	7,422.14	18.56	14.04	0:10:35	7,330.70	36.65	7.12	0:17:35	6,832.84	68.33	3.82	0:24:35	5,906.89	118.14	2.21	0:31:35	282.17	282.17	0.92
0:03:40	7,278.69	18.20	14.04	0:10:40	7,419.04	37.10	7.08	0:17:40	6,923.69	69.24	3.79	0:24:40	5,975.78	119.52	2.19	0:31:40	281.49	281.49	0.93
0:03:45	7,277.12	18.19	14.70	0:10:45	7,346.01	36.73	7.12	0:17:45	7,132.05	71.32	3.67	0:24:45	6,246.84	124.94	2.09	0:31:45	283.95	283.95	0.92
0:03:50	7,460.41	18.65	14.19	0:10:50	7,314.76	36.57	7.14	0:17:50	6,655.26	66.55	3.91	0:24:50	6,501.43	130.03	2.01	0:31:50	283.85	283.85	0.92
0:03:55	7,117.79	17.79	14.37	0:10:55	7,384.44	36.92	7.12	0:17:55	7,419.20	74.19	3.55	0:24:55	5,879.00	117.58	2.23	0:31:55	284.01	284.01	0.92
0:04:00	7,294.79	18.24	14.49	0:11:00	7,495.43	37.48	7.02	0:18:00	7,272.40	72.72	3.60	0:25:00	6,336.34	126.73	2.06	0:32:00	284.90	284.90	0.92
0:04:05	7,431.52	18.58	14.37	0:11:05	7,340.19	36.70	7.08	0:18:05	6,993.58	69.94	3.75	0:25:05	6,059.83	121.20	2.16	0:32:05	283.33	283.33	0.92
0:04:10	7,187.04	17.97	14.20	0:11:10	7,321.52	36.61	7.19	0:18:10	7,324.09	73.24	3.56	0:25:10	6,012.12	120.24	2.17	0:32:10	281.96	281.96	0.93
0:04:15	7,391.73	18.48	14.11	0:11:15	7,341.66	36.71	7.14	0:18:15	6,952.22	69.52	3.78	0:25:15	6,556.54	131.13	2.00	0:32:15	285.47	285.47	0.91
0:04:20	7,281.57	18.20	14.35	0:11:20	7,440.12	37.20	7.02	0:18:20	6,923.12	69.23	3.78	0:25:20	6,233.31	124.67	2.10	0:32:20	285.58	285.58	0.91
0:04:25	7,408.66	18.52	14.22	0:11:25	7,549.49	37.75	6.97	0:18:25	7,183.85	71.84	3.63	0:25:25	6,302.78	126.06	2.08	0:32:25	283.74	283.74	0.92
0:04:30	7,220.34	18.05	14.61	0:11:30	7,453.28	37.27	6.99	0:18:30	7,062.79	70.63	3.73	0:25:30	5,918.48	118.37	2.22	0:32:30	284.27	284.27	0.92
0:04:35	7,415.16	18.54	14.48	0:11:35	7,491.18	37.46	7.04	0:18:35	6,925.74	69.26	3.79	0:25:35	5,881.57	117.63	2.22	0:32:35	285.32	285.32	0.91
0:04:40	7,521.33	18.80	13.88	0:11:40	7,360.90	36.80	7.09	0:18:40	7,409.50	74.10	3.54	0:25:40	6,425.94	128.52	2.04	0:32:40	285.27	285.27	0.91
0:04:45	7,085.60	17.71	14.24	0:11:45	7,366.56	36.83	7.09	0:18:45	6,905.92	69.06	3.78	0:25:45	5,836.22	116.72	2.23	0:32:45	281.12	281.12	0.93
0:04:50	7,497.90	18.74	14.25	0:11:50	7,481.12	37.41	7.06	0:18:50	7,184.21	71.84	3.65	0:25:50	6,138.42	122.77	2.14	0:32:50	285.06	285.06	0.92
0:04:55	7,259.71	18.15	14.45	0:11:55	7,337.57	36.69	7.07	0:18:55	6,986.98	69.87	3.74	0:25:55	5,845.97	116.92	2.24	0:32:55	283.06	283.06	0.92
0:05:00	7,233.39	18.08	14.31	0:12:00	7,244.77	36.22	7.27	0:19:00	6,975.28	69.75	3.73	0:26:00	6,222.72	124.45	2.10	0:33:00	283.48	283.48	0.92
0:05:05	7,241.31	18.10	14.30	0:12:05	7,361.79	36.81	7.13	0:19:05	7,148.35	71.48	3.68	0:26:05	6,162.95	123.26	2.13	0:33:05	280.13	280.13	0.93
0:05:10	7,353.35	18.38	14.29	0:12:10	7,442.84	37.21	7.05	0:19:10	6,950.64	69.51	3.77	0:26:10	6,423.94	128.48	2.03	0:33:10	286.84	286.84	0.91
0:05:15	7,270.56	18.18	14.70	0:12:15	7,503.56	37.52	6.97	0:19:15	7,197.95	71.98	3.64	0:26:15	5,803.08	116.06	2.26	0:33:15	282.28	282.28	0.92
0:05:20	7,152.13	17.88	14.55	0:12:20	7,347.69	36.74	7.11	0:19:20	6,966.16	69.66	3.74	0:26:20	5,845.50	116.91	2.23	0:33:20	284.90	284.90	0.92
0:05:25	7,357.65	18.39	14.40	0:12:25	7,392.46	36.96	7.13	0:19:25	7,085.91	70.86	3.71	0:26:25	6,267.34	125.35	2.09	0:33:25	283.64	283.64	0.92
0:05:30	7,331.38	18.33	14.31	0:12:30	7,352.67	36.76	7.11	0:19:30	6,747.69	67.48	3.88	0:26:30	6,451.10	129.02	2.03	0:33:30	280.76	280.76	0.93
0:05:35	7,208.70	18.02	14.64	0:12:35	7,501.98	37.51	6.94	0:19:35	7,167.33	71.67	3.63	0:26:35	5,554.52	111.09	2.36	0:33:35	283.06	283.06	0.92
0:05:40	7,267.89	18.17	14.09	0:12:40	7,250.22	36.25	7.24	0:19:40	7,329.91	73.30	3.59	0:26:40	6,417.18	128.34	2.04	0:33:40	281.44	281.44	0.93
0:05:45	7,328.39	18.32	14.20	0:12:45	7,512.05	37.56	6.98	0:19:45	7,057.34	70.57	3.72	0:26:45	6,247.05	124.94	2.09	0:33:45	277.87	277.87	0.94
0:05:50	7,379.62	18.45	14.86	0:12:50	7,287.50	36.44	7.21	0:19:50	7,372.75	73.73	3.55	0:26:50	6,004.57	120.09	2.18	0:33:50	282.01	282.01	0.93
0:05:55	7,328.71	18.32	14.00	0:12:55	7,364.99	36.82	7.08	0:19:55	6,488.75	64.89	4.02	0:26:55	5,989.99	119.80	2.17	0:33:55	285.21	285.21	0.91
0:06:00	7,461.19	18.65	14.04	0:13:00	7,353.93	36.77	7.11	0:20:00	7,262.23	72.62	3.61	0:27:00	6,122.11	122.44	2.15	0:34:00	283.90	283.90	0.92
0:06:05	7,275.96	18.19	14.18	0:13:05	7,376.84	36.88	7.19	0:20:05	7,038.51	70.39	3.71	0:27:05	6,386.72	127.73	2.04	0:34:05	282.12	282.12	0.92
0:06:10	7,354.97	18.39	14.41	0:13:10	7,324.30	36.62	7.10	0:20:10	6,994.84	69.95	3.73	0:27:10	6,572.68	131.45	1.99	0:34:10	280.18	280.18	0.93
0:06:15	7,613.87	19.03	13.82	0:13:15	7,295.73	36.48	7.17	0:20:15	6,877.92	68.78	3.82	0:27:15	5,582.99	111.66	2.33	0:34:15	282.49	282.49	0.92
0:06:20	7,082.87	17.71	14.46	0:13:20	7,377.57	36.89	7.14	0:20:20	7,066.72	70.67	3.71	0:27:20	6,130.50	122.61	2.14	0:34:20	281.39	281.39	0.93
0:06:25	7,352.30	18.38	14.45	0:13:25	7,293.21	36.47	7.16	0:20:25	7,090.26	70.90	3.68	0:27:25	5,788.77	115.78	2.26	0:34:25	284.06	284.06	0.92
0:06:30	7,372.75	18.43	14.21	0:13:30	7,541.15	37.71	6.89	0:20:30	7,209.43	72.09	3.62	0:27:30	6,312.95	126.26	2.08	0:34:30	285.06	285.06	0.92
0:06:35	7,263.12	18.16	14.54	0:13:35	7,343.81	36.72	7.18	0:20:35	7,021.95	70.22	3.75	0:27:35	6,057.15	121.14	2.16	0:34:35	283.33	283.33	0.92
0:06:40	7,419.04	18.55	14.02	0:13:40	7,471.21	37.36	7.05	0:20:40	7,025.25	70.25	3.73	0:27:40	5,877.37	117.55	2.23	0:34:40	283.59	283.59	0.92
0:06:45	2,621.54	0.00	15.83	0:13:45	2,435.37	0.00	6.62	0:20:45	2,606.76	0.00	3.05	0:27:45	2,260.52	0.00	1.76	0:34:45	116.86	0.00	0.91
0:06:50	0.00	0.00	0.00	0:13:50	0.00	0.00	0.00	0:20:50	0.00	0.00	0.00	0:27:50	0.00	0.00	0.00	0:34:50	0.00	0.00	0.00
0:06:55	0.00	0.00	0.00									0:27:55	0.00	0.00	0.00				

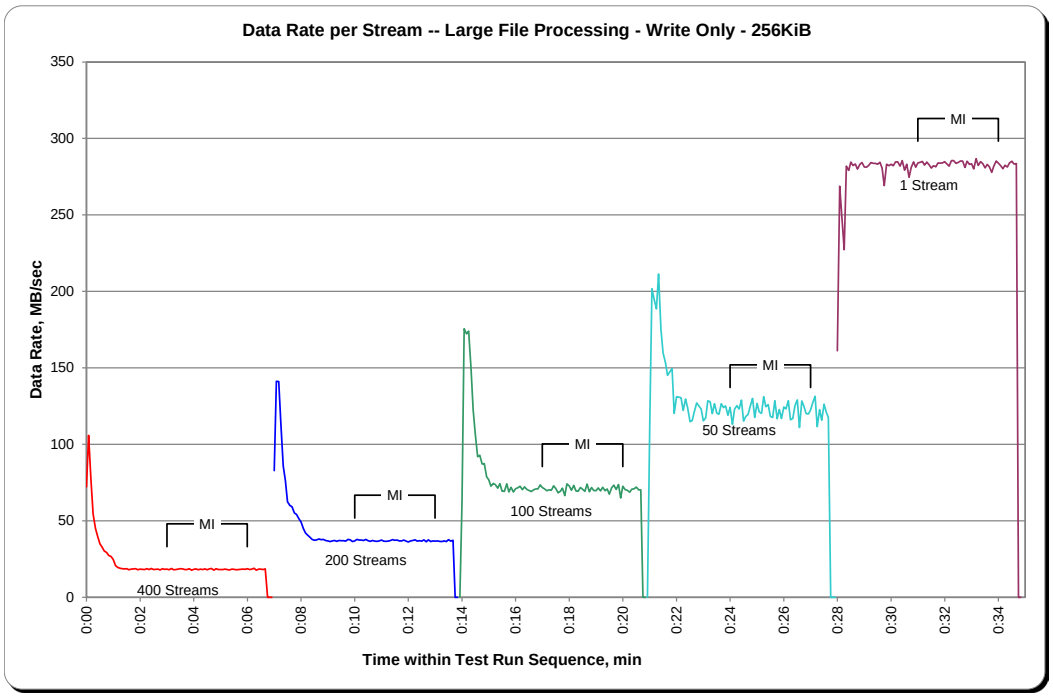
SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



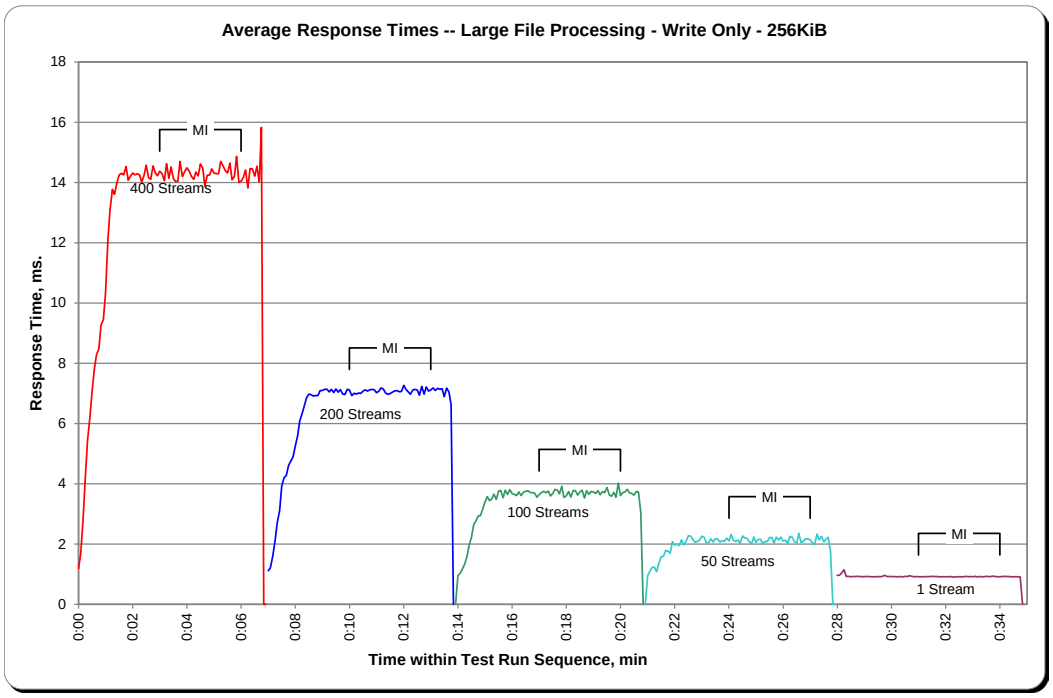
SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/ WRITE ONLY /256 KiB Transfer Size" Average Response Time Graph



Large File Processing Test – READ-WRITE Test Phase

Clause 10.6.8.1.2

1. *A table that will contain the following information for each "READ-WRITE, 1024 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
2. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "READ-WRITE, 1024 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*
3. *A table that will contain the following information for each " READ-WRITE, 256 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
4. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "READ-WRITE, 256 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*

The SPC-2 "Large File Processing/READ-WRITE/1024 KiB Transfer Size" Test Run data is contained in the table that appears on the next page. That table is followed by graphs illustrating the average Data Rate, average Data Rate per Stream, and average Response Time produced by the same Test Runs. The table and graphs present the data at five-second intervals.

Immediately following the SPC-2 "Large File Processing/ READ-WRITE /1024 KiB Transfer Size" table and graphs will be the SPC-2 "Large File Processing/ READ-WRITE /64 KiB Transfer Size" table and graphs. The table contains the Test Run data and the graphs illustrate the average Data Rate, average Data Rate per Stream, and average Response Time produced by the Test Runs.

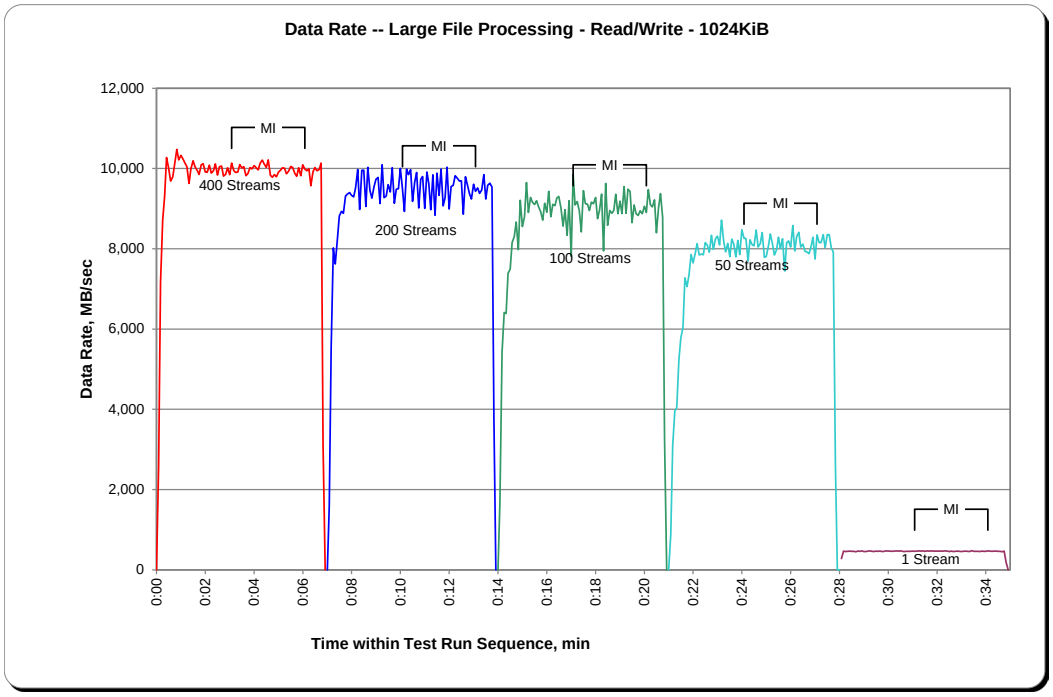
SPC-2 "Large File Processing/READ-WRITE/1024 KiB Transfer Size" Test Run Data – Ramp-Up Period

TR11	400 Streams			TR12	200 Streams			TR13	100 Streams			TR14	50 Streams			TR15	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	0.00	0.00	0.00	0:07:00	0.00	0.00	0.00	0:14:00	0.00	0.00	0.00	0:21:00	0.00	0.00	0.00	0:28:05	277.66	277.66	2.23
0:00:05	2,575.51	78.05	5.20	0:07:05	1,594.46	99.65	3.70	0:14:05	1,681.29	152.84	2.80	0:21:05	874.09	145.68	2.77	0:28:10	464.10	464.10	2.25
0:00:10	7,172.26	96.92	7.81	0:07:10	5,563.53	163.63	4.75	0:14:10	5,425.33	258.35	3.09	0:21:10	3,097.28	344.14	2.65	0:28:15	457.60	457.60	2.29
0:00:15	8,715.34	79.96	10.83	0:07:15	8,019.09	148.50	5.92	0:14:15	6,412.67	206.86	4.14	0:21:15	3,961.31	304.72	3.04	0:28:20	459.07	459.07	2.28
0:00:20	9,305.27	67.92	13.88	0:07:20	7,623.78	113.79	8.18	0:14:20	6,386.46	159.66	5.44	0:21:20	4,044.57	237.92	3.78	0:28:25	464.31	464.31	2.25
0:00:25	10,272.90	58.70	16.05	0:07:25	8,239.08	101.72	9.20	0:14:25	7,389.73	157.23	5.96	0:21:25	5,236.80	238.04	3.86	0:28:30	459.28	459.28	2.28
0:00:30	10,004.46	48.80	20.15	0:07:30	8,819.99	90.93	10.90	0:14:30	7,493.75	152.93	6.70	0:21:30	5,777.44	231.10	4.33	0:28:35	458.65	458.65	2.28
0:00:35	9,686.12	41.22	23.91	0:07:35	8,934.50	80.49	12.28	0:14:35	8,156.24	140.62	7.05	0:21:35	6,035.81	208.13	4.69	0:28:40	451.73	451.73	2.32
0:00:40	9,791.39	37.95	26.56	0:07:40	8,881.65	74.01	13.60	0:14:40	8,305.35	125.84	7.87	0:21:40	7,275.44	227.36	4.44	0:28:45	467.87	467.87	2.23
0:00:45	10,116.66	35.75	27.98	0:07:45	9,316.81	70.05	14.15	0:14:45	8,666.69	120.37	8.34	0:21:45	7,057.97	190.76	5.00	0:28:50	462.84	462.84	2.26
0:00:50	10,475.48	35.51	28.78	0:07:50	9,363.78	65.03	15.66	0:14:50	7,981.13	101.03	9.75	0:21:50	7,345.69	183.64	5.40	0:28:55	471.23	471.23	2.22
0:00:55	10,214.60	32.95	30.84	0:07:55	9,402.16	59.13	16.89	0:14:55	9,207.13	116.55	9.00	0:21:55	7,856.56	191.62	5.43	0:29:00	458.02	458.02	2.28
0:01:00	10,325.75	31.20	32.61	0:08:00	9,334.00	57.26	17.98	0:15:00	8,551.98	101.81	10.16	0:22:00	7,651.25	182.17	5.76	0:29:05	453.40	453.40	2.31
0:01:05	10,245.01	29.78	34.37	0:08:05	9,295.21	53.42	19.04	0:15:05	8,802.80	101.18	10.22	0:22:05	7,876.90	187.55	5.58	0:29:10	464.73	464.73	2.25
0:01:10	10,137.42	28.80	36.13	0:08:10	9,521.70	54.41	19.34	0:15:10	9,649.42	103.76	9.69	0:22:10	8,130.66	180.68	5.67	0:29:15	470.18	470.18	2.23
0:01:15	10,052.49	27.54	37.43	0:08:15	9,974.26	55.11	18.64	0:15:15	8,907.02	94.76	11.01	0:22:15	7,845.87	174.35	6.02	0:29:20	463.05	463.05	2.26
0:01:20	9,630.33	25.34	40.45	0:08:20	8,979.17	48.28	21.40	0:15:20	9,279.27	96.66	10.73	0:22:20	7,867.05	167.38	6.16	0:29:25	457.18	457.18	2.28
0:01:25	9,996.91	25.44	40.48	0:08:25	9,952.03	51.56	20.15	0:15:25	9,160.99	93.48	11.07	0:22:25	7,851.32	160.23	6.34	0:29:30	467.04	467.04	2.25
0:01:30	10,191.53	25.54	40.67	0:08:30	9,960.63	50.05	20.59	0:15:30	9,103.32	91.03	11.30	0:22:30	8,152.26	163.05	6.31	0:29:35	463.26	463.26	2.26
0:01:35	10,045.99	25.11	41.59	0:08:35	9,056.55	45.28	23.06	0:15:35	9,200.21	92.00	11.41	0:22:35	8,084.31	161.69	6.51	0:29:40	466.83	466.83	2.24
0:01:40	9,952.03	24.88	42.21	0:08:40	10,026.69	50.13	20.98	0:15:40	9,036.84	90.37	11.64	0:22:40	7,915.28	158.31	6.61	0:29:45	456.76	456.76	2.29
0:01:45	9,853.26	24.63	42.54	0:08:45	9,456.06	47.28	22.23	0:15:45	8,930.72	89.31	11.74	0:22:45	8,334.08	166.68	6.29	0:29:50	462.00	462.00	2.27
0:01:50	10,095.27	25.24	41.59	0:08:50	9,261.02	46.31	22.54	0:15:50	8,711.36	87.11	11.97	0:22:50	7,986.58	159.73	6.58	0:29:55	469.55	469.55	2.23
0:01:55	10,119.39	25.30	41.30	0:08:55	9,544.14	47.72	21.94	0:15:55	9,132.26	91.32	11.51	0:22:55	8,254.81	165.10	6.33	0:30:00	464.73	464.73	2.25
0:02:00	9,912.40	24.78	42.31	0:09:00	9,729.74	48.65	21.64	0:16:00	8,909.33	89.09	11.75	0:23:00	8,313.95	166.28	6.27	0:30:05	464.73	464.73	2.25
0:02:05	9,904.22	24.76	42.33	0:09:05	9,777.76	48.89	21.41	0:16:05	9,434.88	94.35	11.08	0:23:05	8,095.43	161.91	6.46	0:30:10	462.42	462.42	2.26
0:02:10	10,081.43	25.20	41.58	0:09:10	9,127.64	45.64	22.91	0:16:10	8,798.39	87.98	11.94	0:23:10	8,711.99	174.24	6.05	0:30:15	464.10	464.10	2.25
0:02:15	9,886.60	24.72	42.56	0:09:15	10,093.59	50.47	20.80	0:16:15	9,108.98	91.09	11.54	0:23:15	8,189.80	163.80	6.38	0:30:20	473.33	473.33	2.21
0:02:20	9,943.44	24.86	42.21	0:09:20	9,270.46	46.35	22.66	0:16:20	9,073.33	90.73	11.55	0:23:20	7,927.02	158.54	6.60	0:30:25	464.94	464.94	2.25
0:02:25	10,111.63	25.28	41.52	0:09:25	9,313.03	46.57	22.51	0:16:25	9,267.94	92.68	11.28	0:23:25	8,134.85	162.70	6.46	0:30:30	473.96	473.96	2.21
0:02:30	9,837.95	24.59	42.50	0:09:30	9,598.25	47.99	21.75	0:16:30	9,306.11	93.06	11.29	0:23:30	7,801.82	156.04	6.71	0:30:35	459.91	459.91	2.27
0:02:35	10,044.10	25.11	41.83	0:09:35	9,416.63	47.08	22.41	0:16:35	9,022.58	90.23	11.61	0:23:35	8,238.45	164.77	6.32	0:30:40	453.19	453.19	2.31
0:02:40	10,059.83	25.15	41.61	0:09:40	10,018.51	50.09	20.84	0:16:40	8,564.35	85.64	12.18	0:23:40	8,121.01	162.42	6.46	0:30:45	460.95	460.95	2.27
0:02:45	9,808.80	24.52	42.78	0:09:45	9,135.61	45.68	22.94	0:16:45	8,972.46	89.72	11.71	0:23:45	7,797.63	155.95	6.75	0:30:50	458.44	458.44	2.28
0:02:50	9,851.79	24.63	42.58	0:09:50	9,483.95	47.42	22.11	0:16:50	8,334.08	83.34	12.63	0:23:50	8,205.95	164.12	6.38	0:30:55	458.65	458.65	2.28
0:02:55	10,019.56	25.05	41.83	0:09:55	9,494.86	47.47	22.15	0:16:55	9,196.85	91.97	11.38	0:23:55	7,854.88	157.10	6.66	0:31:00	468.92	468.92	2.23
0:03:00	9,849.06	24.62	42.64	0:10:00	10,003.21	50.02	20.83	0:17:00	7,813.78	78.14	13.31	0:24:00	8,473.12	169.46	6.20				

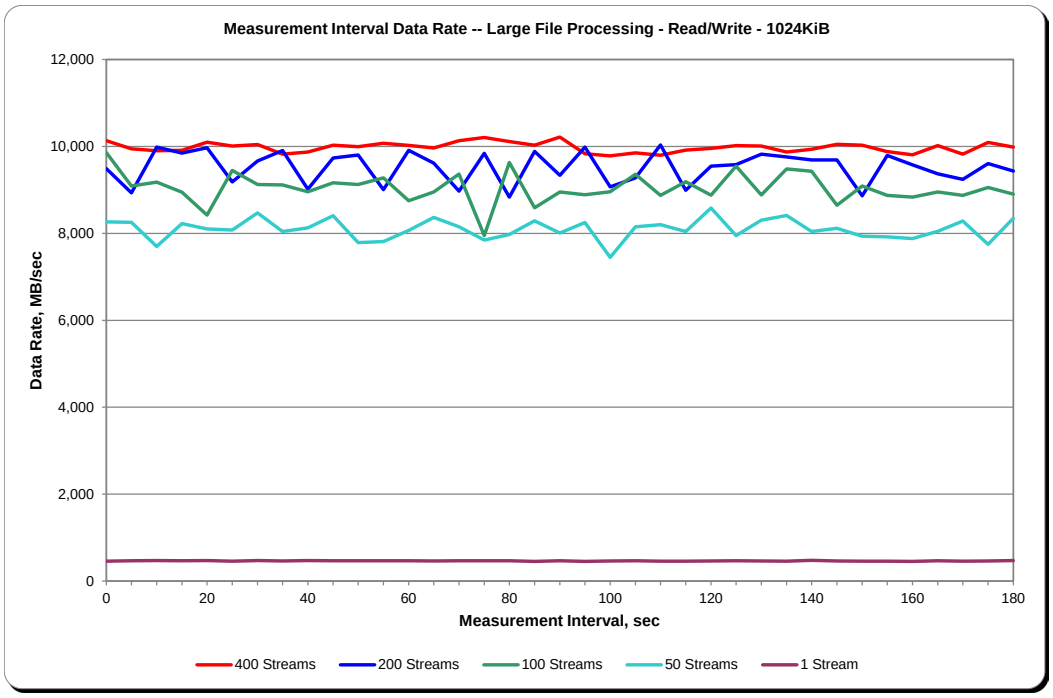
SPC-2 "Large File Processing/READ-WRITE/1024 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR11	400 Streams			TR12	200 Streams			TR13	100 Streams			TR14	50 Streams			TR15	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	10,133.02	25.33	41.35	0:10:05	9,487.52	47.44	22.15	0:17:05	9,857.03	98.57	10.72	0:24:05	8,261.73	165.23	6.33	0:31:05	460.32	460.32	2.27
0:03:10	9,946.58	24.87	41.98	0:10:10	8,930.30	44.65	23.36	0:17:10	9,089.69	90.90	11.52	0:24:10	8,253.55	165.07	6.30	0:31:10	467.46	467.46	2.24
0:03:15	9,902.12	24.76	42.34	0:10:15	9,986.43	49.93	21.07	0:17:15	9,178.81	91.79	11.41	0:24:15	7,696.97	153.94	6.82	0:31:15	470.60	470.60	2.22
0:03:20	9,909.67	24.77	42.29	0:10:20	9,848.23	49.24	21.33	0:17:20	8,944.77	89.45	11.71	0:24:20	8,224.19	164.48	6.39	0:31:20	466.83	466.83	2.24
0:03:25	10,098.84	25.25	41.76	0:10:25	9,971.12	49.86	21.04	0:17:25	8,423.21	84.23	12.46	0:24:25	8,103.81	162.08	6.47	0:31:25	471.23	471.23	2.22
0:03:30	10,010.96	25.03	41.92	0:10:30	9,183.43	45.92	22.80	0:17:30	9,449.14	94.49	11.10	0:24:30	8,077.39	161.55	6.48	0:31:30	459.91	459.91	2.28
0:03:35	10,043.26	25.11	41.64	0:10:35	9,663.68	48.32	21.65	0:17:35	9,126.39	91.26	11.46	0:24:35	8,469.35	169.39	6.21	0:31:35	472.49	472.49	2.21
0:03:40	9,822.01	24.56	42.77	0:10:40	9,903.80	49.52	21.22	0:17:40	9,112.34	91.12	11.51	0:24:40	8,043.21	160.86	6.48	0:31:40	465.57	465.57	2.25
0:03:45	9,872.76	24.68	42.28	0:10:45	9,015.03	45.08	23.08	0:17:45	8,954.42	89.54	11.69	0:24:45	8,125.63	162.51	6.45	0:31:45	470.81	470.81	2.22
0:03:50	10,026.06	25.07	41.89	0:10:50	9,732.46	48.66	21.70	0:17:50	9,161.62	91.62	11.45	0:24:50	8,404.13	168.08	6.25	0:31:50	467.46	467.46	2.24
0:03:55	9,992.30	24.98	41.91	0:10:55	9,802.09	49.01	21.38	0:17:55	9,123.45	91.23	11.47	0:24:55	7,784.84	155.70	6.74	0:31:55	466.41	466.41	2.24
0:04:00	10,070.52	25.18	41.78	0:11:00	9,005.17	45.03	23.29	0:18:00	9,277.59	92.78	11.30	0:25:00	7,811.05	156.22	6.68	0:32:00	468.50	468.50	2.23
0:04:05	10,025.44	25.06	41.84	0:11:05	9,909.25	49.55	21.15	0:18:05	8,751.62	87.52	11.99	0:25:05	8,067.95	161.36	6.51	0:32:05	466.41	466.41	2.24
0:04:10	9,963.36	24.91	41.98	0:11:10	9,617.33	48.09	21.75	0:18:10	8,951.27	89.51	11.68	0:25:10	8,365.96	167.32	6.27	0:32:10	465.15	465.15	2.25
0:04:15	10,132.18	25.33	41.50	0:11:15	8,972.87	44.86	23.40	0:18:15	9,365.67	93.66	11.21	0:25:15	8,149.11	162.98	6.39	0:32:15	466.83	466.83	2.24
0:04:20	10,207.68	25.52	41.00	0:11:20	9,843.61	49.22	21.23	0:18:20	7,947.37	79.47	13.17	0:25:20	7,844.82	156.90	6.68	0:32:20	469.13	469.13	2.23
0:04:25	10,112.05	25.28	41.53	0:11:25	8,833.83	44.17	23.82	0:18:25	9,628.23	96.28	10.90	0:25:25	7,972.53	159.45	6.60	0:32:25	467.25	467.25	2.24
0:04:30	10,030.05	25.08	41.64	0:11:30	9,887.65	49.44	21.26	0:18:30	8,585.95	85.86	12.20	0:25:30	8,289.62	165.79	6.32	0:32:30	454.66	454.66	2.30
0:04:35	10,215.86	25.54	41.25	0:11:35	9,334.00	46.67	22.46	0:18:35	8,951.48	89.51	11.70	0:25:35	8,006.09	160.12	6.53	0:32:35	465.99	465.99	2.25
0:04:40	9,832.08	24.58	42.60	0:11:40	9,986.22	49.93	20.97	0:18:40	8,886.47	88.86	11.82	0:25:40	8,248.31	164.97	6.35	0:32:40	454.24	454.24	2.30
0:04:45	9,783.42	24.46	42.78	0:11:45	9,068.92	45.34	23.05	0:18:45	8,958.19	89.58	11.68	0:25:45	7,446.57	148.93	7.05	0:32:45	463.47	463.47	2.26
0:04:50	9,850.53	24.63	42.75	0:11:50	9,277.38	46.39	22.65	0:18:50	9,358.54	93.59	11.22	0:25:50	8,149.11	162.98	6.41	0:32:50	466.41	466.41	2.24
0:04:55	9,796.43	24.49	42.51	0:11:55	10,033.40	50.17	20.82	0:18:55	8,873.89	88.74	11.81	0:25:55	8,198.61	163.97	6.38	0:32:55	459.07	459.07	2.28
0:05:00	9,913.45	24.78	42.45	0:12:00	8,990.91	44.95	23.37	0:19:00	9,189.09	91.89	11.40	0:26:00	8,042.16	160.84	6.54	0:33:00	457.39	457.39	2.29
0:05:05	9,955.60	24.89	42.01	0:12:05	9,548.12	47.74	22.02	0:19:05	8,879.34	88.79	11.80	0:26:05	8,581.55	171.63	6.12	0:33:05	460.95	460.95	2.27
0:05:10	10,018.51	25.05	42.07	0:12:10	9,581.47	47.91	21.89	0:19:10	9,548.54	95.49	10.96	0:26:10	7,949.25	158.99	6.57	0:33:10	465.99	465.99	2.25
0:05:15	10,007.19	25.02	42.04	0:12:15	9,822.43	49.11	21.32	0:19:15	8,882.49	88.82	11.83	0:26:15	8,302.00	166.04	6.32	0:33:15	461.79	461.79	2.27
0:05:20	9,870.88	24.68	42.33	0:12:20	9,755.74	48.78	21.45	0:19:20	9,483.95	94.84	11.03	0:26:20	8,412.52	168.25	6.23	0:33:20	456.13	456.13	2.29
0:05:25	9,932.53	24.83	42.22	0:12:25	9,689.89	48.45	21.69	0:19:25	9,429.63	94.30	11.14	0:26:25	8,042.79	160.86	6.49	0:33:25	476.05	476.05	2.20
0:05:30	10,048.71	25.12	41.74	0:12:30	9,690.94	48.45	21.54	0:19:30	8,649.07	86.49	12.11	0:26:30	8,116.19	162.32	6.45	0:33:30	461.58	461.58	2.27
0:05:35	10,029.84	25.07	41.74	0:12:35	8,861.73	44.31	23.72	0:19:35	9,089.48	90.89	11.53	0:26:35	7,935.20	158.70	6.61	0:33:35	458.86	458.86	2.28
0:05:40	9,882.20	24.71	42.28	0:12:40	9,793.07	48.97	21.45	0:19:40	8,874.10	88.74	11.80	0:26:40	7,918.22	158.36	6.63	0:33:40	460.53	460.53	2.27
0:05:45	9,806.91	24.52	42.88	0:12:45	9,575.39	47.88	21.88	0:19:45	8,832.58	88.33	11.88	0:26:45	7,879.00	157.58	6.63	0:33:45	455.08	455.08	2.30
0:05:50	10,020.61	25.05	42.07	0:12:50	9,369.87	46.85	22.36	0:19:50	8,950.23	89.50	11.72	0:26:50	8,048.24	160.96	6.51	0:33:50	468.08	468.08	2.24
0:05:55	9,822.64	24.56	42.50	0:12:55	9,239.63	46.20	22.64	0:19:55	8,872.00	88.72	11.79	0:26:55	8,285.85	165.72	6.33	0:33:55	458.86	458.86	2.28
0:06:00	10,091.29	25.23	41.69	0:13:00	9,607.26	48.04	21.80	0:20:00	9,057.39	90.57	11.53	0:27:00	7,746.67	154.93	6.72	0:34:00	460.74	460.74	2.27
0:06:05	9,986.22	24.97	42.07	0:13:05	9,433.83	47.17	22.26	0:20:05	8,904.09	89.04	11.82	0:27:05	8,347.29	166.95	6.31	0:34:05	471.65	471.65	2.22
0:06:10	9,943.44	24.86	41.99	0:13:10	9,518.55	47.59	22.09	0:20:10	9,476.61	94.77	11.03	0:27:10	8,152.26	163.05	6.43	0:34:10	468.29	468.29	2.23
0:06:15	9,991.46	24.98	42.00	0:13:15	9,380.77	46.90	22.36	0:20:15	9,094.93	90.95	11.52	0:27:15	8,156.87	163.14	6.44	0:34:15	461.79	461.79	2.27
0:06:20	9,570.77	23.93	43.81	0:13:20	9,465.29	47.33	22.22	0:20:20	9,042.50	90.42	11.56	0:27:20	8,350.23	167.00	6.25	0:34:20	465.15	465.15	2.25
0:06:25	9,916.38	24.79	42.16	0:13:25	9,847.18	49.24	21.18	0:20:25	9,217.40	92.17	11.35	0:27:25	8,033.35	160.67	6.51	0:34:25	464.73	464.73	2.25
0:06:30	10,021.24	25.05	41.96	0:13:30	9,242.15	46.21	22.68	0:20:30	8,400.56	84.01	12.48	0:27:30	8,352.75	167.05	6.30	0:34:30	460.53	460.53	2.27
0:06:35	9,942.18	24.86	42.16	0:13:35	9,583.98	47.92	21.97	0:20:35	9,029.29	90.29	11.65	0:27:35	8,350.65	167.01	6.27	0:34:35	462.42	462.42	2.26
0:06:40	9,975.94	24.94	42.27	0:13:40	9,637.25	48.19	21.65	0:20:40	9,374.90	93.75	11.18	0:27:40	8,017.41	160.35	6.53	0:34:40	452.36	452.36	2.31
0:06:45	10,133.86	25.72	41.23	0:13:45	9,538.69	56.44	21.95	0:20:45	8,788.53	108.50	11.82	0:27:45	7,921.99	193.22	6.55	0:34:45	464.94	464.94	2.25
0:06:50	3,118.67	0.00	40.74	0:13:50	3,771.52	0.00	16.12	0:20:50	3,242.41	0.00	9.46	0:27:50	2,619.34	0.00	5.95	0:34:50	191.47	0.00	2.22
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00
												0:28:00	0.00	0.00	0.00				

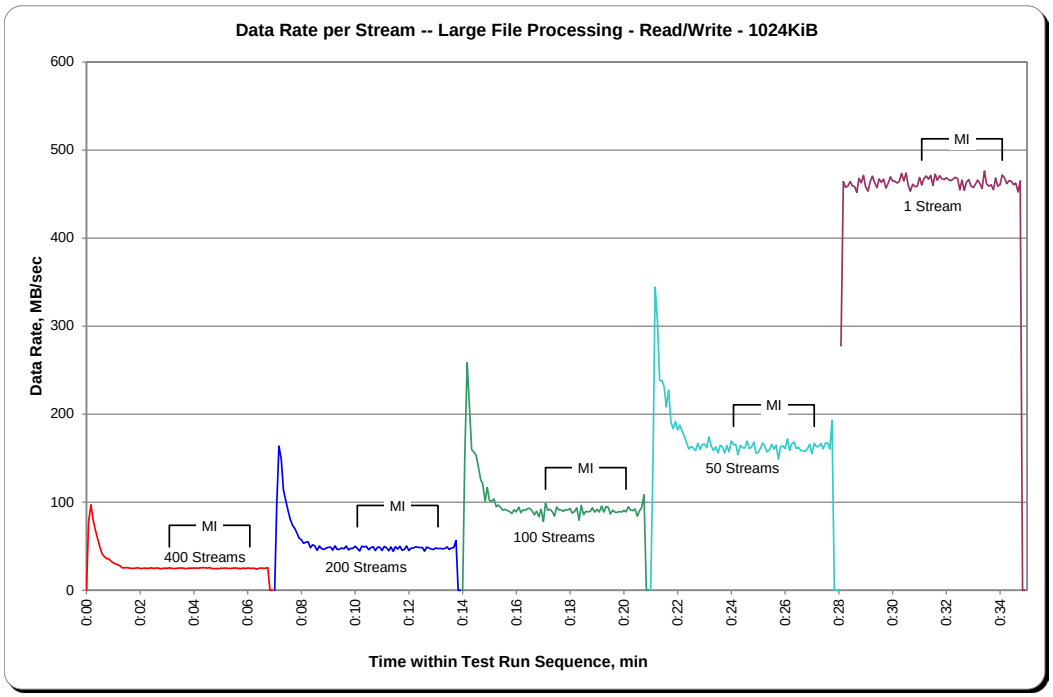
SPC-2 "Large File Processing/ READ-WRITE/1024 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



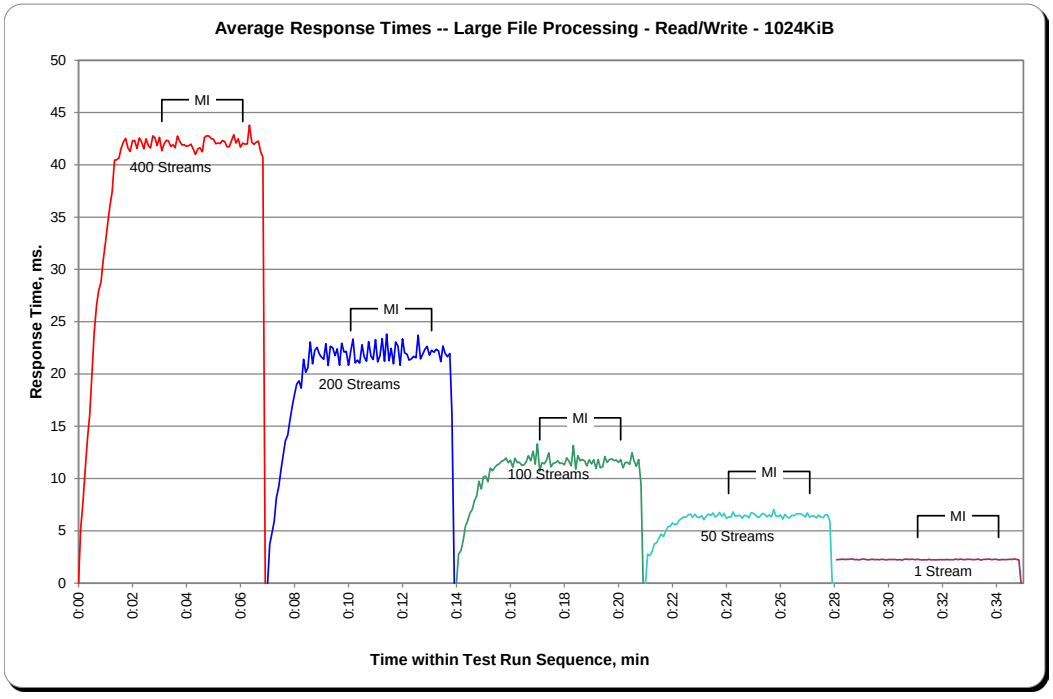
SPC-2 "Large File Processing/ READ-WRITE/1024 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/READ-WRITE/1024 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/READ-WRITE/1024 KiB Transfer Size" Average Response Time Graph



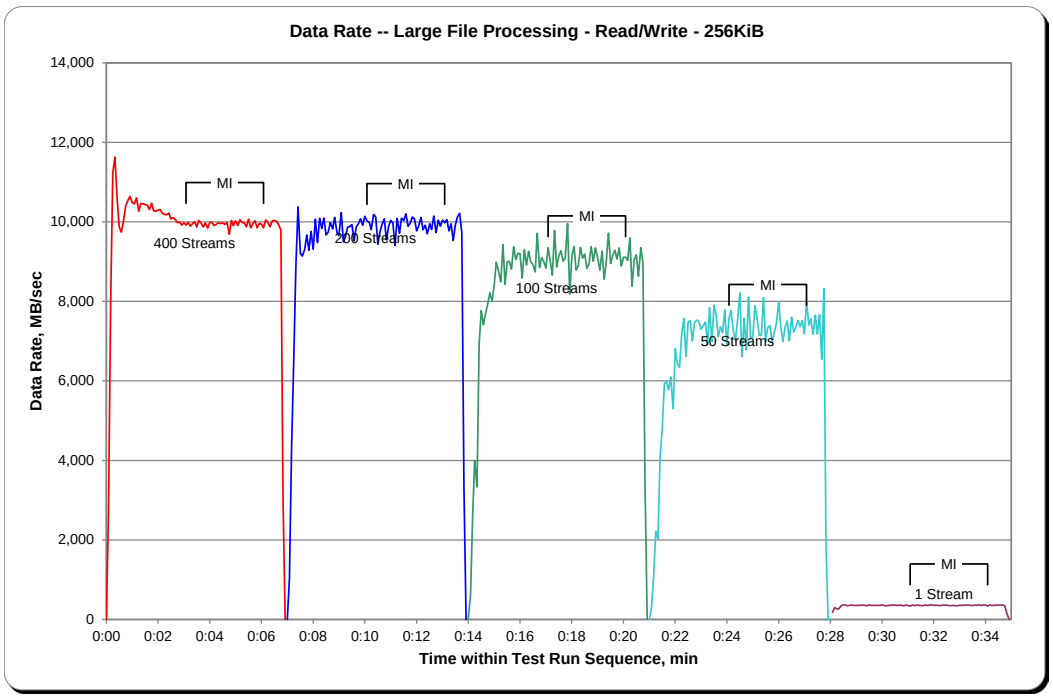
SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Test Run Data – Ramp-Up Period

TR16	400 Streams			TR17	200 Streams			TR18	100 Streams			TR19	50 Streams			TR20	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	0.00	0.00	0.00	0:07:00	0.10	0.10	21.16	0:14:00	0.00	0.00	0.00	0:21:00	0.00	0.00	0.00	0:28:05	177.47	177.47	0.87
0:00:05	2,723.89	73.62	1.40	0:07:05	1,034.89	64.68	1.88	0:14:05	636.49	90.93	1.06	0:21:05	303.09	101.03	0.80	0:28:10	293.55	293.55	0.89
0:00:10	7,963.52	100.80	1.89	0:07:10	4,321.81	123.48	1.56	0:14:10	2,490.26	166.02	1.04	0:21:10	1,079.56	154.22	1.10	0:28:15	269.54	269.54	0.97
0:00:15	11,232.77	97.68	2.25	0:07:15	6,497.24	112.02	1.85	0:14:15	4,000.74	166.70	1.34	0:21:15	2,225.39	222.54	0.98	0:28:20	270.22	270.22	0.97
0:00:20	11,625.93	83.04	2.88	0:07:20	8,863.35	113.63	2.04	0:14:20	3,331.38	107.46	2.15	0:21:20	2,032.72	169.39	1.36	0:28:25	350.01	350.01	0.74
0:00:25	10,600.95	61.28	3.87	0:07:25	10,377.23	111.58	2.11	0:14:25	6,927.36	203.75	1.20	0:21:25	4,078.12	271.87	0.88	0:28:30	363.23	363.23	0.72
0:00:30	9,872.08	49.11	4.96	0:07:30	9,207.60	88.53	2.84	0:14:30	7,766.96	168.85	1.34	0:21:30	4,789.90	239.49	0.89	0:28:35	363.96	363.96	0.72
0:00:35	9,741.01	41.99	5.91	0:07:35	9,139.76	78.12	3.15	0:14:35	7,407.19	139.76	1.73	0:21:35	5,929.38	247.06	0.98	0:28:40	345.72	345.72	0.75
0:00:40	10,027.27	38.27	6.34	0:07:40	9,301.60	72.67	3.45	0:14:40	7,695.60	130.43	1.91	0:21:40	5,985.11	230.20	1.09	0:28:45	361.65	361.65	0.72
0:00:45	10,397.31	35.85	6.98	0:07:45	9,664.99	67.59	3.70	0:14:45	7,932.27	123.94	2.05	0:21:45	5,774.40	186.27	1.27	0:28:50	361.65	361.65	0.72
0:00:50	10,531.84	34.19	7.46	0:07:50	9,287.24	61.50	4.16	0:14:50	8,214.81	117.35	2.12	0:21:50	6,096.26	196.65	1.32	0:28:55	356.78	356.78	0.73
0:00:55	10,640.22	33.04	7.77	0:07:55	9,759.83	61.38	4.17	0:14:55	8,005.04	105.33	2.37	0:21:55	5,301.60	147.27	1.65	0:29:00	352.32	352.32	0.74
0:01:00	10,484.76	30.75	8.26	0:08:00	9,313.71	55.44	4.58	0:15:00	8,386.41	106.16	2.45	0:22:00	6,807.46	183.99	1.38	0:29:05	355.47	355.47	0.73
0:01:05	10,450.69	29.61	8.76	0:08:05	10,065.70	57.52	4.46	0:15:05	8,989.97	108.31	2.36	0:22:05	6,430.03	160.75	1.54	0:29:10	354.05	354.05	0.74
0:01:10	10,598.85	28.96	8.96	0:08:10	9,479.34	52.37	4.90	0:15:10	8,767.09	100.77	2.50	0:22:10	6,339.90	147.44	1.68	0:29:15	363.59	363.59	0.72
0:01:15	10,267.92	27.38	9.38	0:08:15	10,092.07	54.55	4.73	0:15:15	8,490.11	95.39	2.72	0:22:15	7,171.84	166.79	1.57	0:29:20	353.63	353.63	0.74
0:01:20	10,460.70	27.75	9.42	0:08:20	9,830.50	51.20	5.08	0:15:20	9,430.94	99.27	2.48	0:22:20	7,563.17	160.92	1.55	0:29:25	341.52	341.52	0.76
0:01:25	10,456.56	27.23	9.58	0:08:25	10,096.21	51.25	5.04	0:15:25	8,430.60	86.91	2.95	0:22:25	6,613.74	134.97	1.88	0:29:30	365.95	365.95	0.71
0:01:30	10,432.96	26.35	9.80	0:08:30	9,669.60	48.59	5.34	0:15:30	8,996.57	89.97	2.90	0:22:30	7,491.71	149.83	1.72	0:29:35	355.83	355.83	0.73
0:01:35	10,423.26	26.06	10.03	0:08:35	9,741.64	48.71	5.39	0:15:35	9,004.44	90.04	2.92	0:22:35	7,510.11	150.20	1.74	0:29:40	352.74	352.74	0.74
0:01:40	10,304.51	25.76	10.11	0:08:40	9,983.91	49.92	5.24	0:15:40	8,813.75	88.14	2.97	0:22:40	7,005.80	140.12	1.87	0:29:45	354.21	354.21	0.74
0:01:45	10,464.84	26.16	10.07	0:08:45	9,822.96	49.11	5.34	0:15:45	9,370.34	93.70	2.77	0:22:45	7,469.22	149.38	1.75	0:29:50	353.63	353.63	0.74
0:01:50	10,274.26	25.69	10.19	0:08:50	10,110.68	50.55	5.17	0:15:50	9,051.15	90.51	2.91	0:22:50	7,527.10	150.54	1.74	0:29:55	352.95	352.95	0.74
0:01:55	10,267.13	25.67	10.22	0:08:55	9,734.09	48.67	5.39	0:15:55	9,210.85	92.11	2.83	0:22:55	7,502.67	150.05	1.74	0:30:00	368.21	368.21	0.71
0:02:00	10,295.71	25.74	10.19	0:09:00	9,655.29	48.28	5.43	0:16:00	9,200.68	92.01	2.83	0:23:00	7,295.15	145.90	1.80	0:30:05	349.54	349.54	0.75
0:02:05	10,311.59	25.78	10.12	0:09:05	10,230.12	51.15	5.10	0:16:05	8,588.10	85.88	3.06	0:23:05	7,385.70	147.71	1.77	0:30:10	342.20	342.20	0.76
0:02:10	10,222.04	25.56	10.28	0:09:10	9,496.64	47.48	5.52	0:16:10	9,295.26	92.95	2.82	0:23:10	7,481.80	149.64	1.75	0:30:15	356.99	356.99	0.73
0:02:15	10,187.28	25.47	10.21	0:09:15	9,640.19	48.20	5.43	0:16:15	8,911.59	89.12	2.95	0:23:15	6,907.23	138.14	1.89	0:30:20	355.05	355.05	0.73
0:02:20	10,177.06	25.44	10.37	0:09:20	9,871.45	49.36	5.31	0:16:20	9,256.57	92.57	2.80	0:23:20	7,837.00	156.74	1.66	0:30:25	367.21	367.21	0.71
0:02:25	10,217.48	25.54	10.27	0:09:25	9,880.57	49.40	5.30	0:16:25	8,992.33	89.92	2.93	0:23:25	6,988.81	139.78	1.87	0:30:30	361.55	361.55	0.72
0:02:30	10,075.61	25.19	10.33	0:09:30	9,927.24	49.64	5.28	0:16:30	8,922.28	89.22	2.92	0:23:30	7,901.60	158.03	1.65	0:30:35	355.00	355.00	0.73
0:02:35	10,108.85	25.27	10.39	0:09:35	9,522.59	47.61	5.50	0:16:35	8,744.28	87.44	2.98	0:23:35	7,639.77	152.80	1.71	0:30:40	360.97	360.97	0.72
0:02:40	10,058.41	25.15	10.41	0:09:40	9,873.23	49.37	5.29	0:16:40	9,716.31	97.16	2.71	0:23:40	7,108.24	142.16	1.84	0:30:45	358.61	358.61	0.73
0:02:45	9,977.67	24.94	10.53	0:09:45	9,951.62	49.76	5.29	0:16:45	8,847.57	88.48	2.97	0:23:45	7,359.48	147.19	1.78	0:30:50	342.73	342.73	0.76
0:02:50	9,992.82	24.98	10.36	0:09:50	10,076.55	50.38	5.19	0:16:50	9,104.05	91.04	2.88	0:23:50	7,215.62	144.31	1.82	0:30:55	357.88	357.88	0.73
0:02:55	9,917.38	24.79	10.62	0:09:55	9,911.98	49.56	5.29	0:16:55	9,002.02	90.02	2.88	0:23:55	7,784.10	155.68	1.67	0:31:00	353.47	353.47	0.74
0:03:00	9,978.72	24.95	10.58	0:10:00	10,138.52	50.69	5.13	0:17:00	8,836.77	88.37	2.97	0:24:00	6,904.72	138.09	1.89				

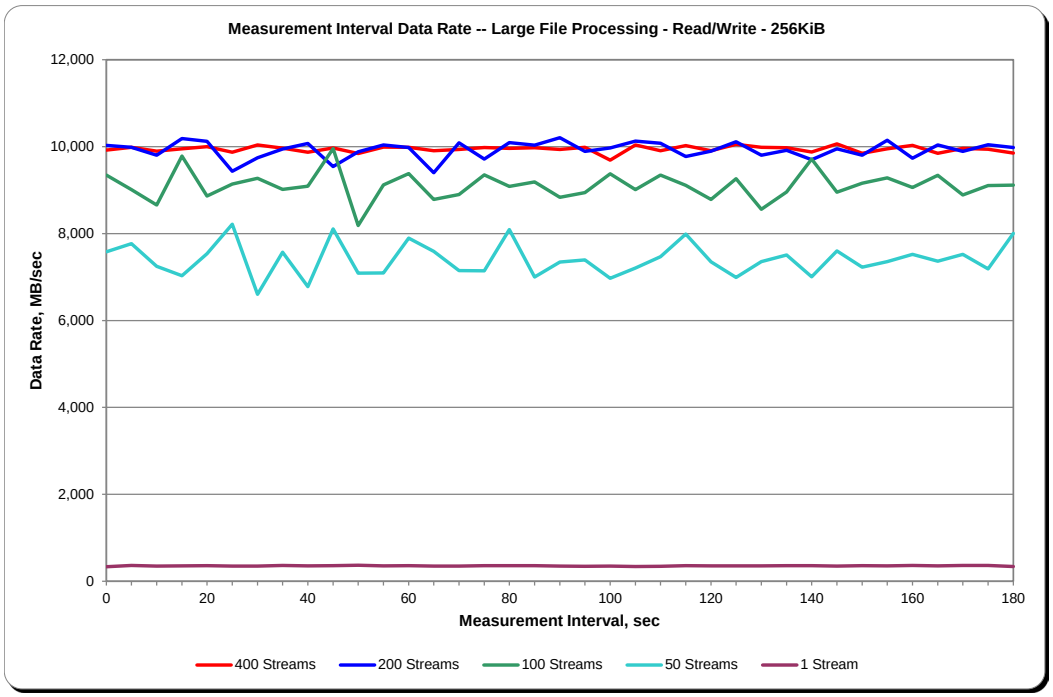
SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR16	400 Streams			TR17	200 Streams			TR18	100 Streams			TR19	50 Streams			TR20	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	9,919.42	24.80	10.52	0:10:05	10,026.27	50.13	5.25	0:17:05	9,347.27	93.47	2.81	0:24:05	7,581.99	151.64	1.73	0:31:05	335.02	335.02	0.78
0:03:10	9,984.33	24.96	10.46	0:10:10	9,982.08	49.91	5.24	0:17:10	9,010.47	90.10	2.90	0:24:10	7,768.79	155.38	1.68	0:31:10	363.65	363.65	0.72
0:03:15	9,893.79	24.73	10.61	0:10:15	9,803.82	49.02	5.34	0:17:15	8,659.19	86.59	3.02	0:24:15	7,246.66	144.93	1.80	0:31:15	350.80	350.80	0.74
0:03:20	9,950.72	24.88	10.50	0:10:20	10,186.08	50.93	5.14	0:17:20	9,781.75	97.82	2.68	0:24:20	7,029.86	140.60	1.87	0:31:20	357.25	357.25	0.73
0:03:25	10,000.06	25.00	10.53	0:10:25	10,122.74	50.61	5.19	0:17:25	8,863.56	88.64	2.97	0:24:25	7,537.48	150.75	1.73	0:31:25	360.66	360.66	0.72
0:03:30	9,873.18	24.68	10.60	0:10:30	9,434.14	47.17	5.54	0:17:30	9,136.40	91.36	2.84	0:24:30	8,213.18	164.26	1.59	0:31:30	349.75	349.75	0.75
0:03:35	10,037.91	25.09	10.45	0:10:35	9,744.73	48.72	5.37	0:17:35	9,273.55	92.74	2.84	0:24:35	6,603.51	132.07	1.98	0:31:35	350.91	350.91	0.74
0:03:40	9,965.46	24.91	10.50	0:10:40	9,944.85	49.72	5.27	0:17:40	9,013.35	90.13	2.90	0:24:40	7,570.67	151.41	1.73	0:31:40	365.69	365.69	0.71
0:03:45	9,872.40	24.68	10.60	0:10:45	10,074.88	50.37	5.19	0:17:45	9,089.84	90.90	2.87	0:24:45	6,780.51	135.61	1.93	0:31:45	355.94	355.94	0.73
0:03:50	9,971.17	24.93	10.56	0:10:50	9,543.56	47.72	5.50	0:17:50	9,952.66	99.53	2.63	0:24:50	8,105.49	162.11	1.61	0:31:50	357.62	357.62	0.73
0:03:55	9,843.04	24.61	10.61	0:10:55	9,879.00	49.40	5.29	0:17:55	8,184.40	81.84	3.20	0:24:55	7,088.27	141.77	1.85	0:31:55	367.95	367.95	0.71
0:04:00	9,989.21	24.97	10.50	0:11:00	10,037.02	50.19	5.24	0:18:00	9,120.15	91.20	2.88	0:25:00	7,091.99	141.84	1.84	0:32:00	353.89	353.89	0.74
0:04:05	9,985.43	24.96	10.55	0:11:05	9,978.88	49.89	5.25	0:18:05	9,379.56	93.80	2.76	0:25:05	7,895.25	157.91	1.66	0:32:05	359.35	359.35	0.73
0:04:10	9,906.47	24.77	10.56	0:11:10	9,400.96	47.00	5.54	0:18:10	8,784.66	87.85	3.00	0:25:10	7,592.74	151.85	1.72	0:32:10	352.32	352.32	0.74
0:04:15	9,936.88	24.84	10.53	0:11:15	10,086.57	50.43	5.21	0:18:15	8,900.10	89.00	2.94	0:25:15	7,149.24	142.98	1.83	0:32:15	351.27	351.27	0.74
0:04:20	9,978.14	24.95	10.52	0:11:20	9,714.27	48.57	5.40	0:18:20	9,352.30	93.52	2.79	0:25:20	7,143.95	142.88	1.83	0:32:20	362.18	362.18	0.72
0:04:25	9,958.75	24.90	10.54	0:11:25	10,090.50	50.45	5.20	0:18:25	9,085.49	90.85	2.88	0:25:25	8,091.70	161.83	1.61	0:32:25	361.92	361.92	0.72
0:04:30	9,972.48	24.93	10.47	0:11:30	10,032.41	50.16	5.21	0:18:30	9,189.98	91.90	2.85	0:25:30	7,001.08	140.02	1.88	0:32:30	362.39	362.39	0.72
0:04:35	9,934.79	24.84	10.49	0:11:35	10,205.69	51.03	5.14	0:18:35	8,834.41	88.34	2.97	0:25:35	7,342.71	146.85	1.78	0:32:35	351.43	351.43	0.74
0:04:40	9,984.70	24.96	10.52	0:11:40	9,888.49	49.44	5.30	0:18:40	8,939.95	89.40	2.90	0:25:40	7,393.88	147.88	1.76	0:32:40	347.39	347.39	0.75
0:04:45	9,688.37	24.22	10.82	0:11:45	9,968.65	49.84	5.24	0:18:45	9,375.53	93.76	2.81	0:25:45	6,973.34	139.47	1.87	0:32:45	352.01	352.01	0.74
0:04:50	10,037.13	25.09	10.48	0:11:50	10,125.68	50.63	5.18	0:18:50	9,010.99	90.11	2.90	0:25:50	7,209.01	144.18	1.81	0:32:50	342.26	342.26	0.76
0:04:55	9,903.75	24.76	10.64	0:11:55	10,075.92	50.38	5.20	0:18:55	9,345.43	93.45	2.79	0:25:55	7,465.13	149.30	1.75	0:32:55	343.09	343.09	0.76
0:05:00	10,024.49	25.06	10.43	0:12:00	9,773.67	48.87	5.36	0:19:00	9,109.61	91.10	2.87	0:26:00	7,990.52	159.81	1.64	0:33:00	358.04	358.04	0.73
0:05:05	9,906.16	24.77	10.54	0:12:05	9,897.35	49.49	5.28	0:19:05	8,784.03	87.84	2.98	0:26:05	7,347.06	146.94	1.79	0:33:05	352.58	352.58	0.74
0:05:10	10,054.32	25.14	10.40	0:12:10	10,110.00	50.55	5.20	0:19:10	9,263.28	92.63	2.83	0:26:10	6,989.39	139.79	1.87	0:33:10	357.09	357.09	0.73
0:05:15	9,982.97	24.96	10.50	0:12:15	9,801.83	49.01	5.34	0:19:15	8,559.37	85.59	3.03	0:26:15	7,354.40	147.09	1.78	0:33:15	357.25	357.25	0.73
0:05:20	9,973.22	24.93	10.53	0:12:20	9,914.44	49.57	5.26	0:19:20	8,956.20	89.56	2.94	0:26:20	7,508.43	150.17	1.73	0:33:20	358.51	358.51	0.73
0:05:25	9,876.48	24.69	10.64	0:12:25	9,697.81	48.49	5.41	0:19:25	9,715.06	97.15	2.70	0:26:25	7,004.96	140.10	1.86	0:33:25	359.14	359.14	0.73
0:05:30	10,062.55	25.16	10.37	0:12:30	9,951.62	49.76	5.26	0:19:30	8,953.42	89.53	2.91	0:26:30	7,602.65	152.05	1.72	0:33:30	351.12	351.12	0.74
0:05:35	9,847.18	24.62	10.66	0:12:35	9,804.34	49.02	5.34	0:19:35	9,158.73	91.59	2.86	0:26:35	7,226.47	144.53	1.81	0:33:35	359.24	359.24	0.73
0:05:40	9,949.78	24.87	10.55	0:12:40	10,147.12	50.74	5.15	0:19:40	9,282.62	92.83	2.83	0:26:40	7,355.39	147.11	1.78	0:33:40	357.04	357.04	0.73
0:05:45	10,027.79	25.07	10.47	0:12:45	9,732.93	48.66	5.40	0:19:45	9,062.27	90.62	2.90	0:26:45	7,522.85	150.46	1.74	0:33:45	366.79	366.79	0.71
0:05:50	9,846.55	24.62	10.62	0:12:50	10,040.01	50.20	5.22	0:19:50	9,341.45	93.41	2.78	0:26:50	7,362.16	147.24	1.77	0:33:50	354.26	354.26	0.74
0:05:55	9,960.90	24.90	10.50	0:12:55	9,891.16	49.46	5.27	0:19:55	8,889.25	88.89	2.96	0:26:55	7,523.17	150.46	1.73	0:33:55	365.90	365.90	0.71
0:06:00	9,940.19	24.85	10.55	0:13:00	10,041.22	50.21	5.21	0:20:00	9,106.73	91.07	2.86	0:27:00	7,189.61	143.79	1.82	0:34:00	365.22	365.22	0.71
0:06:05	9,849.54	24.62	10.63	0:13:05	9,977.62	49.89	5.28	0:20:05	9,115.11	91.15	2.89	0:27:05	8,001.95	160.04	1.64	0:34:05	340.21	340.21	0.77
0:06:10	10,049.03	25.12	10.51	0:13:10	10,056.42	50.28	5.18	0:20:10	9,028.50	90.29	2.86	0:27:10	7,405.52	148.11	1.77	0:34:10	364.54	364.54	0.71
0:06:15	9,981.71	24.95	10.44	0:13:15	9,774.62	48.87	5.36	0:20:15	9,597.67	95.98	2.75	0:27:15	7,560.91	151.22	1.72	0:34:15	356.62	356.62	0.73
0:06:20	9,874.49	24.69	10.58	0:13:20	9,950.72	49.75	5.28	0:20:20	8,383.31	83.83	3.13	0:27:20	7,172.31	143.45	1.82	0:34:20	351.95	351.95	0.74
0:06:25	10,025.23	25.06	10.45	0:13:25	9,531.35	47.66	5.49	0:20:25	9,037.62	90.38	2.88	0:27:25	7,657.91	153.16	1.72	0:34:25	361.18	361.18	0.72
0:06:30	10,031.78	25.08	10.44	0:13:30	9,924.51	49.62	5.28	0:20:30	9,173.41	91.73	2.86	0:27:30	7,180.33	143.61	1.82	0:34:30	358.14	358.14	0.73
0:06:35	10,010.44	25.03	10.51	0:13:35	10,129.30	50.65	5.16	0:20:35	8,633.08	86.33	3.04	0:27:35	7,664.78	153.30	1.71	0:34:35	358.98	358.98	0.73
0:06:40	9,923.72	24.81	10.60	0:13:40	10,213.50	51.07	5.15	0:20:40	9,350.41	93.50	2.79	0:27:40	6,543.43	130.87	1.99	0:34:40	365.11	365.11	0.71
0:06:45	9,790.03	30.12	10.57	0:13:45	9,731.57	67.58	5.22	0:20:45	8,979.64	130.14	2.81	0:27:45	8,320.08	260.00	1.53	0:34:45	344.67	344.67	0.76
0:06:50	3,040.45	0.00	9.94	0:13:50	3,338.30	0.00	4.46	0:20:50	3,275.91	0.00	2.32	0:27:50	1,848.27	0.00	2.08	0:34:50	144.81	0.00	0.73
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00
												0:28:00	0.00	0.00	0.00				

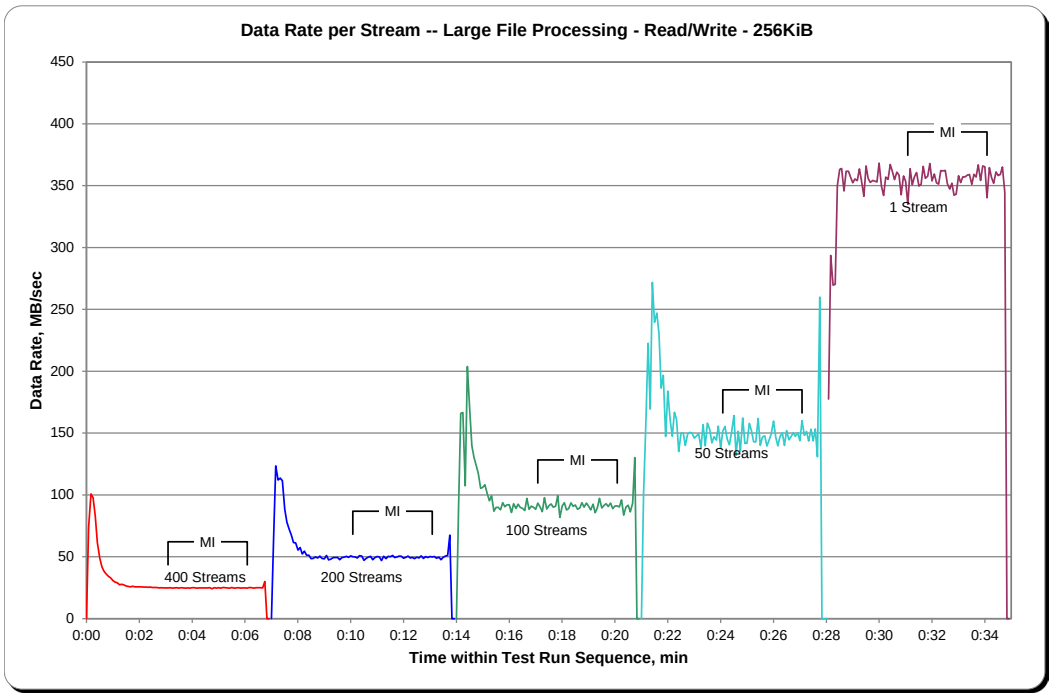
SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



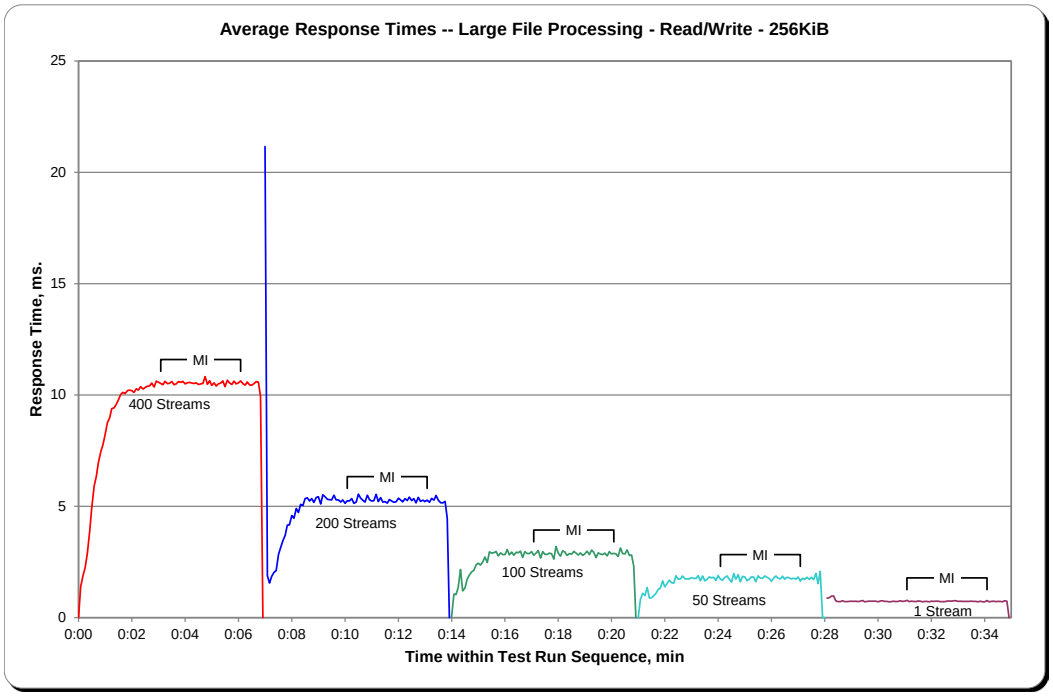
SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/READ-WRITE/256 KiB Transfer Size" Average Response Time Graph



Large File Processing Test – READ ONLY Test Phase

Clause 10.6.8.1.3

1. *A table that will contain the following information for each "READ ONLY, 1024 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
2. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "READ ONLY, 1024 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*
3. *A table that will contain the following information for each "READ ONLY, 256 KiB Transfer Size" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
4. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "READ ONLY, 256 KiB Transfer Size" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*

The SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Test Run data is contained in the table that appears on the next page. That table is followed by graphs illustrating the average Data Rate, average Data Rate per Stream, and average Response Time produced by the same Test Runs. The table and graphs present the data at five-second intervals.

Immediately following the SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" table and graphs will be the SPC-2 "Large File Processing/READ ONLY/64 KiB Transfer Size" table and graphs. The table contains the Test Run data and the graphs illustrate the average Data Rate, average Data Rate per Stream, and average Response Time produced by the Test Runs.

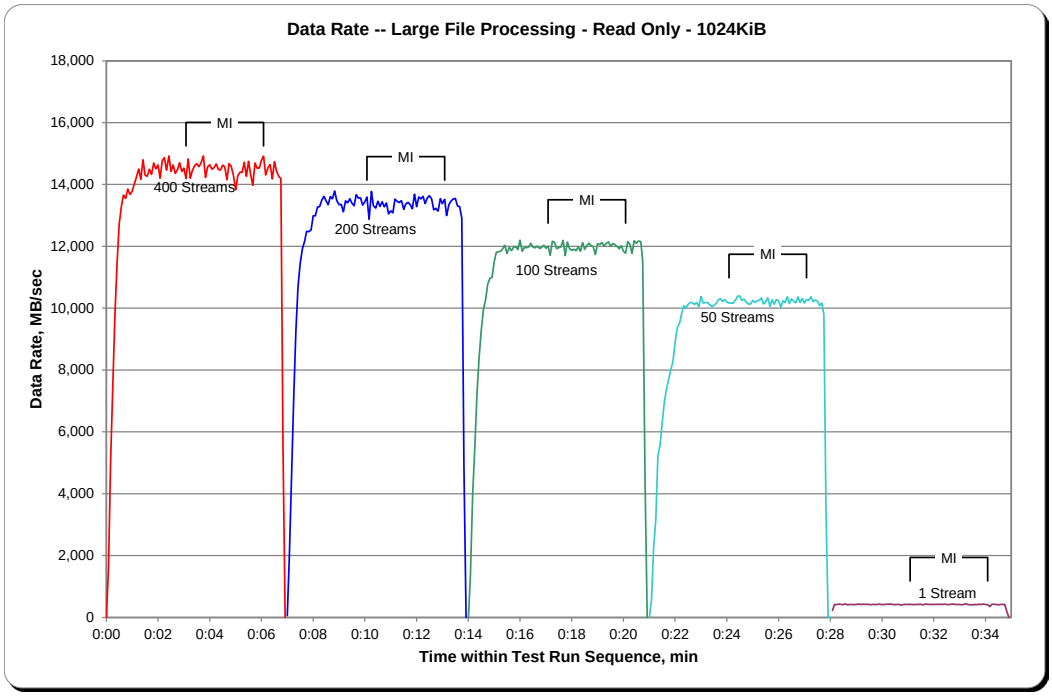
SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Test Run Data – Ramp Up Period

TR21	400 Streams			TR22	200 Streams			TR23	100 Streams			TR24	50 Streams			TR25	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	0.00	0.00	0.00	0:07:00	63.96	31.98	2.70	0:14:00	0.00	0.00	0.00	0:21:00	0.00	0.00	0.00	0:28:05	229.85	229.85	2.71
0:00:05	1,616.28	57.72	7.13	0:07:05	2,082.68	109.61	5.10	0:14:05	1,309.25	163.66	3.22	0:21:05	568.12	142.03	3.26	0:28:10	424.46	424.46	2.46
0:00:10	5,112.65	66.40	11.07	0:07:10	4,595.07	109.41	6.98	0:14:10	4,039.53	192.36	3.74	0:21:10	2,267.23	251.91	2.99	0:28:15	414.19	414.19	2.53
0:00:15	7,471.94	67.93	13.15	0:07:15	7,100.33	116.40	7.47	0:14:15	5,509.01	204.04	4.56	0:21:15	3,156.00	263.00	3.22	0:28:20	432.43	432.43	2.42
0:00:20	9,797.26	66.65	13.76	0:07:20	9,243.41	121.62	7.77	0:14:20	7,243.98	185.74	4.92	0:21:20	5,245.82	291.43	3.16	0:28:25	419.22	419.22	2.50
0:00:25	11,477.50	65.59	14.67	0:07:25	10,691.07	116.21	8.28	0:14:25	8,419.23	191.35	5.14	0:21:25	5,567.10	278.35	3.50	0:28:30	411.88	411.88	2.53
0:00:30	12,723.63	62.68	15.66	0:07:30	11,432.83	106.85	9.06	0:14:30	9,291.22	182.18	5.34	0:21:30	6,288.94	262.04	3.60	0:28:35	441.66	441.66	2.38
0:00:35	13,287.97	58.80	17.06	0:07:35	11,900.29	100.00	9.80	0:14:35	9,963.99	174.81	5.79	0:21:35	6,962.75	257.88	3.79	0:28:40	407.90	407.90	2.56
0:00:40	13,657.49	54.41	18.46	0:07:40	12,168.93	93.61	10.65	0:14:40	10,268.50	165.62	6.06	0:21:40	7,395.19	255.01	3.97	0:28:45	421.32	421.32	2.49
0:00:45	13,545.50	50.17	20.05	0:07:45	12,485.18	87.31	11.45	0:14:45	10,774.33	160.81	6.26	0:21:45	7,701.79	248.44	4.08	0:28:50	419.85	419.85	2.49
0:00:50	13,852.74	48.10	21.17	0:07:50	12,479.31	82.64	12.19	0:14:50	10,966.01	152.31	6.69	0:21:50	8,009.23	250.29	4.09	0:28:55	416.70	416.70	2.51
0:00:55	13,677.63	45.59	22.48	0:07:55	12,532.37	78.82	12.86	0:14:55	10,992.01	139.14	7.11	0:21:55	8,268.02	250.55	4.16	0:29:00	420.27	420.27	2.49
0:01:00	13,776.40	43.60	23.47	0:08:00	12,991.23	77.79	13.11	0:15:00	11,485.89	140.07	7.32	0:22:00	8,940.37	229.24	4.21	0:29:05	433.90	433.90	2.41
0:01:05	14,001.43	42.17	24.26	0:08:05	12,985.77	75.06	13.58	0:15:05	11,803.40	132.62	7.70	0:22:05	9,379.93	228.78	4.54	0:29:10	418.38	418.38	2.50
0:01:10	14,234.63	40.55	24.93	0:08:10	13,270.99	72.92	13.92	0:15:10	11,830.03	125.85	8.05	0:22:10	9,512.47	211.39	4.64	0:29:15	428.03	428.03	2.45
0:01:15	14,501.18	39.84	25.87	0:08:15	13,285.67	69.92	14.63	0:15:15	11,843.67	124.67	8.40	0:22:15	9,827.88	213.65	4.88	0:29:20	423.00	423.00	2.47
0:01:20	14,171.29	37.79	27.07	0:08:20	13,495.17	69.56	14.85	0:15:20	11,921.68	125.49	8.33	0:22:20	10,082.06	214.51	4.84	0:29:25	425.51	425.51	2.46
0:01:25	14,797.92	38.44	26.99	0:08:25	13,617.23	68.77	15.03	0:15:25	12,036.81	125.38	8.38	0:22:25	10,011.80	213.02	4.92	0:29:30	420.69	420.69	2.47
0:01:30	14,303.00	36.12	28.63	0:08:30	13,474.20	67.37	15.56	0:15:30	11,772.57	117.73	8.72	0:22:30	10,128.20	202.56	5.00	0:29:35	412.51	412.51	2.55
0:01:35	14,267.34	35.67	29.30	0:08:35	13,348.58	66.74	15.58	0:15:35	11,972.01	119.72	8.77	0:22:35	10,180.20	203.60	5.14	0:29:40	425.72	425.72	2.46
0:01:40	14,495.72	36.24	29.02	0:08:40	13,607.79	68.04	15.49	0:15:40	11,859.60	118.60	8.81	0:22:40	10,177.27	203.55	5.15	0:29:45	411.46	411.46	2.55
0:01:45	14,330.68	35.83	29.28	0:08:45	13,541.52	67.71	15.44	0:15:45	11,973.90	119.74	8.77	0:22:45	10,121.69	202.43	5.18	0:29:50	425.09	425.09	2.46
0:01:50	14,694.74	36.74	28.62	0:08:50	13,787.31	68.94	15.33	0:15:50	11,995.50	119.95	8.74	0:22:50	10,185.24	203.70	5.13	0:29:55	426.35	426.35	2.44
0:01:55	14,508.31	36.27	28.75	0:08:55	13,483.01	67.42	15.47	0:15:55	11,898.61	118.99	8.80	0:22:55	10,050.81	201.02	5.22	0:30:00	412.93	412.93	2.55
0:02:00	14,630.78	36.58	28.69	0:09:00	13,346.28	66.73	15.67	0:16:00	12,197.87	121.98	8.62	0:23:00	10,373.35	207.47	5.06	0:30:05	424.04	424.04	2.47
0:02:05	14,205.69	35.51	29.53	0:09:05	13,353.20	66.77	15.77	0:16:05	11,840.31	118.40	8.83	0:23:05	10,172.24	203.44	5.15	0:30:10	429.50	429.50	2.44
0:02:10	14,773.18	36.93	28.34	0:09:10	13,120.20	65.60	15.84	0:16:10	11,966.77	119.67	8.78	0:23:10	10,176.01	203.52	5.14	0:30:15	427.19	427.19	2.45
0:02:15	14,863.98	37.16	28.33	0:09:15	13,473.57	67.37	15.66	0:16:15	11,960.06	119.60	8.73	0:23:15	10,192.37	203.85	5.14	0:30:20	432.43	432.43	2.42
0:02:20	14,468.88	36.17	28.94	0:09:20	13,410.45	67.05	15.58	0:16:20	11,976.42	119.76	8.77	0:23:20	10,113.10	202.26	5.18	0:30:25	420.69	420.69	2.49
0:02:25	14,921.66	37.30	28.24	0:09:25	13,540.89	67.70	15.62	0:16:25	12,095.53	120.96	8.67	0:23:25	10,059.41	201.19	5.20	0:30:30	416.07	416.07	2.51
0:02:30	14,423.79	36.06	28.84	0:09:30	13,394.93	66.97	15.56	0:16:30	11,982.50	119.82	8.73	0:23:30	10,083.95	201.68	5.20	0:30:35	419.01	419.01	2.50
0:02:35	14,632.04	36.58	28.73	0:09:35	13,309.99	66.55	15.72	0:16:35	11,951.25	119.51	8.80	0:23:35	10,153.15	203.06	5.18	0:30:40	422.16	422.16	2.47
0:02:40	14,354.38	35.89	29.18	0:09:40	13,674.06	68.37	15.40	0:16:40	12,006.61	120.07	8.71	0:23:40	10,272.90	205.46	5.09	0:30:45	398.67	398.67	2.63
0:02:45	14,478.74	36.20	28.92	0:09:45	13,559.77	67.80	15.34	0:16:45	11,931.12	119.31	8.80	0:23:45	10,306.24	206.12	5.08	0:30:50	418.59	418.59	2.49
0:02:50	14,699.78	36.75	28.67	0:09:50	13,570.67	67.85	15.54	0:16:50	11,955.23	119.55	8.73	0:23:50	10,219.63	204.39	5.13	0:30:55	421.74	421.74	2.50
0:02:55	14,426.73	36.07	29.00	0:09:55	13,330.34	66.65	15.67	0:16:55	12,031.57	120.32	8.72	0:23:55	10,280.66	205.61	5.10	0:31:00	421.53	421.53	2.48
0:03:00	14,525.71	36.31	28.91	0:10:00	13,450.92	67.25	15.66	0:17:00	11,940.13	119.40	8.77	0:24:00	10,199.29	203.99	5.12				

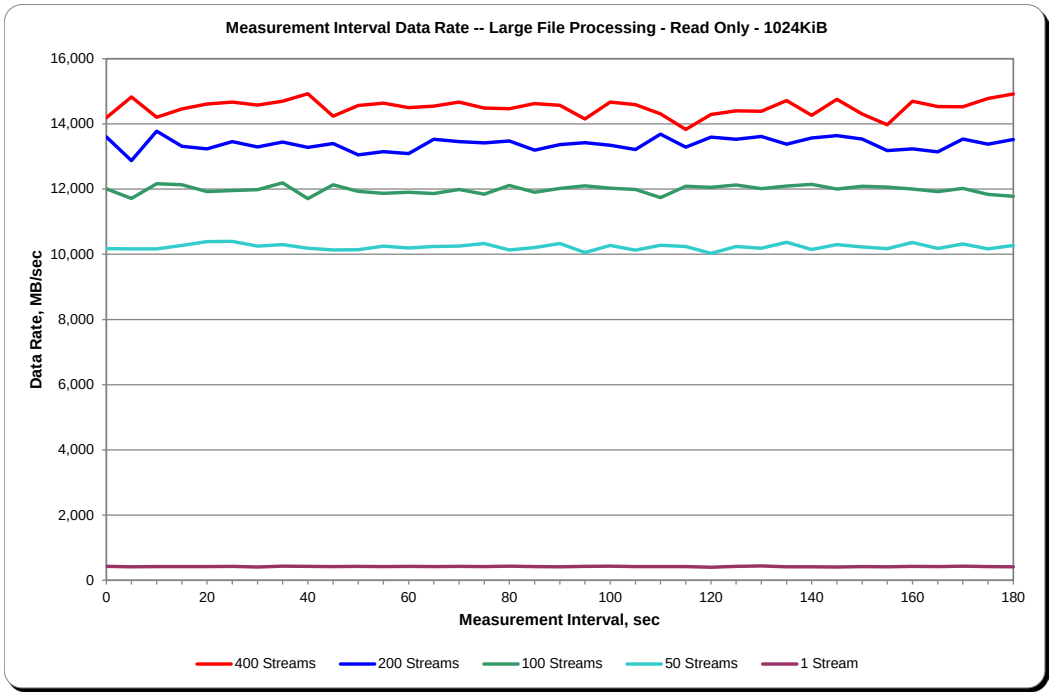
SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR21	400 Streams			TR22	200 Streams			TR23	100 Streams			TR24	50 Streams			TR25	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	14,192.48	35.48	29.42	0:10:05	13,598.98	67.99	15.38	0:17:05	12,005.36	120.05	8.75	0:24:05	10,169.72	203.39	5.14	0:31:05	424.67	424.67	2.46
0:03:10	14,823.09	37.06	28.38	0:10:10	12,875.25	64.38	16.25	0:17:10	11,710.08	117.10	8.87	0:24:10	10,167.62	203.35	5.15	0:31:10	415.87	415.87	2.51
0:03:15	14,202.54	35.51	29.48	0:10:15	13,777.45	68.89	15.22	0:17:15	12,162.43	121.62	8.66	0:24:15	10,163.22	203.26	5.15	0:31:15	418.59	418.59	2.50
0:03:20	14,459.02	36.15	28.98	0:10:20	13,313.14	66.57	15.73	0:17:20	12,133.91	121.34	8.65	0:24:20	10,269.75	205.40	5.10	0:31:20	419.43	419.43	2.50
0:03:25	14,607.71	36.52	28.79	0:10:25	13,233.45	66.17	15.86	0:17:25	11,922.31	119.22	8.79	0:24:25	10,387.82	207.76	5.04	0:31:25	421.53	421.53	2.48
0:03:30	14,670.42	36.68	28.67	0:10:30	13,455.96	67.28	15.63	0:17:30	11,955.86	119.56	8.77	0:24:30	10,398.31	207.97	5.01	0:31:30	427.40	427.40	2.45
0:03:35	14,576.46	36.44	28.70	0:10:35	13,292.80	66.46	15.78	0:17:35	11,982.29	119.82	8.73	0:24:35	10,253.19	205.06	5.14	0:31:35	408.53	408.53	2.56
0:03:40	14,697.05	36.74	28.44	0:10:40	13,442.53	67.21	15.54	0:17:40	12,190.53	121.91	8.60	0:24:40	10,294.50	205.89	5.08	0:31:40	432.01	432.01	2.42
0:03:45	14,923.33	37.31	28.18	0:10:45	13,281.26	66.41	15.77	0:17:45	11,705.67	117.06	8.90	0:24:45	10,186.92	203.74	5.15	0:31:45	426.56	426.56	2.45
0:03:50	14,234.42	35.59	29.43	0:10:50	13,400.17	67.00	15.66	0:17:50	12,134.96	121.35	8.69	0:24:50	10,132.18	202.64	5.17	0:31:50	419.85	419.85	2.49
0:03:55	14,566.61	36.42	28.79	0:10:55	13,047.22	65.24	16.04	0:17:55	11,929.86	119.30	8.78	0:24:55	10,137.63	202.75	5.16	0:31:55	424.25	424.25	2.47
0:04:00	14,637.07	36.59	28.70	0:11:00	13,148.09	65.74	15.97	0:18:00	11,871.77	118.72	8.83	0:25:00	10,249.83	205.00	5.12	0:32:00	422.37	422.37	2.48
0:04:05	14,496.14	36.24	28.96	0:11:05	13,087.28	65.44	16.07	0:18:05	11,900.29	119.00	8.81	0:25:05	10,192.16	203.84	5.10	0:32:05	425.09	425.09	2.46
0:04:10	14,543.33	36.36	28.82	0:11:10	13,527.47	67.64	15.50	0:18:10	11,863.38	118.63	8.82	0:25:10	10,240.81	204.82	5.15	0:32:10	418.59	418.59	2.50
0:04:15	14,665.80	36.66	28.52	0:11:15	13,455.75	67.28	15.55	0:18:15	11,989.42	119.89	8.75	0:25:15	10,251.51	205.03	5.09	0:32:15	429.29	429.29	2.44
0:04:20	14,484.82	36.21	28.97	0:11:20	13,416.53	67.08	15.60	0:18:20	11,843.46	118.43	8.81	0:25:20	10,332.25	206.64	5.08	0:32:20	417.75	417.75	2.51
0:04:25	14,465.74	36.16	28.96	0:11:25	13,478.82	67.39	15.56	0:18:25	12,114.83	121.15	8.69	0:25:25	10,136.79	202.74	5.17	0:32:25	436.84	436.84	2.40
0:04:30	14,625.75	36.56	28.73	0:11:30	13,192.34	65.96	15.86	0:18:30	11,899.87	119.00	8.81	0:25:30	10,208.52	204.17	5.13	0:32:30	422.79	422.79	2.47
0:04:35	14,572.48	36.43	28.75	0:11:35	13,366.62	66.83	15.71	0:18:35	12,018.36	120.18	8.72	0:25:35	10,332.04	206.64	5.08	0:32:35	413.35	413.35	2.52
0:04:40	14,153.89	35.38	29.72	0:11:40	13,421.56	67.11	15.69	0:18:40	12,100.36	121.00	8.67	0:25:40	10,056.89	201.14	5.18	0:32:40	427.61	427.61	2.46
0:04:45	14,670.63	36.68	28.52	0:11:45	13,344.18	66.72	15.70	0:18:45	12,025.28	120.25	8.71	0:25:45	10,270.17	205.40	5.13	0:32:45	433.48	433.48	2.41
0:04:50	14,591.14	36.48	28.63	0:11:50	13,215.62	66.08	15.83	0:18:50	11,989.21	119.89	8.74	0:25:50	10,129.66	202.59	5.16	0:32:50	420.27	420.27	2.49
0:04:55	14,309.08	35.77	29.38	0:11:55	13,687.69	68.44	15.28	0:18:55	11,739.02	117.39	8.88	0:25:55	10,280.87	205.62	5.10	0:32:55	419.22	419.22	2.50
0:05:00	13,828.62	34.57	30.29	0:12:00	13,287.56	66.44	15.80	0:19:00	12,083.58	120.84	8.71	0:26:00	10,235.36	204.71	5.12	0:33:00	421.95	421.95	2.48
0:05:05	14,289.99	35.72	29.34	0:12:05	13,595.21	67.98	15.41	0:19:05	12,052.33	120.52	8.69	0:26:05	10,030.47	200.61	5.22	0:33:05	403.91	403.91	2.59
0:05:10	14,397.58	35.99	29.15	0:12:10	13,531.45	67.66	15.50	0:19:10	12,126.57	121.27	8.65	0:26:10	10,239.13	204.78	5.13	0:33:10	424.88	424.88	2.46
0:05:15	14,386.88	35.97	29.30	0:12:15	13,613.66	68.07	15.45	0:19:15	12,012.28	120.12	8.73	0:26:15	10,184.82	203.70	5.10	0:33:15	439.35	439.35	2.38
0:05:20	14,712.57	36.78	28.38	0:12:20	13,379.41	66.90	15.67	0:19:20	12,093.02	120.93	8.66	0:26:20	10,371.26	207.43	5.09	0:33:20	411.88	411.88	2.54
0:05:25	14,264.20	35.66	29.35	0:12:25	13,566.69	67.83	15.41	0:19:25	12,142.93	121.43	8.63	0:26:25	10,147.49	202.95	5.14	0:33:25	412.93	412.93	2.53
0:05:30	14,751.37	36.88	28.47	0:12:30	13,640.30	68.20	15.34	0:19:30	12,001.58	120.02	8.69	0:26:30	10,298.48	205.97	5.09	0:33:30	407.48	407.48	2.57
0:05:35	14,304.04	35.76	29.29	0:12:35	13,535.23	67.68	15.49	0:19:35	12,088.40	120.88	8.71	0:26:35	10,226.97	204.54	5.13	0:33:35	422.37	422.37	2.48
0:05:40	13,976.26	34.94	29.99	0:12:40	13,181.44	65.91	15.90	0:19:40	12,057.58	120.58	8.68	0:26:40	10,176.01	203.52	5.14	0:33:40	412.72	412.72	2.53
0:05:45	14,694.11	36.74	28.60	0:12:45	13,232.82	66.16	15.85	0:19:45	12,002.00	120.02	8.75	0:26:45	10,361.40	207.23	5.07	0:33:45	429.92	429.92	2.43
0:05:50	14,531.80	36.33	28.93	0:12:50	13,142.43	65.71	16.03	0:19:50	11,925.87	119.26	8.79	0:26:50	10,181.04	203.62	5.10	0:33:50	420.69	420.69	2.49
0:05:55	14,527.18	36.32	28.79	0:12:55	13,537.33	67.69	15.48	0:19:55	12,020.67	120.21	8.71	0:26:55	10,315.26	206.31	5.12	0:33:55	434.32	434.32	2.41
0:06:00	14,777.58	36.94	28.16	0:13:00	13,378.15	66.89	15.57	0:20:00	11,839.05	118.39	8.84	0:27:00	10,166.99	203.34	5.11	0:34:00	418.17	418.17	2.51
0:06:05	14,916.41	37.29	28.33	0:13:05	13,521.18	67.61	15.59	0:20:05	11,775.72	117.76	8.90	0:27:05	10,273.74	205.47	5.13	0:34:05	416.28	416.28	2.51
0:06:10	14,305.72	35.76	29.29	0:13:10	12,997.73	64.99	16.09	0:20:10	12,149.22	121.49	8.64	0:27:10	10,258.85	205.18	5.08	0:34:10	350.85	350.85	2.98
0:06:15	14,539.55	36.35	28.80	0:13:15	13,355.71	66.78	15.71	0:20:15	12,060.09	120.60	8.71	0:27:15	10,368.32	207.37	5.08	0:34:15	425.72	425.72	2.45
0:06:20	14,643.78	36.61	28.60	0:13:20	13,461.20	67.31	15.58	0:20:20	11,772.15	117.72	8.86	0:27:20	10,213.13	204.26	5.11	0:34:20	429.08	429.08	2.45
0:06:25	14,184.30	35.46	29.55	0:13:25	13,534.18	67.67	15.50	0:20:25	12,181.52	121.82	8.61	0:27:25	10,268.50	205.37	5.09	0:34:25	421.95	421.95	2.48
0:06:30	14,737.32	36.84	28.43	0:13:30	13,545.92	67.73	15.44	0:20:30	12,101.62	121.02	8.66	0:27:30	10,230.54	204.61	5.14	0:34:30	408.94	408.94	2.56
0:06:35	14,423.37	36.06	29.01	0:13:35	13,308.53	66.54	15.69	0:20:35	12,173.55	121.74	8.62	0:27:35	10,085.83	201.72	5.19	0:34:35	421.74	421.74	2.48
0:06:40	14,264.41	35.66	29.54	0:13:40	13,283.57	66.42	15.84	0:20:40	12,154.46	121.54	8.62	0:27:40	10,171.40	203.43	5.15	0:34:40	421.95	421.95	2.48
0:06:45	14,187.02	52.16	28.36	0:13:45	12,915.10	102.50	15.38	0:20:45	11,526.58	182.96	8.56	0:27:45	9,796.43	306.14	5.05	0:34:45	423.21	423.21	2.47
0:06:50	5,441.27	0.00	22.45	0:13:50	4,879.86	0.00	12.59	0:20:50	4,353.90	0.00	7.11	0:27:50	3,447.30	0.00	4.56	0:34:50	159.80	0.00	2.67
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00
												0:28:00	0.00	0.00	0.00				

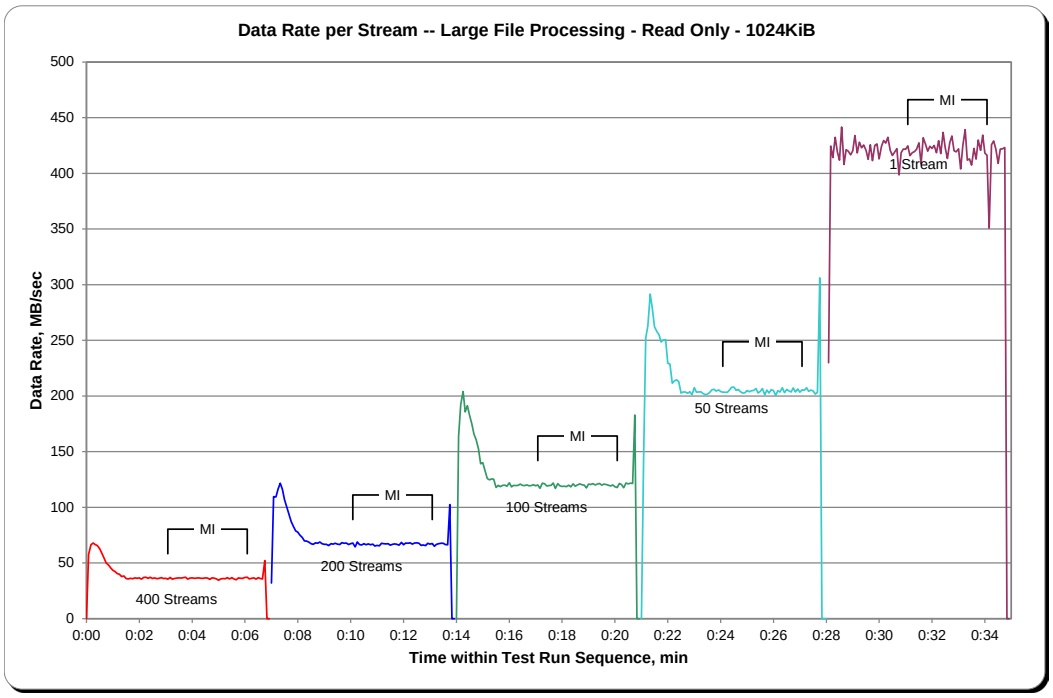
SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



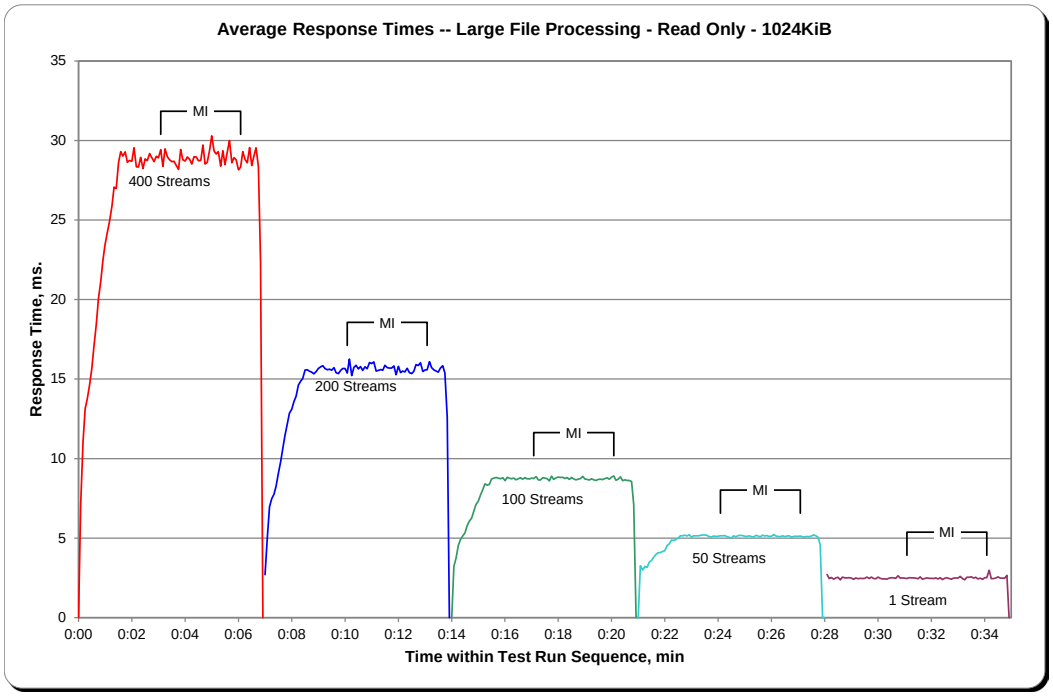
SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/READ ONLY/1024 KiB Transfer Size" Average Response Time Graph



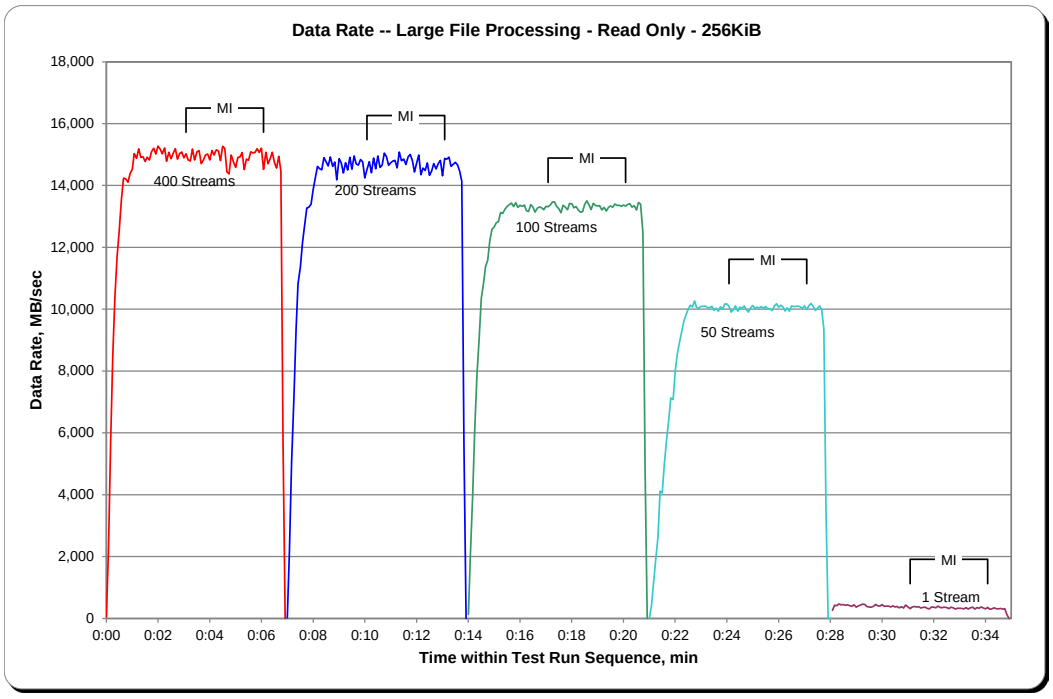
SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Test Run Data – Ramp-Up Period

TR26	400 Streams			TR27	200 Streams			TR28	100 Streams			TR29	50 Streams			TR30	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	54.89	27.45	0.89	0:07:00	20.34	10.17	1.00	0:14:00	130.65	43.55	0.69	0:21:00	0.00	0.00	0.00	0:28:05	260.41	260.41	0.59
0:00:05	2,268.86	61.32	1.86	0:07:05	2,187.07	99.41	1.28	0:14:05	2,034.55	145.33	0.88	0:21:05	423.68	211.84	0.63	0:28:10	430.07	430.07	0.60
0:00:10	5,722.45	68.12	2.76	0:07:10	5,034.95	119.88	1.74	0:14:10	4,023.49	174.93	1.14	0:21:10	1,180.59	236.12	0.77	0:28:15	417.28	417.28	0.62
0:00:15	8,517.27	70.39	3.15	0:07:15	7,148.88	119.15	1.84	0:14:15	6,034.03	167.61	1.24	0:21:15	1,925.97	240.75	0.86	0:28:20	468.24	468.24	0.56
0:00:20	10,420.28	69.47	3.43	0:07:20	9,349.79	118.35	1.95	0:14:20	7,902.59	183.78	1.33	0:21:20	2,616.35	237.85	0.90	0:28:25	443.86	443.86	0.59
0:00:25	11,696.66	67.61	3.61	0:07:25	10,816.32	120.18	2.05	0:14:25	9,045.28	170.67	1.37	0:21:25	4,114.87	274.32	0.92	0:28:30	449.73	449.73	0.58
0:00:30	12,539.87	63.65	3.85	0:07:30	11,354.40	115.86	2.17	0:14:30	10,350.23	164.29	1.44	0:21:30	4,052.06	225.11	1.03	0:28:35	429.86	429.86	0.61
0:00:35	13,524.69	61.48	4.05	0:07:35	12,149.33	110.45	2.27	0:14:35	10,809.93	163.79	1.52	0:21:35	4,994.47	249.72	1.01	0:28:40	441.77	441.77	0.59
0:00:40	14,238.88	57.65	4.28	0:07:40	12,717.55	105.98	2.34	0:14:40	11,385.44	160.36	1.56	0:21:40	5,746.72	239.45	1.02	0:28:45	416.97	416.97	0.62
0:00:45	14,220.32	52.67	4.77	0:07:45	13,267.68	99.76	2.49	0:14:45	11,587.92	146.68	1.67	0:21:45	6,451.57	215.05	1.10	0:28:50	392.32	392.32	0.66
0:00:50	14,108.96	48.48	5.23	0:07:50	13,298.41	92.35	2.74	0:14:50	12,221.31	147.24	1.71	0:21:50	7,128.32	229.95	1.11	0:28:55	443.08	443.08	0.59
0:00:55	14,388.66	47.18	5.43	0:07:55	13,397.24	86.43	2.90	0:14:55	12,587.11	148.08	1.75	0:21:55	7,079.46	228.37	1.14	0:29:00	366.74	366.74	0.71
0:01:00	14,521.10	45.52	5.59	0:08:00	13,877.90	86.20	2.97	0:15:00	12,656.73	143.83	1.79	0:22:00	8,016.05	216.65	1.13	0:29:05	409.21	409.21	0.64
0:01:05	15,034.74	44.61	5.73	0:08:05	14,249.20	82.84	3.07	0:15:05	12,794.51	143.76	1.82	0:22:05	8,571.74	209.07	1.20	0:29:10	437.15	437.15	0.60
0:01:10	14,877.67	41.91	6.08	0:08:10	14,617.36	82.12	3.13	0:15:10	12,826.86	135.02	1.87	0:22:10	8,937.12	207.84	1.22	0:29:15	461.95	461.95	0.56
0:01:15	15,187.68	41.16	6.29	0:08:15	14,545.06	79.05	3.29	0:15:15	13,124.08	138.15	1.90	0:22:15	9,270.57	197.25	1.26	0:29:20	454.35	454.35	0.57
0:01:20	14,908.08	39.13	6.57	0:08:20	14,508.25	75.96	3.37	0:15:20	13,100.70	136.47	1.90	0:22:20	9,619.85	204.68	1.28	0:29:25	383.20	383.20	0.68
0:01:25	14,927.84	38.28	6.78	0:08:25	14,902.62	76.42	3.39	0:15:25	13,238.48	136.48	1.91	0:22:25	9,808.07	196.16	1.27	0:29:30	374.97	374.97	0.70
0:01:30	14,780.57	37.04	6.98	0:08:30	14,772.97	74.24	3.50	0:15:30	13,327.51	133.28	1.93	0:22:30	9,997.07	199.94	1.30	0:29:35	368.26	368.26	0.71
0:01:35	14,915.89	37.29	6.99	0:08:35	14,632.20	73.16	3.56	0:15:35	13,379.52	133.80	1.96	0:22:35	10,126.57	202.53	1.29	0:29:40	392.01	392.01	0.66
0:01:40	14,824.14	37.06	7.05	0:08:40	14,921.45	74.61	3.52	0:15:40	13,432.78	134.33	1.95	0:22:40	10,072.99	201.46	1.29	0:29:45	454.66	454.66	0.57
0:01:45	15,094.15	37.74	6.98	0:08:45	14,620.19	73.10	3.58	0:15:45	13,321.53	133.22	1.95	0:22:45	10,266.19	205.32	1.28	0:29:50	406.27	406.27	0.64
0:01:50	15,205.09	38.01	6.88	0:08:50	14,757.40	73.79	3.57	0:15:50	13,444.63	134.45	1.95	0:22:50	10,049.34	200.99	1.30	0:29:55	399.87	399.87	0.65
0:01:55	15,021.59	37.55	6.95	0:08:55	14,180.21	70.90	3.66	0:15:55	13,292.90	132.93	1.97	0:22:55	10,029.58	200.59	1.30	0:30:00	450.36	450.36	0.58
0:02:00	15,275.50	38.19	6.89	0:09:00	14,864.25	74.32	3.53	0:16:00	13,360.01	133.60	1.96	0:23:00	10,093.12	201.86	1.29	0:30:05	391.59	391.59	0.66
0:02:05	15,181.13	37.95	6.92	0:09:05	14,727.15	73.64	3.56	0:16:05	13,322.89	133.23	1.95	0:23:05	10,093.02	201.86	1.29	0:30:10	398.67	398.67	0.65
0:02:10	15,026.41	37.57	6.95	0:09:10	14,406.81	72.03	3.62	0:16:10	13,369.71	133.70	1.96	0:23:10	10,099.83	202.00	1.30	0:30:15	397.20	397.20	0.66
0:02:15	15,211.48	38.03	6.88	0:09:15	14,732.86	73.66	3.57	0:16:15	13,184.06	131.84	1.99	0:23:15	10,051.33	201.03	1.29	0:30:20	371.35	371.35	0.70
0:02:20	14,784.97	36.96	7.11	0:09:20	14,497.45	72.49	3.61	0:16:20	13,157.11	131.57	1.98	0:23:20	10,052.54	201.05	1.31	0:30:25	407.11	407.11	0.64
0:02:25	15,073.33	37.68	6.93	0:09:25	14,909.28	74.55	3.52	0:16:25	13,380.62	133.81	1.96	0:23:25	10,094.69	201.89	1.30	0:30:30	371.72	371.72	0.70
0:02:30	14,864.93	37.16	7.04	0:09:30	14,526.66	72.63	3.58	0:16:30	13,304.33	133.04	1.96	0:23:30	9,958.80	199.18	1.31	0:30:35	383.83	383.83	0.68
0:02:35	15,039.52	37.60	6.99	0:09:35	14,954.11	74.77	3.51	0:16:35	13,139.97	131.40	1.99	0:23:35	10,030.47	200.61	1.30	0:30:40	345.30	345.30	0.75
0:02:40	15,193.39	37.98	6.92	0:09:40	14,696.00	73.48	3.57	0:16:40	13,272.46	132.72	1.97	0:23:40	9,931.38	198.63	1.31	0:30:45	379.37	379.37	0.69
0:02:45	14,852.29	37.13	7.02	0:09:45	14,660.98	73.30	3.55	0:16:45	13,306.59	133.07	1.97	0:23:45	10,078.70	201.57	1.30	0:30:50	336.02	336.02	0.78
0:02:50	15,036.06	37.59	6.98	0:09:50	14,837.87	74.19	3.54	0:16:50	13,276.28	132.76	1.97	0:23:50	10,001.68	200.03	1.30	0:30:55	432.12	432.12	0.60
0:02:55	15,082.66	37.71	6.95	0:09:55	14,765.16	73.83	3.55	0:16:55	13,216.72	132.17	1.97	0:23:55	10,170.24	203.40	1.29	0:31:00	375.02	375.02	0.69
0:03:00	14,894.39	37.24	7.04	0:10:00	14,246.37	71.23	3.69	0:17:00	13,325.15	133.25	1.97	0:24:00	10,170.03	203.40	1.28				

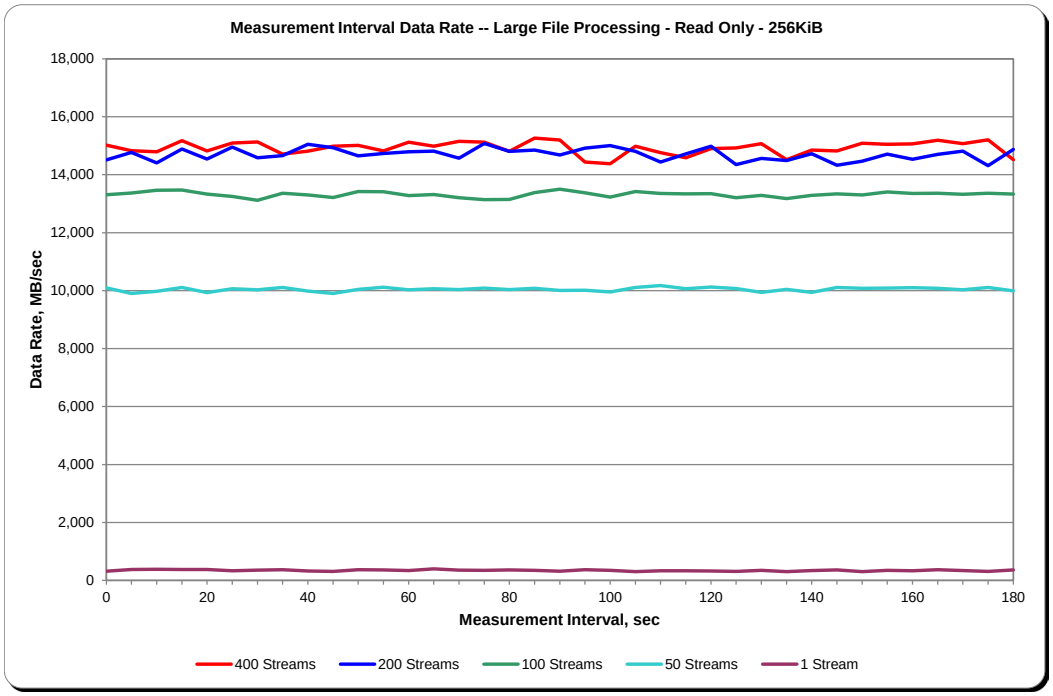
SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR26	400 Streams			TR27	200 Streams			TR28	100 Streams			TR29	50 Streams			TR30	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	15,023.79	37.56	6.96	0:10:05	14,511.24	72.56	3.57	0:17:05	13,312.56	133.13	1.96	0:24:05	10,093.28	201.87	1.30	0:31:05	320.81	320.81	0.81
0:03:10	14,828.18	37.07	7.03	0:10:10	14,770.56	73.85	3.56	0:17:10	13,370.29	133.70	1.95	0:24:10	9,906.26	198.13	1.31	0:31:10	376.12	376.12	0.69
0:03:15	14,791.00	36.98	7.09	0:10:15	14,408.64	72.04	3.63	0:17:15	13,463.03	134.63	1.94	0:24:15	9,979.61	199.59	1.31	0:31:15	388.03	388.03	0.67
0:03:20	15,178.66	37.95	6.93	0:10:20	14,884.59	74.42	3.53	0:17:20	13,473.78	134.74	1.95	0:24:20	10,107.01	202.14	1.30	0:31:20	375.65	375.65	0.69
0:03:25	14,824.45	37.06	7.05	0:10:25	14,539.71	72.70	3.59	0:17:25	13,329.29	133.29	1.97	0:24:25	9,931.12	198.62	1.31	0:31:25	379.22	379.22	0.69
0:03:30	15,091.47	37.73	6.97	0:10:30	14,954.32	74.77	3.51	0:17:30	13,250.33	132.50	1.97	0:24:30	10,063.45	201.27	1.30	0:31:30	336.75	336.75	0.77
0:03:35	15,129.17	37.82	6.93	0:10:35	14,585.38	72.93	3.60	0:17:35	13,121.41	131.21	1.99	0:24:35	10,031.25	200.63	1.30	0:31:35	356.36	356.36	0.73
0:03:40	14,708.01	36.77	7.11	0:10:40	14,657.52	73.29	3.54	0:17:40	13,358.54	133.59	1.96	0:24:40	10,106.91	202.14	1.29	0:31:40	367.74	367.74	0.71
0:03:45	14,816.59	37.04	7.07	0:10:45	15,049.42	75.25	3.50	0:17:45	13,305.96	133.06	1.96	0:24:45	9,982.97	199.66	1.31	0:31:45	324.38	324.38	0.80
0:03:50	14,986.09	37.47	7.00	0:10:50	14,934.29	74.67	3.50	0:17:50	13,214.10	132.14	1.98	0:24:50	9,904.59	198.09	1.32	0:31:50	312.79	312.79	0.83
0:03:55	15,016.39	37.54	6.97	0:10:55	14,654.48	73.27	3.58	0:17:55	13,417.79	134.18	1.95	0:24:55	10,047.19	200.94	1.31	0:31:55	373.56	373.56	0.70
0:04:00	14,822.30	37.06	7.06	0:11:00	14,736.01	73.68	3.54	0:18:00	13,409.56	134.10	1.96	0:25:00	10,121.07	202.42	1.29	0:32:00	363.28	363.28	0.72
0:04:05	15,127.18	37.82	6.96	0:11:05	14,792.79	73.96	3.55	0:18:05	13,281.26	132.81	1.97	0:25:05	10,027.01	200.54	1.30	0:32:05	341.99	341.99	0.76
0:04:10	14,983.21	37.46	6.97	0:11:10	14,814.28	74.07	3.54	0:18:10	13,320.17	133.20	1.96	0:25:10	10,063.29	201.27	1.30	0:32:10	401.76	401.76	0.65
0:04:15	15,149.77	37.87	6.90	0:11:15	14,568.18	72.84	3.56	0:18:15	13,208.44	132.08	1.98	0:25:15	10,038.12	200.76	1.30	0:32:15	353.68	353.68	0.74
0:04:20	15,121.67	37.80	6.93	0:11:20	15,078.84	75.39	3.49	0:18:20	13,141.49	131.41	1.99	0:25:20	10,085.41	201.71	1.29	0:32:20	349.91	349.91	0.74
0:04:25	14,805.95	37.01	7.10	0:11:25	14,803.48	74.02	3.53	0:18:25	13,150.56	131.51	1.99	0:25:25	10,034.24	200.68	1.30	0:32:25	366.48	366.48	0.71
0:04:30	15,267.32	38.17	6.86	0:11:30	14,852.40	74.26	3.54	0:18:30	13,385.28	133.85	1.96	0:25:30	10,083.53	201.67	1.30	0:32:30	349.44	349.44	0.75
0:04:35	15,198.53	38.00	6.88	0:11:35	14,679.64	73.40	3.56	0:18:35	13,503.51	135.04	1.94	0:25:35	10,007.50	200.15	1.30	0:32:35	317.14	317.14	0.82
0:04:40	14,439.84	36.10	7.27	0:11:40	14,919.19	74.60	3.52	0:18:40	13,376.26	133.76	1.95	0:25:40	10,010.60	200.21	1.31	0:32:40	368.47	368.47	0.71
0:04:45	14,375.82	35.94	7.29	0:11:45	15,007.74	75.04	3.50	0:18:45	13,225.90	132.26	1.97	0:25:45	9,955.18	199.10	1.31	0:32:45	344.67	344.67	0.76
0:04:50	14,982.32	37.46	7.00	0:11:50	14,808.51	74.04	3.50	0:18:50	13,420.88	134.21	1.95	0:25:50	10,109.85	202.20	1.30	0:32:50	301.89	301.89	0.86
0:04:55	14,758.81	36.90	7.08	0:11:55	14,439.10	72.20	3.64	0:18:55	13,353.56	133.54	1.95	0:25:55	10,173.70	203.47	1.28	0:32:55	334.50	334.50	0.78
0:05:00	14,585.59	36.46	7.19	0:12:00	14,721.33	73.61	3.55	0:19:00	13,340.30	133.40	1.96	0:26:00	10,063.76	201.28	1.30	0:33:00	334.65	334.65	0.78
0:05:05	14,904.98	37.26	7.03	0:12:05	14,984.99	74.92	3.51	0:19:05	13,343.81	133.44	1.96	0:26:05	10,128.30	202.57	1.29	0:33:05	324.38	324.38	0.80
0:05:10	14,921.34	37.30	7.01	0:12:10	14,346.56	71.73	3.63	0:19:10	13,206.45	132.06	1.99	0:26:10	10,070.73	201.41	1.29	0:33:10	311.11	311.11	0.84
0:05:15	15,069.98	37.67	6.99	0:12:15	14,563.88	72.82	3.60	0:19:15	13,291.33	132.91	1.97	0:26:15	9,937.77	198.76	1.32	0:33:15	348.91	348.91	0.75
0:05:20	14,515.65	36.29	7.21	0:12:20	14,488.28	72.44	3.63	0:19:20	13,176.62	131.77	1.98	0:26:20	10,042.47	200.85	1.30	0:33:20	300.57	300.57	0.87
0:05:25	14,849.83	37.12	7.02	0:12:25	14,726.52	73.63	3.53	0:19:25	13,289.70	132.90	1.97	0:26:25	9,937.04	198.74	1.32	0:33:25	343.41	343.41	0.76
0:05:30	14,821.46	37.05	7.08	0:12:30	14,327.22	71.64	3.67	0:19:30	13,340.19	133.40	1.95	0:26:30	10,106.54	202.13	1.29	0:33:30	363.07	363.07	0.72
0:05:35	15,088.33	37.72	6.98	0:12:35	14,469.51	72.35	3.61	0:19:35	13,300.35	133.00	1.97	0:26:35	10,083.79	201.68	1.29	0:33:35	303.62	303.62	0.86
0:05:40	15,052.36	37.63	6.95	0:12:40	14,711.21	73.56	3.57	0:19:40	13,402.79	134.03	1.96	0:26:40	10,090.13	201.80	1.30	0:33:40	350.75	350.75	0.74
0:05:45	15,067.93	37.67	6.94	0:12:45	14,534.36	72.67	3.59	0:19:45	13,356.03	133.56	1.96	0:26:45	10,099.78	202.00	1.29	0:33:45	334.50	334.50	0.78
0:05:50	15,189.88	37.97	6.91	0:12:50	14,705.07	73.53	3.57	0:19:50	13,359.12	133.59	1.96	0:26:50	10,082.32	201.65	1.30	0:33:50	371.14	371.14	0.70
0:05:55	15,069.61	37.67	6.96	0:12:55	14,814.07	74.07	3.55	0:19:55	13,325.25	133.25	1.96	0:26:55	10,029.21	200.58	1.30	0:33:55	338.11	338.11	0.77
0:06:00	15,206.34	38.02	6.87	0:13:00	14,315.26	71.58	3.63	0:20:00	13,364.36	133.64	1.96	0:27:00	10,108.22	202.16	1.30	0:34:00	309.75	309.75	0.84
0:06:05	14,518.11	36.30	7.19	0:13:05	14,870.80	74.35	3.51	0:20:05	13,332.91	133.33	1.97	0:27:05	9,992.30	199.85	1.30	0:34:05	359.71	359.71	0.72
0:06:10	15,073.44	37.68	7.00	0:13:10	14,856.22	74.28	3.53	0:20:10	13,391.31	133.91	1.94	0:27:10	10,116.24	202.32	1.29	0:34:10	299.74	299.74	0.87
0:06:15	14,700.62	36.75	7.12	0:13:15	14,913.63	74.57	3.52	0:20:15	13,410.08	134.10	1.95	0:27:15	10,180.57	203.61	1.29	0:34:15	312.00	312.00	0.84
0:06:20	14,867.44	37.17	7.05	0:13:20	14,617.57	73.09	3.54	0:20:20	13,298.72	132.99	1.97	0:27:20	10,091.60	201.83	1.29	0:34:20	342.46	342.46	0.76
0:06:25	15,075.27	37.69	6.93	0:13:25	14,686.72	73.43	3.60	0:20:25	13,345.65	133.46	1.96	0:27:25	9,952.72	199.05	1.31	0:34:25	317.46	317.46	0.82
0:06:30	14,740.15	36.85	7.10	0:13:30	14,751.84	73.76	3.54	0:20:30	13,207.34	132.07	1.98	0:27:30	10,030.57	200.61	1.30	0:34:30	310.54	310.54	0.84
0:06:35	14,563.04	36.41	7.20	0:13:35	14,665.02	73.33	3.57	0:20:35	13,452.13	134.52	1.95	0:27:35	10,107.49	202.15	1.30	0:34:35	322.12	322.12	0.81
0:06:40	14,946.35	37.37	7.01	0:13:40	14,465.84	72.33	3.60	0:20:40	13,392.62	133.93	1.95	0:27:40	9,973.48	199.47	1.30	0:34:40	300.57	300.57	0.87
0:06:45	14,475.91	57.90	6.79	0:13:45	14,136.95	112.20	3.40	0:20:45	12,469.40	197.93	1.91	0:27:45	9,362.21	292.57	1.27	0:34:45	318.09	318.09	0.82
0:06:50	5,717.47	0.00	5.39	0:13:50	5,641.81	0.00	2.79	0:20:50	4,857.95	0.00	1.64	0:27:50	3,484.37	0.00	1.16	0:34:50	126.46	0.00	0.84
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00
												0:28:00	0.00	0.00	0.00				

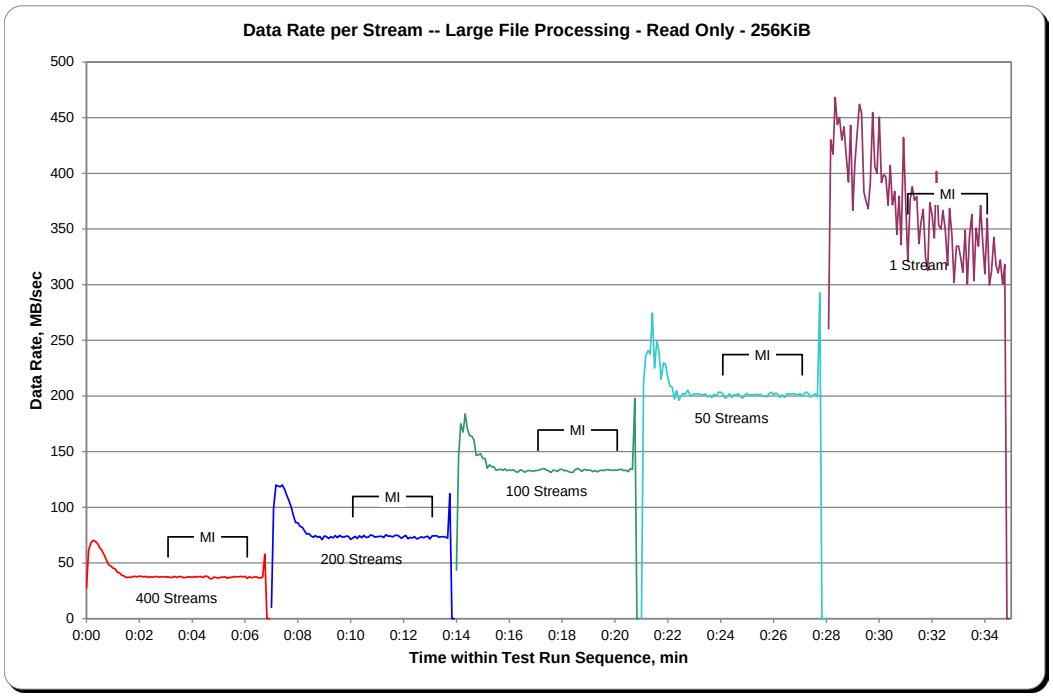
SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Average Data Rate Graph – Complete Test Run



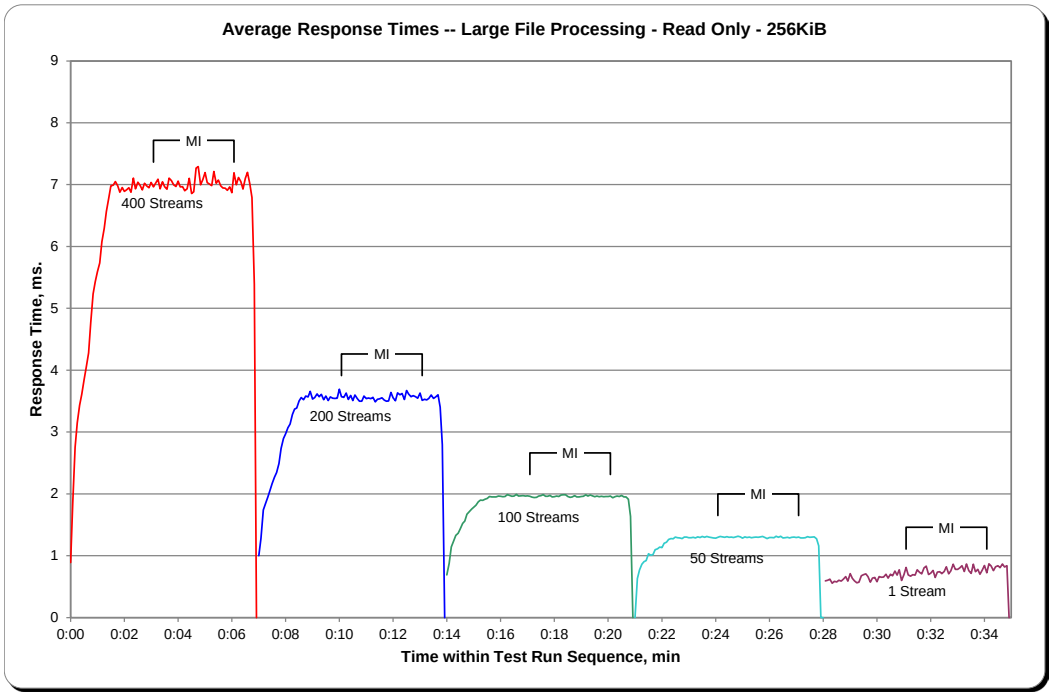
SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Average Data Rate per Stream Graph



SPC-2 "Large File Processing/READ ONLY/256 KiB Transfer Size" Average Response Time Graph



Large Database Query Test

Clause 6.4.3.1

The Large Database Query Test is comprised of a set of I/O operations representative of scans or joins of large relational tables such as those performed for data mining or business intelligence.

Clause 6.4.3.2

The Large Database Query Test has two Test Phases, which shall be executed in the following uninterrupted sequence:

1. *1024 KIB TRANSFER SIZE*
2. *64 KIB TRANSFER SIZE*

The BC shall not be restarted or manually disturbed, altered, or adjusted during the execution of the Large File Processing Test. If power is lost to the BC during this Test all results shall be rendered invalid and the Test re-run in its entirety.

Clause 10.6.8.2

The Full Disclosure Report will contain the following content for the Large Database Query Test:

1. *A listing of the SPC-2 Workload Generator commands and parameters used to execute each of the Test Runs in the Large Database Query Test.*
2. *The human readable SPC-2 Test Results File for each of the Test Runs in the Large Database Query Test.*
3. *A table that contains the following information for each Test Run in the two Test Phases of the Large Database Query Test:*
    - *The number Streams specified.*
    - *The Ramp-Up duration in seconds.*
    - *The Measurement Interval duration in seconds.*
    - *The average data rate, in MB per second, for the Measurement Interval.*
    - *The average data rate, in MB per second, per Stream for the Measurement Interval.*
4. *Average Data Rate and Average Data Rate per Stream graphs as defined in Clauses 10.1.1 and 10.1.2.*

SPC-2 Workload Generator Commands and Parameters

The SPC-2 Workload Generator commands and parameters for the Large Database Query Test Runs are documented in "Appendix E: SPC-2 Workload Generator Execution Commands and Parameters" on Page 138.

SPC-2 Test Results File

A link to the SPC-2 Test Results file generated from the Large Database Query Test Runs is listed below.

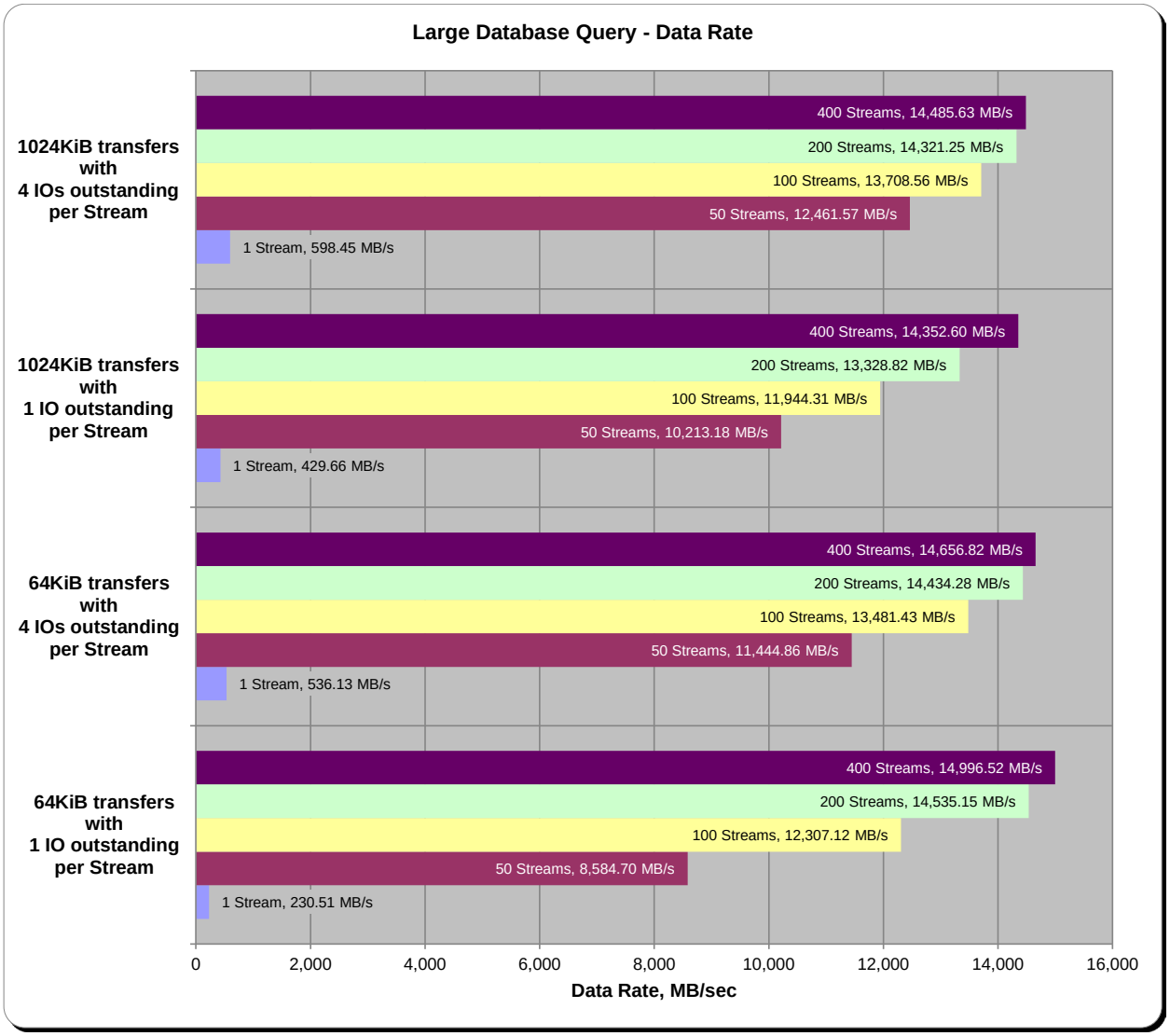
SPC-2 Large Database Query Test Results File

SPC-2 Large Database Query Average Data Rates (MB/s)

The average Data Rate (MB/s) for each Test Run in the two Test Phases of the SPC-2 Large Database Query Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
1024KiB w/ 4 IOs/Stream	598.45	12,461.57	13,708.56	14,321.25	14,485.63
1024KiB w/ 1 IO/Stream	429.66	10,213.18	11,944.31	13,328.82	14,352.60
64KiB w/ 4 IOs/Stream	536.13	11,444.86	13,481.43	14,434.28	14,656.82
64KiB w/ 1 IO/Stream	230.51	8,584.70	12,307.12	14,535.15	14,996.52

SPC-2 Large Database Query Average Data Rates Graph

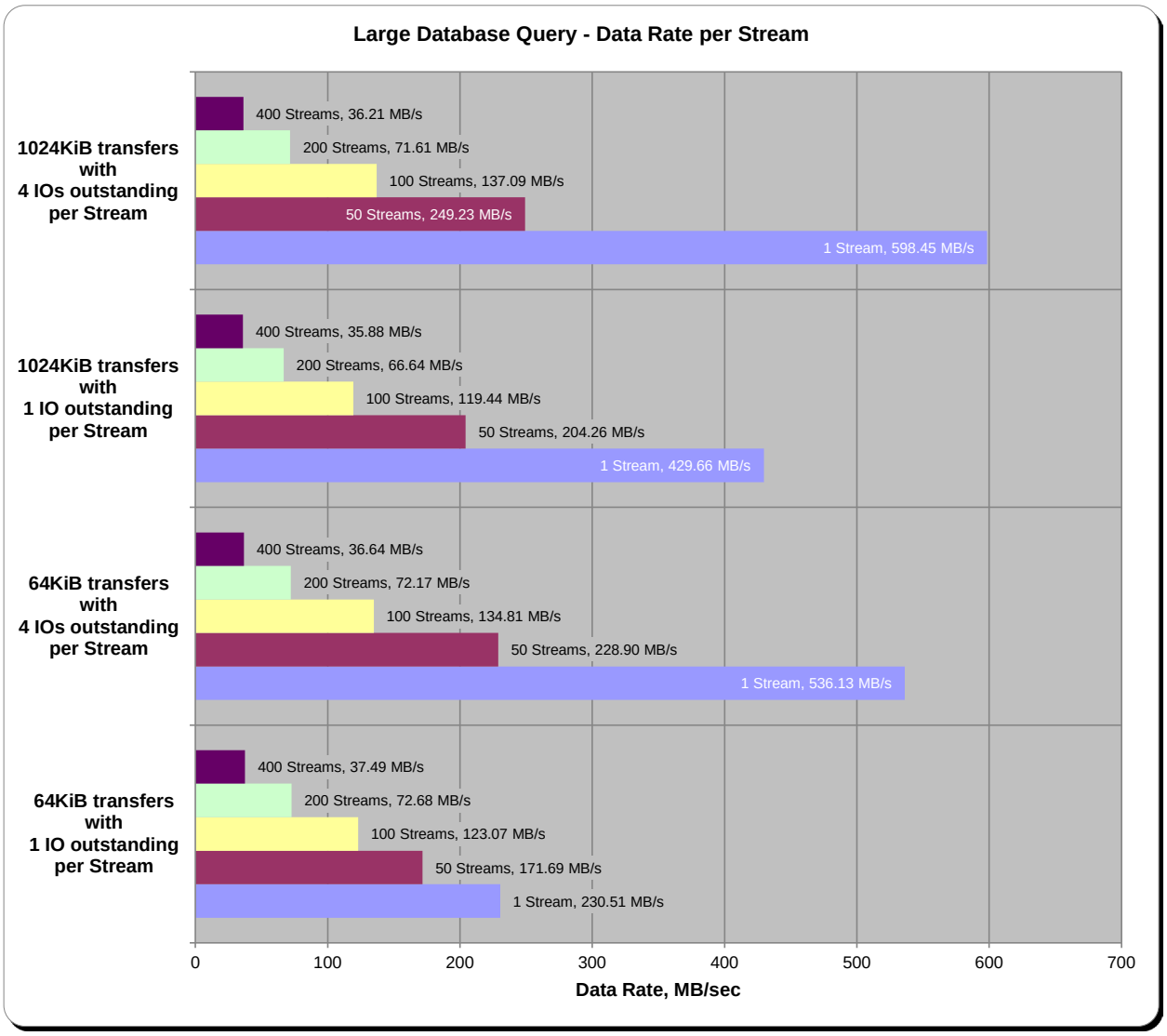


SPC-2 Large Database Query Average Data Rate per Stream

The average Data Rate per Stream for each Test Run in the two Test Phases of the SPC-2 Large Database Query Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
1024KiB w/ 4 IOs/Stream	598.45	249.23	137.09	71.61	36.21
1024KiB w/ 1 IO/Stream	429.66	204.26	119.44	66.64	35.88
64KiB w/ 4 IOs/Stream	536.13	228.90	134.81	72.17	36.64
64KiB w/ 1 IO/Stream	230.51	171.69	123.07	72.68	37.49

SPC-2 Large Database Query Average Data Rate per Stream Graph

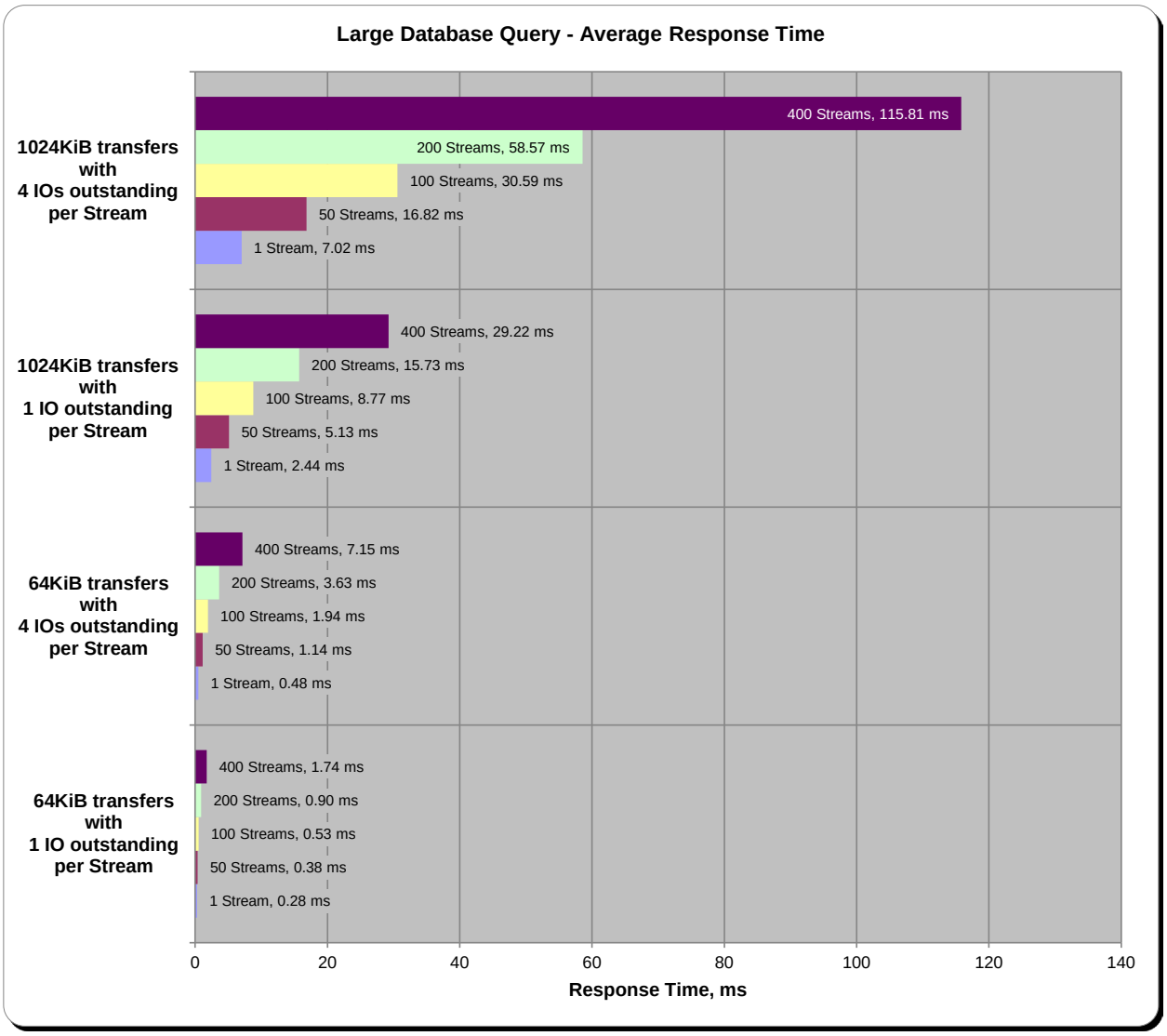


SPC-2 Large Database Query Average Response Time

The average Response Time, in milliseconds, for each Test Run in the two Test Phases of the SPC-2 Large Database Query Test is listed in the table below as well as illustrated in the following graph.

Test Run Sequence	1 Stream	50 Streams	100 Streams	200 Streams	400 Streams
1024KiB w/ 4 IOs/Stream	7.02	16.82	30.59	58.57	115.81
1024KiB w/ 1 IO/Stream	2.44	5.13	8.77	15.73	29.22
64KiB w/ 4 IOs/Stream	0.48	1.14	1.94	3.63	7.15
64KiB w/ 1 IO/Stream	0.28	0.38	0.53	0.90	1.74

SPC-2 Large Database Query Average Response Time Graph



Large Database Query Test – 1024 KIB TRANSFER SIZE Test Phase

Clause 10.6.8.2.1

1. *A table that will contain the following information for each "1024 KiB Transfer Size, 4 Outstanding I/Os" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
2. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "1024 KiB Transfer Size, 4 Outstanding I/Os" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*
3. *A table that will contain the following information for each "1024 KiB Transfer Size, 1 Outstanding I/O" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
4. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "1024 KiB Transfer Size, 1 Outstanding I/O" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*

The SPC-2 "Large Database Query/1024 KIB TRANSFER SIZE/4 Outstanding I/Os" Test Run data is contained in the table that appears on the next page. That table is followed by graphs illustrating the average Data Rate, average Data Rate per Stream, and average Response Time produced by the same Test Runs. The table and graphs present the data at five-second intervals.

Immediately following the SPC-2 "Large Database Query/1024 KIB TRANSFER SIZE/4 Outstanding I/Os" table and graphs will be the SPC-2 "Large Database Query/1024 KIB TRANSFER SIZE/1 Outstanding I/O" table and graphs. The table contains the Test Run data and the graphs illustrate the average Data Rate, average Data Rate per Stream, and average Response Time produced by the Test Runs.

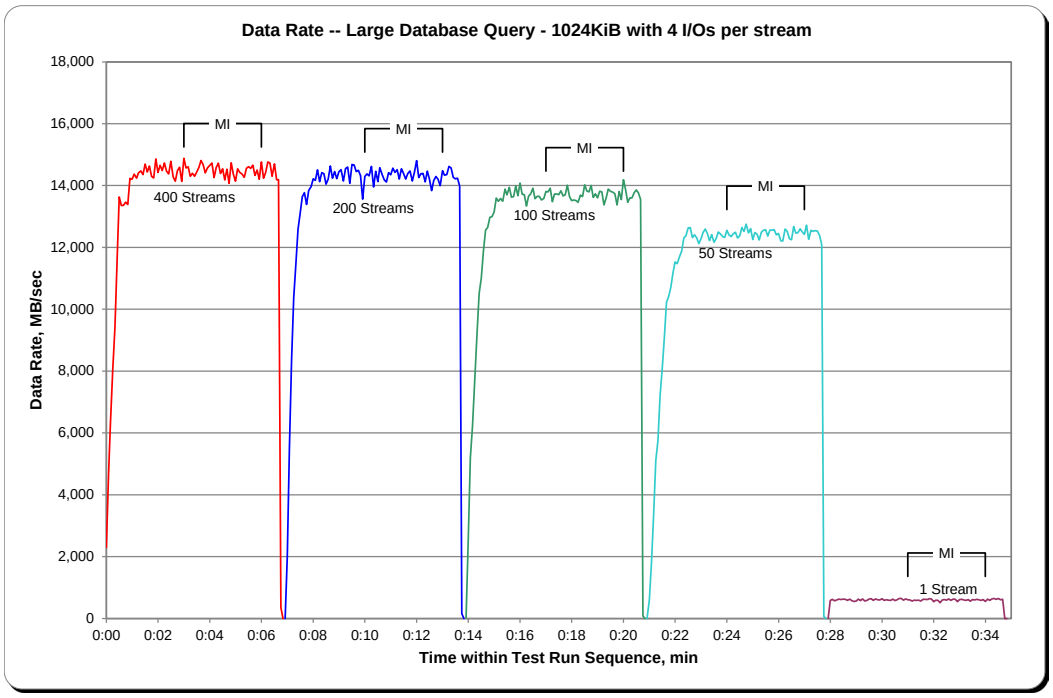
SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Test Run Data – Ramp-Up Period

TR1	400 Streams			TR2	200 Streams			TR3	100 Streams			TR4	50 Streams			TR5	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	2,290.93	49.80	48.42	0:06:55	0.42	0.42	15.93	0:13:55	20.55	20.55	6.81	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00
0:00:05	4,621.07	56.35	57.46	0:07:00	2,015.99	87.65	21.36	0:14:00	2,521.62	229.24	11.62	0:21:00	603.56	301.78	7.64	0:28:00	589.09	589.09	7.06
0:00:10	6,320.61	54.02	66.03	0:07:05	5,551.37	118.11	26.29	0:14:05	5,207.23	260.36	12.97	0:21:05	1,823.89	260.56	9.93	0:28:05	622.64	622.64	6.70
0:00:15	8,072.78	54.92	67.95	0:07:10	8,364.70	128.69	27.33	0:14:10	6,218.06	259.09	15.18	0:21:10	3,366.77	420.85	9.54	0:28:10	576.09	576.09	7.29
0:00:20	9,412.02	53.48	70.79	0:07:15	10,372.93	142.09	27.88	0:14:15	7,785.68	243.30	15.15	0:21:15	5,103.63	425.30	9.15	0:28:15	599.16	599.16	6.98
0:00:25	11,558.45	54.52	70.08	0:07:20	11,456.53	131.68	29.49	0:14:20	9,196.64	229.92	16.35	0:21:20	5,743.26	358.95	10.08	0:28:20	626.63	626.63	6.70
0:00:30	13,631.91	57.52	68.81	0:07:25	12,581.23	119.82	32.51	0:14:25	10,515.33	244.54	16.76	0:21:25	7,195.75	399.76	9.54	0:28:25	612.79	612.79	6.84
0:00:35	13,350.89	52.98	75.99	0:07:30	13,095.46	109.13	35.57	0:14:30	11,006.69	215.82	18.00	0:21:30	8,069.00	336.21	11.22	0:28:30	625.16	625.16	6.70
0:00:40	13,362.63	49.68	81.49	0:07:35	13,634.00	103.29	38.21	0:14:35	11,872.82	208.30	18.68	0:21:35	9,086.33	324.51	12.00	0:28:35	620.13	620.13	6.75
0:00:45	13,464.14	45.95	87.26	0:07:40	13,766.33	95.60	41.63	0:14:40	12,556.07	196.19	20.36	0:21:40	10,224.04	329.81	12.18	0:28:40	588.67	588.67	7.13
0:00:50	13,390.32	43.06	94.25	0:07:45	13,390.73	85.84	47.20	0:14:45	12,648.76	183.32	21.88	0:21:45	10,411.10	289.20	13.23	0:28:45	626.21	626.21	6.69
0:00:55	14,230.02	43.65	94.11	0:07:50	13,844.56	85.46	48.30	0:14:50	12,972.77	164.21	23.77	0:21:50	10,701.14	297.25	14.17	0:28:50	579.02	579.02	7.24
0:01:00	14,204.85	41.53	98.12	0:07:55	13,960.32	81.16	49.60	0:14:55	12,996.26	154.72	26.15	0:21:55	11,164.82	279.12	14.56	0:28:55	553.02	553.02	7.58
0:01:05	14,366.54	40.58	101.09	0:08:00	14,216.17	79.87	51.59	0:15:00	13,147.47	152.88	27.11	0:22:00	11,532.87	281.29	14.84	0:29:00	565.18	565.18	7.41
0:01:10	14,239.24	39.23	105.24	0:08:05	14,167.52	77.42	53.26	0:15:05	13,594.16	151.05	27.23	0:22:05	11,477.92	279.95	14.92	0:29:05	627.26	627.26	6.67
0:01:15	14,410.79	38.22	107.11	0:08:10	14,508.94	76.77	53.81	0:15:10	13,492.24	146.65	28.22	0:22:10	11,683.44	259.63	15.50	0:29:10	578.39	578.39	7.26
0:01:20	14,470.56	36.73	112.58	0:08:15	14,126.00	72.81	56.12	0:15:15	13,582.41	146.05	28.38	0:22:15	11,885.19	247.61	16.47	0:29:15	632.92	632.92	6.62
0:01:25	14,358.57	35.90	115.01	0:08:20	14,419.39	72.83	56.79	0:15:20	13,491.82	140.54	29.23	0:22:20	12,300.43	251.03	16.43	0:29:20	564.55	564.55	7.41
0:01:30	14,691.39	36.73	114.18	0:08:25	14,382.90	71.91	58.23	0:15:25	13,889.23	138.89	29.75	0:22:25	12,377.18	247.54	17.02	0:29:25	587.20	587.20	7.13
0:01:35	14,437.42	36.09	116.17	0:08:30	14,042.53	70.21	59.64	0:15:30	13,701.11	137.01	30.55	0:22:30	12,628.21	252.56	16.64	0:29:30	626.00	626.00	6.71
0:01:40	14,634.56	36.59	115.29	0:08:35	14,209.88	71.05	59.02	0:15:35	13,938.72	139.39	30.06	0:22:35	12,645.83	252.92	16.57	0:29:35	641.10	641.10	6.53
0:01:45	14,299.64	35.75	116.13	0:08:40	14,634.14	73.17	57.32	0:15:40	13,623.10	136.23	30.73	0:22:40	12,320.77	246.42	16.94	0:29:40	585.32	585.32	7.13
0:01:50	14,243.86	35.61	117.40	0:08:45	14,240.08	71.20	59.21	0:15:45	13,645.12	136.45	30.83	0:22:45	12,404.23	248.08	16.94	0:29:45	637.11	637.11	6.60
0:01:55	14,857.69	37.14	113.95	0:08:50	14,454.62	72.27	57.61	0:15:50	13,986.12	139.86	29.98	0:22:50	12,310.49	246.21	17.06	0:29:50	606.92	606.92	6.91
0:02:00	14,427.36	36.07	116.21	0:08:55	14,222.05	71.11	59.08	0:15:55	13,673.85	136.74	30.56	0:22:55	12,126.78	242.54	17.17	0:29:55	603.14	603.14	6.95
0:02:05	14,649.86	36.62	114.18	0:09:00	14,446.86	72.23	58.21	0:16:00	14,080.07	140.80	30.00	0:23:00	12,277.15	245.54	17.19	0:30:00	643.83	643.83	6.51
0:02:10	14,488.17	36.22	116.35	0:09:05	14,513.34	72.57	57.79	0:16:05	13,721.88	137.22	30.41	0:23:05	12,480.99	249.62	16.81	0:30:05	588.46	588.46	7.12
0:02:15	14,731.44	36.83	113.77	0:09:10	14,150.53	70.75	59.10	0:16:10	13,705.73	137.06	30.61	0:23:10	12,592.35	251.85	16.62	0:30:10	606.29	606.29	6.91
0:02:20	14,468.88	36.17	115.76	0:09:15	14,550.46	72.75	57.69	0:16:15	13,340.19	133.40	31.42	0:23:15	12,447.44	248.95	16.79	0:30:15	592.86	592.86	7.06
0:02:25	14,373.04	35.93	115.76	0:09:20	14,596.81	72.98	57.65	0:16:20	13,660.01	136.60	30.74	0:23:20	12,224.09	244.48	17.18	0:30:20	585.94	585.94	7.16
0:02:30	14,783.87	36.96	114.78	0:09:25	14,071.26	70.36	59.31	0:16:25	13,736.97	137.37	30.50	0:23:25	12,415.77	248.32	16.93	0:30:25	628.31	628.31	6.66
0:02:35	14,280.14	35.70	116.95	0:09:30	14,679.43	73.40	57.27	0:16:30	13,914.60	139.15	30.04	0:23:30	12,167.26	243.35	17.09	0:30:30	576.51	576.51	7.28
0:02:40	14,141.10	35.35	118.42	0:09:35	14,668.53	73.34	57.23	0:16:35	13,575.91	135.76	31.06	0:23:35	12,292.04	245.84	17.16	0:30:35	609.22	609.22	6.88
0:02:45	14,489.01	36.22	116.00	0:09:40	14,450.43	72.25	57.99	0:16:40	13,648.27	136.48	30.68	0:23:40	12,499.03	249.98	16.80	0:30:40	647.39	647.39	6.48
0:02:50	14,590.31	36.48	115.45	0:09:45	14,495.10	72.48	57.70	0:16:45	13,653.09	136.53	30.67	0:23:45	12,438.42	248.77	16.83	0:30:45	649.91	649.91	6.43
0:02:55	14,135.43	35.34	116.35	0:09:50	14,320.82	71.60	58.65	0:16:50	13,533.55	135.34	30.96	0:23:50	12,354.11	247.08	16.90	0:30:50	592.24	592.24	7.09
				0:09:55	13,561.86	67.81	61.22	0:16:55	13,584.93	135.85	30.71	0:23:55	12,326.64	246.53	16.91	0:30:55	635.44	635.44	6.60

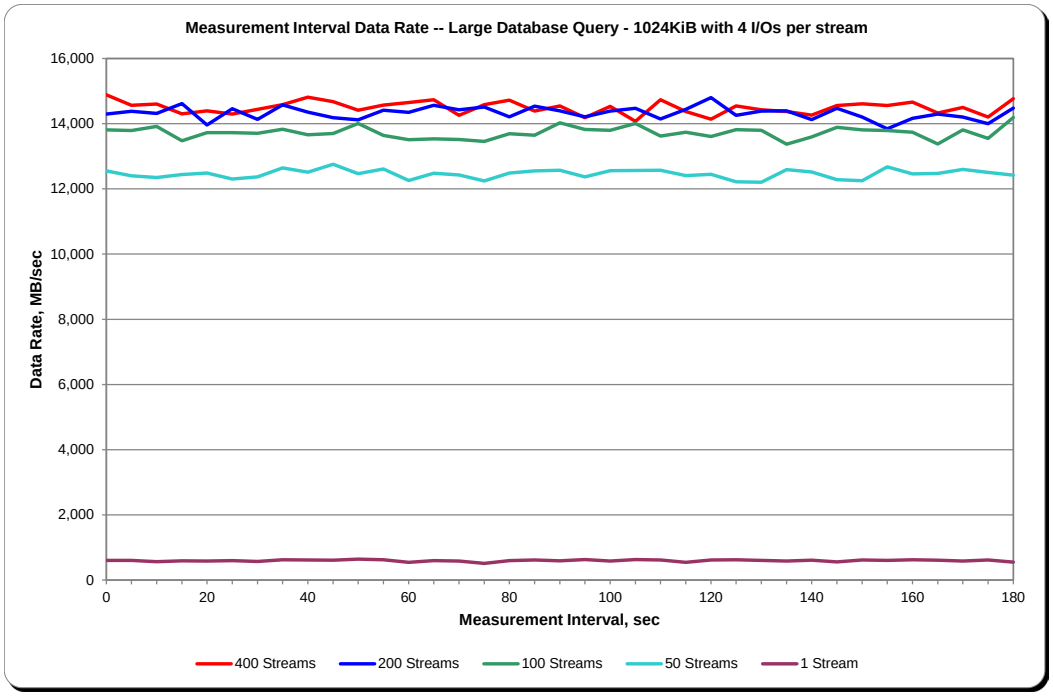
SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR1	400 Streams			TR2	200 Streams			TR3	100 Streams			TR4	50 Streams			TR5	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:00	14,883.28	37.21	114.57	0:10:00	14,295.03	71.48	59.11	0:17:00	13,810.79	138.11	30.47	0:24:00	12,552.71	251.05	16.87	0:31:00	605.45	605.45	6.91
0:03:05	14,566.82	36.42	115.33	0:10:05	14,379.12	71.90	58.51	0:17:05	13,793.81	137.94	30.45	0:24:05	12,401.72	248.03	16.77	0:31:05	602.09	602.09	6.93
0:03:10	14,603.52	36.51	114.80	0:10:10	14,315.58	71.58	58.53	0:17:10	13,916.49	139.16	30.23	0:24:10	12,349.08	246.98	17.03	0:31:10	566.86	566.86	7.40
0:03:15	14,301.74	35.75	117.01	0:10:15	14,615.47	73.08	57.63	0:17:15	13,477.14	134.77	31.07	0:24:15	12,441.98	248.84	16.96	0:31:15	590.56	590.56	7.09
0:03:20	14,396.32	35.99	116.76	0:10:20	13,958.43	69.79	59.98	0:17:20	13,727.12	137.27	30.64	0:24:20	12,488.33	249.77	16.72	0:31:20	584.48	584.48	7.18
0:03:25	14,297.75	35.74	117.44	0:10:25	14,456.93	72.28	57.90	0:17:25	13,726.49	137.26	30.41	0:24:25	12,302.94	246.06	17.02	0:31:25	597.06	597.06	7.02
0:03:30	14,439.94	36.10	115.72	0:10:30	14,128.93	70.64	59.39	0:17:30	13,708.24	137.08	30.71	0:24:30	12,370.47	247.41	16.97	0:31:30	568.96	568.96	7.36
0:03:35	14,585.06	36.46	114.46	0:10:35	14,575.00	72.87	57.34	0:17:35	13,829.04	138.29	30.13	0:24:35	12,641.21	252.82	16.62	0:31:35	622.22	622.22	6.75
0:03:40	14,813.65	37.03	114.17	0:10:40	14,352.28	71.76	58.77	0:17:40	13,661.90	136.62	30.73	0:24:40	12,515.17	250.30	16.63	0:31:40	620.55	620.55	6.74
0:03:45	14,673.35	36.68	113.90	0:10:45	14,184.30	70.92	58.85	0:17:45	13,699.44	136.99	30.74	0:24:45	12,754.67	255.09	16.48	0:31:45	612.16	612.16	6.85
0:03:50	14,412.89	36.03	116.91	0:10:50	14,116.35	70.58	59.89	0:17:50	14,009.19	140.09	29.92	0:24:50	12,469.04	249.38	16.91	0:31:50	641.10	641.10	6.54
0:03:55	14,573.32	36.43	115.11	0:10:55	14,416.03	72.08	57.98	0:17:55	13,640.72	136.41	30.80	0:24:55	12,609.34	252.19	16.56	0:31:55	626.42	626.42	6.68
0:04:00	14,649.86	36.62	114.97	0:11:00	14,346.20	71.73	58.35	0:18:00	13,510.48	135.10	30.92	0:25:00	12,254.29	245.09	17.08	0:32:00	542.32	542.32	7.74
0:04:05	14,731.86	36.83	112.88	0:11:05	14,562.20	72.81	57.66	0:18:05	13,535.44	135.35	31.07	0:25:05	12,483.09	249.66	16.83	0:32:05	596.43	596.43	7.03
0:04:10	14,258.54	35.65	116.91	0:11:10	14,424.00	72.12	57.96	0:18:10	13,514.05	135.14	30.88	0:25:10	12,428.35	248.57	16.91	0:32:10	584.27	584.27	7.17
0:04:15	14,580.45	36.45	116.62	0:11:15	14,511.45	72.56	58.03	0:18:15	13,459.31	134.59	31.19	0:25:15	12,240.87	244.82	17.01	0:32:15	511.91	511.91	8.18
0:04:20	14,724.31	36.81	113.19	0:11:20	14,207.79	71.04	58.93	0:18:20	13,692.72	136.93	30.76	0:25:20	12,489.38	249.79	16.81	0:32:20	597.27	597.27	7.02
0:04:25	14,387.93	35.97	116.59	0:11:25	14,539.55	72.70	57.99	0:18:25	13,647.43	136.47	30.68	0:25:25	12,551.87	251.04	16.79	0:32:25	614.68	614.68	6.82
0:04:30	14,541.02	36.35	115.91	0:11:30	14,391.71	71.96	58.12	0:18:30	14,023.24	140.23	29.98	0:25:30	12,570.33	251.41	16.61	0:32:30	592.66	592.66	7.07
0:04:35	14,185.35	35.46	118.04	0:11:35	14,212.19	71.06	58.84	0:18:35	13,825.89	138.26	30.17	0:25:35	12,368.37	247.37	16.94	0:32:35	632.50	632.50	6.62
0:04:40	14,529.49	36.32	115.11	0:11:40	14,389.40	71.95	58.44	0:18:40	13,795.49	137.95	30.49	0:25:40	12,558.79	251.18	16.72	0:32:40	586.99	586.99	7.14
0:04:45	14,072.52	35.18	118.35	0:11:45	14,472.03	72.36	57.66	0:18:45	14,003.94	140.04	29.79	0:25:45	12,562.15	251.24	16.73	0:32:45	628.31	628.31	6.67
0:04:50	14,733.12	36.83	115.47	0:11:50	14,146.97	70.73	59.51	0:18:50	13,619.74	136.20	30.78	0:25:50	12,571.59	251.43	16.59	0:32:50	620.34	620.34	6.75
0:04:55	14,372.41	35.93	115.85	0:11:55	14,436.79	72.18	58.02	0:18:55	13,737.18	137.37	30.71	0:25:55	12,409.27	248.19	16.92	0:32:55	543.16	543.16	7.71
0:05:00	14,139.63	35.35	118.50	0:12:00	14,801.49	74.01	57.05	0:19:00	13,605.90	136.06	30.79	0:26:00	12,446.39	248.93	16.91	0:33:00	616.56	616.56	6.80
0:05:05	14,542.07	36.36	115.56	0:12:05	14,255.81	71.28	58.66	0:19:05	13,818.97	138.19	30.42	0:26:05	12,216.75	244.33	17.11	0:33:05	623.90	623.90	6.72
0:05:10	14,426.10	36.07	117.00	0:12:10	14,384.78	71.92	58.15	0:19:10	13,799.47	137.99	30.24	0:26:10	12,206.47	244.13	17.12	0:33:10	601.88	601.88	6.96
0:05:15	14,372.83	35.93	116.16	0:12:15	14,392.96	71.96	58.39	0:19:15	13,373.75	133.74	31.43	0:26:15	12,592.14	251.84	16.70	0:33:15	585.11	585.11	7.17
0:05:20	14,264.41	35.66	116.74	0:12:20	14,122.22	70.61	59.12	0:19:20	13,595.21	135.95	30.69	0:26:20	12,516.43	250.33	16.78	0:33:20	612.58	612.58	6.83
0:05:25	14,558.01	36.40	116.03	0:12:25	14,469.30	72.35	58.16	0:19:25	13,887.55	138.88	30.23	0:26:25	12,282.60	245.65	16.94	0:33:25	560.99	560.99	7.48
0:05:30	14,610.23	36.53	114.61	0:12:30	14,202.96	71.01	58.91	0:19:30	13,807.65	138.08	30.52	0:26:30	12,251.14	245.02	17.18	0:33:30	614.47	614.47	6.82
0:05:35	14,556.75	36.39	115.36	0:12:35	13,840.15	69.20	60.92	0:19:35	13,789.61	137.90	30.37	0:26:35	12,676.03	253.52	16.61	0:33:35	603.98	603.98	6.94
0:05:40	14,662.24	36.66	114.47	0:12:40	14,162.91	70.81	59.10	0:19:40	13,735.30	137.35	30.59	0:26:40	12,462.54	249.25	16.76	0:33:40	622.02	622.02	6.73
0:05:45	14,328.58	35.82	117.81	0:12:45	14,295.03	71.48	58.51	0:19:45	13,374.59	133.75	31.23	0:26:45	12,475.96	249.52	16.78	0:33:45	609.43	609.43	6.87
0:05:50	14,501.60	36.25	114.86	0:12:50	14,205.90	71.03	59.12	0:19:50	13,809.12	138.09	30.44	0:26:50	12,600.95	252.02	16.67	0:33:50	588.04	588.04	7.13
0:05:55	14,205.90	35.51	116.17	0:12:55	13,997.65	69.99	59.19	0:19:55	13,545.92	135.46	30.55	0:26:55	12,504.06	250.08	16.67	0:33:55	616.56	616.56	6.80
0:06:00	14,765.42	36.91	115.41	0:13:00	14,478.74	72.39	58.80	0:20:00	14,187.23	141.87	29.88	0:27:00	12,422.27	248.45	16.94	0:34:00	551.13	551.13	7.60
0:06:05	14,240.29	35.60	117.90	0:13:05	14,335.08	71.68	58.28	0:20:05	13,863.64	138.64	30.27	0:27:05	12,718.81	254.38	16.46	0:34:05	625.58	625.58	6.70
0:06:10	14,426.94	36.07	116.68	0:13:10	14,354.38	71.77	58.50	0:20:10	13,459.31	134.59	31.00	0:27:10	12,261.42	245.23	17.06	0:34:10	589.30	589.30	7.11
0:06:15	14,761.64	36.90	113.63	0:13:15	14,615.47	73.08	57.51	0:20:15	13,604.64	136.05	30.99	0:27:15	12,553.34	251.07	16.70	0:34:15	632.29	632.29	6.62
0:06:20	14,731.23	36.83	113.90	0:13:20	14,567.87	72.84	57.69	0:20:20	13,599.61	136.00	30.70	0:27:20	12,517.90	250.36	16.76	0:34:20	647.81	647.81	6.48
0:06:25	14,297.75	35.74	117.05	0:13:25	14,267.76	71.34	58.67	0:20:25	13,768.22	137.68	30.52	0:27:25	12,543.28	250.87	16.74	0:34:25	622.64	622.64	6.73
0:06:30	14,702.08	36.76	114.22	0:13:30	14,220.37	71.10	58.89	0:20:30	13,857.56	138.58	30.14	0:27:30	12,524.61	250.49	16.79	0:34:30	645.92	645.92	6.48
0:06:35	14,188.91	35.47	118.01	0:13:35	14,240.92	71.20	58.99	0:20:35	13,763.82	137.64	30.51	0:27:35	12,389.34	247.79	16.80	0:34:35	605.87	605.87	6.93
0:06:40	14,192.69	38.36	116.76	0:13:40	13,984.23	148.77	58.14	0:20:40	13,552.43	366.28	29.73	0:27:40	12,088.82	863.49	16.66	0:34:40	623.27	623.27	6.72
0:06:45	358.40	0.00	187.79	0:13:45	156.03	0.00	41.54	0:20:45	85.35	0.00	24.38	0:27:45	71.72	0.00	14.91	0:34:45	2.52	0.00	16.17
0:06:50	0.00	0.00	0.00	0:13:50	0.00	0.00	0.00	0:20:50	0.00	0.00	0.00	0:27:50	0.00	0.00	0.00	0:34:50	0.00	0.00	0.00

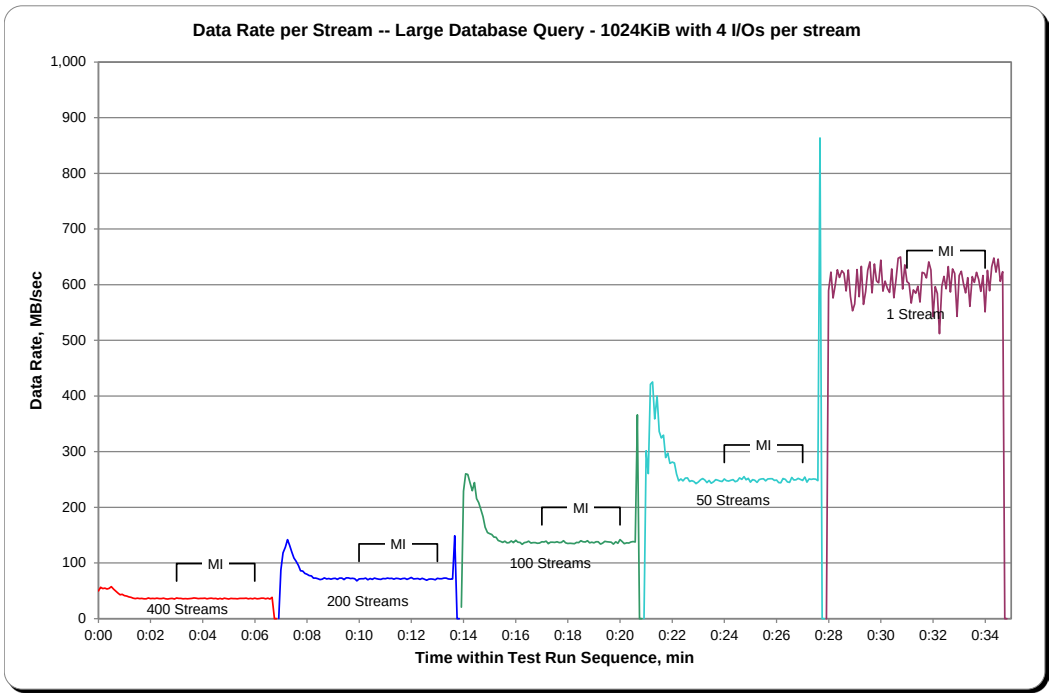
SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate Graph – Complete Test Run



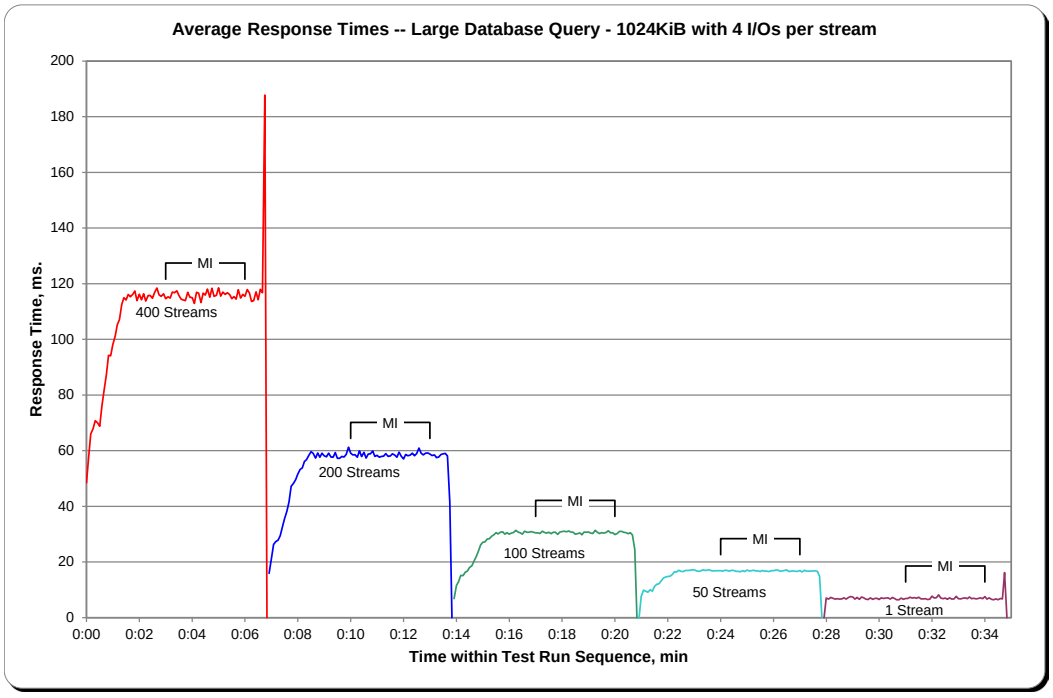
SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate per Stream Graph



SPC-2 "Large Database Query/1024 KiB Transfer Size/4 Outstanding I/Os" Average Response Time Graph



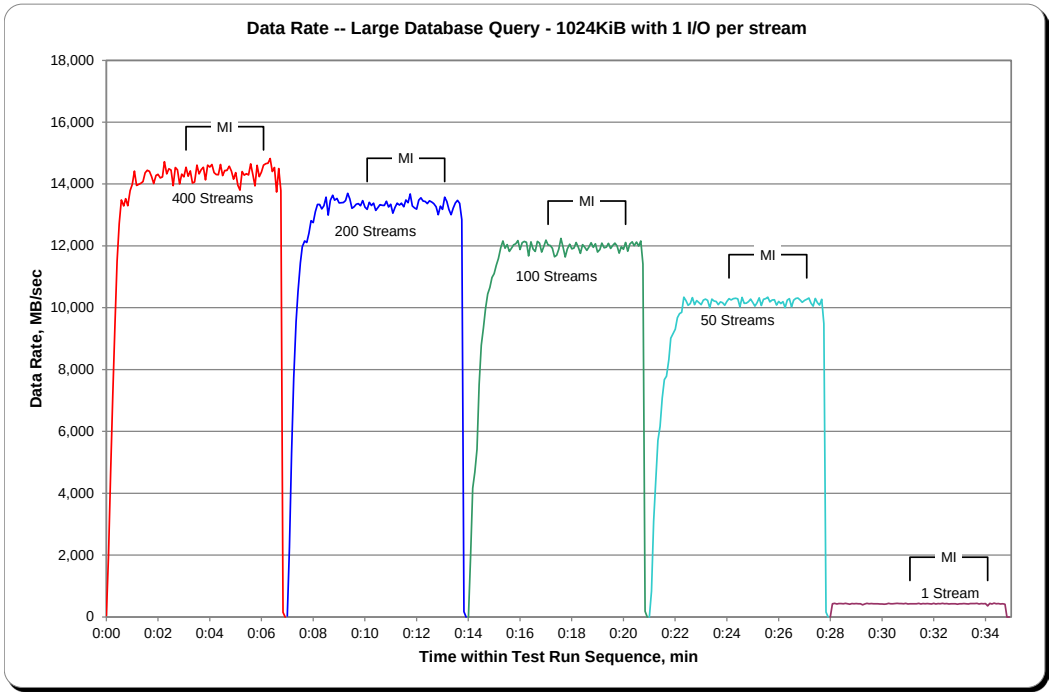
SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Test Run Data – Ramp-Up Period

TR6	400 Streams			TR7	200 Streams			TR8	100 Streams			TR9	50 Streams			TR10	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	47.19	47.19	2.83	0:07:00	31.04	31.04	2.73	0:14:00	0.00	0.00	0.00	0:21:00	0.00	0.00	0.00	0:28:00	0.00	0.00	0.00
0:00:05	1,992.08	48.59	12.00	0:07:05	2,244.37	89.77	6.58	0:14:05	1,948.46	149.88	3.87	0:21:05	836.55	119.51	3.06	0:28:05	425.30	425.30	2.45
0:00:10	4,696.36	58.70	13.30	0:07:10	5,303.49	110.49	7.70	0:14:10	4,166.20	231.46	4.01	0:21:10	3,091.62	281.06	2.99	0:28:10	441.66	441.66	2.36
0:00:15	7,188.62	64.18	14.09	0:07:15	7,725.70	122.63	7.71	0:14:15	4,688.60	223.27	4.34	0:21:15	4,424.57	245.81	3.33	0:28:15	422.79	422.79	2.48
0:00:20	9,431.73	63.73	14.31	0:07:20	9,545.82	116.41	8.06	0:14:20	5,424.70	174.99	4.77	0:21:20	5,713.48	272.07	3.60	0:28:20	437.05	437.05	2.39
0:00:25	11,505.60	61.86	15.11	0:07:25	10,524.35	111.96	8.61	0:14:25	7,525.21	188.13	4.80	0:21:25	6,162.69	267.94	3.65	0:28:25	438.10	438.10	2.39
0:00:30	12,725.52	58.91	16.48	0:07:30	11,445.63	103.11	9.21	0:14:30	8,790.21	187.03	5.29	0:21:30	7,073.90	262.00	3.77	0:28:30	427.40	427.40	2.45
0:00:35	13,483.85	58.63	17.35	0:07:35	11,974.53	102.35	9.90	0:14:35	9,344.49	176.31	5.54	0:21:35	7,675.37	255.85	3.95	0:28:35	441.24	441.24	2.37
0:00:40	13,291.12	52.12	19.15	0:07:40	12,157.19	95.73	10.56	0:14:40	9,983.49	163.66	5.90	0:21:40	7,785.89	251.16	4.13	0:28:40	425.30	425.30	2.46
0:00:45	13,526.21	48.48	20.54	0:07:45	12,112.31	87.77	11.54	0:14:45	10,442.56	168.43	6.18	0:21:45	8,321.50	231.15	4.30	0:28:45	416.91	416.91	2.50
0:00:50	13,301.82	44.19	22.65	0:07:50	12,404.86	81.08	12.30	0:14:50	10,649.34	158.95	6.24	0:21:50	9,015.66	231.17	4.36	0:28:50	433.90	433.90	2.42
0:00:55	13,786.47	43.22	23.62	0:07:55	12,813.39	80.59	12.90	0:14:55	10,979.01	152.49	6.63	0:21:55	9,169.17	229.23	4.48	0:28:55	427.82	427.82	2.45
0:01:00	13,988.84	41.76	24.52	0:08:00	12,749.85	75.00	13.72	0:15:00	11,101.48	140.53	7.20	0:22:00	9,303.39	226.91	4.56	0:29:00	438.10	438.10	2.39
0:01:05	14,417.92	42.03	24.58	0:08:05	13,103.63	74.03	13.82	0:15:05	11,373.48	137.03	7.43	0:22:05	9,676.68	219.92	4.65	0:29:05	426.35	426.35	2.46
0:01:10	13,956.34	39.20	26.22	0:08:10	13,343.55	72.13	14.21	0:15:10	11,595.57	130.29	7.75	0:22:10	9,807.75	208.68	4.76	0:29:10	426.35	426.35	2.45
0:01:15	13,987.37	38.11	27.02	0:08:15	13,343.55	69.86	14.86	0:15:15	11,942.65	125.71	8.02	0:22:15	9,851.58	205.24	5.03	0:29:15	391.33	391.33	2.67
0:01:20	14,025.54	36.24	28.28	0:08:20	13,193.60	68.36	15.30	0:15:20	12,156.56	125.33	8.26	0:22:20	10,341.69	211.05	4.94	0:29:20	419.22	419.22	2.50
0:01:25	14,079.44	35.73	29.08	0:08:25	13,301.82	68.21	15.15	0:15:25	11,924.20	119.24	8.49	0:22:25	10,234.10	208.86	5.00	0:29:25	443.13	443.13	2.36
0:01:30	14,364.02	36.00	29.10	0:08:30	13,572.35	67.86	15.28	0:15:30	12,042.06	120.42	8.74	0:22:30	10,081.01	201.62	5.14	0:29:30	427.61	427.61	2.45
0:01:35	14,448.96	36.12	29.00	0:08:35	12,993.32	64.97	16.16	0:15:35	11,818.92	118.19	8.91	0:22:35	10,133.02	202.66	5.17	0:29:35	431.80	431.80	2.42
0:01:40	14,408.90	36.02	29.00	0:08:40	13,473.78	67.37	15.46	0:15:40	11,922.94	119.23	8.76	0:22:40	10,328.26	206.57	5.09	0:29:40	427.61	427.61	2.44
0:01:45	14,245.11	35.61	29.47	0:08:45	13,636.73	68.18	15.40	0:15:45	12,033.25	120.33	8.68	0:22:45	10,101.77	202.04	5.14	0:29:45	428.03	428.03	2.45
0:01:50	14,014.85	35.04	29.91	0:08:50	13,480.28	67.40	15.60	0:15:50	12,067.01	120.67	8.73	0:22:50	10,228.23	204.56	5.11	0:29:50	428.24	428.24	2.44
0:01:55	14,277.62	35.69	29.39	0:08:55	13,533.34	67.67	15.50	0:15:55	12,170.40	121.70	8.62	0:22:55	10,169.72	203.39	5.18	0:29:55	420.06	420.06	2.49
0:02:00	14,312.64	35.78	29.31	0:09:00	13,391.36	66.96	15.58	0:16:00	11,885.61	118.86	8.74	0:23:00	10,098.84	201.98	5.17	0:30:00	423.00	423.00	2.47
0:02:05	14,197.09	35.49	29.58	0:09:05	13,393.46	66.97	15.75	0:16:05	12,101.62	121.02	8.70	0:23:05	10,243.75	204.87	5.12	0:30:05	415.45	415.45	2.52
0:02:10	14,229.60	35.57	29.51	0:09:10	13,401.43	67.01	15.65	0:16:10	12,144.40	121.44	8.67	0:23:10	10,279.19	205.58	5.10	0:30:10	423.83	423.83	2.47
0:02:15	14,723.48	36.81	28.34	0:09:15	13,461.20	67.31	15.45	0:16:15	12,115.67	121.16	8.63	0:23:15	10,238.09	204.76	5.14	0:30:15	444.18	444.18	2.36
0:02:20	14,324.81	35.81	29.39	0:09:20	13,699.02	68.50	15.35	0:16:20	11,677.57	116.78	8.93	0:23:20	10,002.79	200.06	5.19	0:30:20	425.93	425.93	2.46
0:02:25	14,492.16	36.23	28.93	0:09:25	13,521.18	67.61	15.55	0:16:25	12,128.25	121.28	8.69	0:23:25	10,277.51	205.55	5.08	0:30:25	429.50	429.50	2.44
0:02:30	14,455.46	36.14	28.95	0:09:30	13,212.69	66.06	15.87	0:16:30	11,898.19	118.98	8.82	0:23:30	10,214.18	204.28	5.16	0:30:30	434.74	434.74	2.41
0:02:35	13,947.32	34.87	30.11	0:09:35	13,261.55	66.31	15.75	0:16:35	11,818.29	118.18	8.79	0:23:35	10,204.95	204.10	5.12	0:30:35	438.93	438.93	2.38
0:02:40	14,538.09	36.35	28.98	0:09:40	13,347.53	66.74	15.80	0:16:40	12,146.49	121.46	8.66	0:23:40	10,102.19	202.04	5.18	0:30:40	434.95	434.95	2.41
0:02:45	14,461.75	36.15	28.87	0:09:45	13,368.92	66.84	15.66	0:16:45	12,090.71	120.91	8.71	0:23:45	10,187.96	203.76	5.16	0:30:45	432.64	432.64	2.42
0:02:50	14,002.26	35.01	29.88	0:09:50	13,297.41	66.49	15.64	0:16:50	11,798.79	117.99	8.86	0:23:50	10,165.32	203.31	5.18	0:30:50	428.03	428.03	2.45
0:02:55	14,318.93	35.80	29.37	0:09:55	13,466.44	67.33	15.61	0:16:55	11,977.25	119.77	8.70	0:23:55	10,082.48	201.65	5.15	0:30:55	439.14	439.14	2.38
0:03:00	14,234.21	35.59	29.32	0:10:00	13,249.18	66.25	15.88	0:17:00	12,185.50	121.86	8.64	0:24:00	10,200.34	204.01	5.11	0:31:00	420.69	420.69	2.49

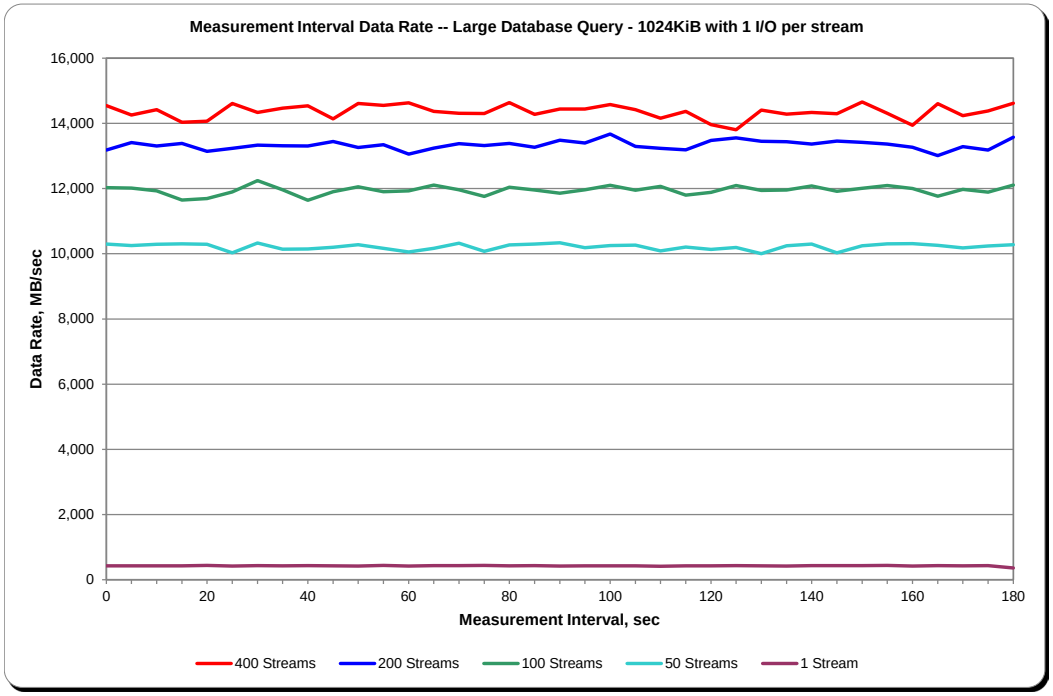
SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR6	400 Streams			TR7	200 Streams			TR8	100 Streams			TR9	50 Streams			TR10	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	14,544.80	36.36	28.99	0:10:05	13,180.81	65.90	15.89	0:17:05	12,026.33	120.26	8.74	0:24:05	10,294.29	205.89	5.15	0:31:05	428.24	428.24	2.44
0:03:10	14,252.66	35.63	29.34	0:10:10	13,408.14	67.04	15.57	0:17:10	12,015.00	120.15	8.66	0:24:10	10,249.83	205.00	5.09	0:31:10	429.50	429.50	2.44
0:03:15	14,421.90	36.05	29.18	0:10:15	13,303.28	66.52	15.78	0:17:15	11,927.13	119.27	8.81	0:24:15	10,292.61	205.85	5.10	0:31:15	425.72	425.72	2.46
0:03:20	14,029.95	35.07	29.72	0:10:20	13,383.81	66.92	15.61	0:17:20	11,649.05	116.49	9.01	0:24:20	10,306.03	206.12	5.07	0:31:20	428.24	428.24	2.44
0:03:25	14,067.91	35.17	29.77	0:10:25	13,143.48	65.72	16.03	0:17:25	11,692.67	116.93	8.96	0:24:25	10,288.84	205.78	5.12	0:31:25	438.93	438.93	2.38
0:03:30	14,612.54	36.53	28.85	0:10:30	13,236.17	66.18	15.80	0:17:30	11,893.37	118.93	8.74	0:24:30	10,030.26	200.61	5.18	0:31:30	423.21	423.21	2.47
0:03:35	14,331.31	35.83	29.21	0:10:35	13,332.85	66.66	15.78	0:17:35	12,242.96	122.43	8.64	0:24:35	10,332.46	206.65	5.08	0:31:35	434.32	434.32	2.42
0:03:40	14,468.04	36.17	29.09	0:10:40	13,309.78	66.55	15.73	0:17:40	11,959.64	119.60	8.77	0:24:40	10,141.41	202.83	5.19	0:31:40	424.88	424.88	2.46
0:03:45	14,539.97	36.35	28.65	0:10:45	13,307.06	66.54	15.70	0:17:45	11,638.14	116.38	8.94	0:24:45	10,147.70	202.95	5.14	0:31:45	435.79	435.79	2.40
0:03:50	14,135.01	35.34	29.80	0:10:50	13,445.47	67.23	15.64	0:17:50	11,904.69	119.05	8.82	0:24:50	10,197.19	203.94	5.15	0:31:50	424.67	424.67	2.46
0:03:55	14,612.96	36.53	28.74	0:10:55	13,260.08	66.30	15.74	0:17:55	12,052.33	120.52	8.72	0:24:55	10,276.25	205.53	5.08	0:31:55	421.32	421.32	2.48
0:04:00	14,548.57	36.37	28.67	0:11:00	13,345.86	66.73	15.78	0:18:00	11,903.23	119.03	8.80	0:25:00	10,165.94	203.32	5.18	0:32:00	440.61	440.61	2.37
0:04:05	14,632.67	36.58	28.78	0:11:05	13,059.80	65.30	16.01	0:18:05	11,930.49	119.30	8.71	0:25:05	10,054.17	201.08	5.17	0:32:05	423.41	423.41	2.47
0:04:10	14,366.96	35.92	29.18	0:11:10	13,241.84	66.21	15.91	0:18:10	12,107.91	121.08	8.74	0:25:10	10,163.64	203.27	5.16	0:32:10	435.58	435.58	2.40
0:04:15	14,306.35	35.77	29.32	0:11:15	13,379.62	66.90	15.64	0:18:15	11,960.27	119.60	8.77	0:25:15	10,323.02	206.46	5.10	0:32:15	430.96	430.96	2.43
0:04:20	14,302.16	35.76	29.30	0:11:20	13,320.90	66.60	15.69	0:18:20	11,756.63	117.57	8.85	0:25:20	10,071.36	201.43	5.18	0:32:20	439.98	439.98	2.38
0:04:25	14,634.56	36.59	28.70	0:11:25	13,382.14	66.91	15.70	0:18:25	12,040.59	120.41	8.73	0:25:25	10,274.37	205.49	5.11	0:32:25	427.61	427.61	2.45
0:04:30	14,272.38	35.68	29.37	0:11:30	13,267.42	66.34	15.76	0:18:30	11,957.33	119.57	8.78	0:25:30	10,296.60	205.93	5.08	0:32:30	433.90	433.90	2.41
0:04:35	14,437.84	36.09	28.89	0:11:35	13,484.90	67.42	15.60	0:18:35	11,856.25	118.56	8.84	0:25:35	10,338.75	206.77	5.09	0:32:35	420.06	420.06	2.49
0:04:40	14,440.36	36.10	29.19	0:11:40	13,394.09	66.97	15.62	0:18:40	11,963.41	119.63	8.68	0:25:40	10,187.96	203.76	5.10	0:32:40	424.88	424.88	2.43
0:04:45	14,579.61	36.45	28.68	0:11:45	13,675.32	68.38	15.39	0:18:45	12,101.41	121.01	8.76	0:25:45	10,252.35	205.05	5.12	0:32:45	425.72	425.72	2.49
0:04:50	14,421.07	36.05	29.24	0:11:50	13,289.44	66.45	15.74	0:18:50	11,948.94	119.49	8.77	0:25:50	10,261.99	205.24	5.13	0:32:50	429.71	429.71	2.44
0:04:55	14,157.66	35.39	29.46	0:11:55	13,231.14	66.16	15.81	0:18:55	12,067.85	120.68	8.62	0:25:55	10,085.41	201.71	5.17	0:32:55	415.87	415.87	2.52
0:05:00	14,367.59	35.92	29.34	0:12:00	13,186.68	65.93	15.92	0:19:00	11,798.79	117.99	8.91	0:26:00	10,204.53	204.09	5.15	0:33:00	430.55	430.55	2.43
0:05:05	13,960.53	34.90	29.93	0:12:05	13,478.61	67.39	15.50	0:19:05	11,884.35	118.84	8.83	0:26:05	10,132.81	202.66	5.16	0:33:05	429.08	429.08	2.44
0:05:10	13,800.94	34.50	30.30	0:12:10	13,556.62	67.78	15.55	0:19:10	12,091.76	120.92	8.67	0:26:10	10,194.26	203.89	5.16	0:33:10	435.37	435.37	2.40
0:05:15	14,404.50	36.01	29.27	0:12:15	13,449.04	67.25	15.54	0:19:15	11,940.97	119.41	8.69	0:26:15	10,001.32	200.03	5.20	0:33:15	428.66	428.66	2.44
0:05:20	14,284.96	35.71	29.25	0:12:20	13,434.78	67.17	15.67	0:19:20	11,955.65	119.56	8.86	0:26:20	10,248.15	204.96	5.12	0:33:20	420.06	420.06	2.49
0:05:25	14,335.29	35.84	29.32	0:12:25	13,366.83	66.83	15.66	0:19:25	12,082.95	120.83	8.68	0:26:25	10,296.81	205.94	5.10	0:33:25	432.85	432.85	2.42
0:05:30	14,294.82	35.74	29.31	0:12:30	13,454.70	67.27	15.52	0:19:30	11,914.34	119.14	8.74	0:26:30	10,031.31	200.63	5.21	0:33:30	435.58	435.58	2.40
0:05:35	14,655.32	36.64	28.69	0:12:35	13,417.37	67.09	15.67	0:19:35	12,010.60	120.11	8.76	0:26:35	10,246.68	204.93	5.12	0:33:35	435.16	435.16	2.40
0:05:40	14,310.76	35.78	29.20	0:12:40	13,365.99	66.83	15.61	0:19:40	12,090.29	120.90	8.68	0:26:40	10,301.84	206.04	5.07	0:33:40	442.29	442.29	2.37
0:05:45	13,939.35	34.85	29.99	0:12:45	13,263.86	66.32	15.90	0:19:45	12,002.21	120.02	8.74	0:26:45	10,312.12	206.24	5.10	0:33:45	420.27	420.27	2.49
0:05:50	14,602.89	36.51	28.87	0:12:50	13,009.05	65.05	16.07	0:19:50	11,766.07	117.66	8.82	0:26:50	10,254.86	205.10	5.07	0:33:50	434.95	434.95	2.40
0:05:55	14,239.45	35.60	29.38	0:12:55	13,287.35	66.44	15.82	0:19:55	11,973.06	119.73	8.84	0:26:55	10,179.16	203.58	5.15	0:33:55	425.93	425.93	2.46
0:06:00	14,379.96	35.95	29.10	0:13:00	13,183.12	65.92	15.84	0:20:00	11,888.54	118.89	8.80	0:27:00	10,238.30	204.77	5.12	0:34:00	433.90	433.90	2.41
0:06:05	14,613.58	36.53	28.71	0:13:05	13,573.82	67.87	15.43	0:20:05	12,109.38	121.09	8.66	0:27:05	10,274.79	205.50	5.12	0:34:05	359.87	359.87	2.91
0:06:10	14,660.14	36.65	28.63	0:13:10	13,435.40	67.18	15.70	0:20:10	11,830.45	118.30	8.78	0:27:10	10,314.84	206.30	5.03	0:34:10	441.45	441.45	2.37
0:06:15	14,672.09	36.68	28.64	0:13:15	13,177.04	65.89	15.87	0:20:15	12,059.67	120.60	8.77	0:27:15	10,145.39	202.91	5.17	0:34:15	418.80	418.80	2.50
0:06:20	14,822.25	37.06	28.27	0:13:20	13,007.38	65.04	16.12	0:20:20	12,133.28	121.33	8.62	0:27:20	10,051.44	201.03	5.23	0:34:20	446.27	446.27	2.34
0:06:25	14,404.29	36.01	28.98	0:13:25	13,221.08	66.11	15.85	0:20:25	12,006.20	120.06	8.66	0:27:25	10,299.95	206.00	5.06	0:34:25	430.96	430.96	2.43
0:06:30	14,535.15	36.34	28.94	0:13:30	13,388.64	66.94	15.68	0:20:30	12,124.47	121.24	8.71	0:27:30	10,165.11	203.30	5.16	0:34:30	432.64	432.64	2.42
0:06:35	13,741.59	34.35	30.53	0:13:35	13,469.80	67.35	15.48	0:20:35	11,989.84	119.90	8.72	0:27:35	10,084.16	201.68	5.18	0:34:35	423.00	423.00	2.47
0:06:40	14,500.55	36.25	28.80	0:13:40	13,377.10	66.89	15.68	0:20:40	12,161.80	121.62	8.60	0:27:40	10,270.17	205.40	5.12	0:34:40	431.38	431.38	2.43
0:06:45	13,780.60	87.22	28.89	0:13:45	12,847.36	147.67	15.25	0:20:45	11,409.35	223.71	8.55	0:27:45	9,485.21	412.40	5.13	0:34:45	415.24	415.24	2.52
0:06:50	153.30	0.00	20.70	0:13:50	173.85	0.00	12.14	0:20:50	185.18	0.00	6.66	0:27:50	160.01	0.00	4.33	0:34:50	1.26	0.00	8.66
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00

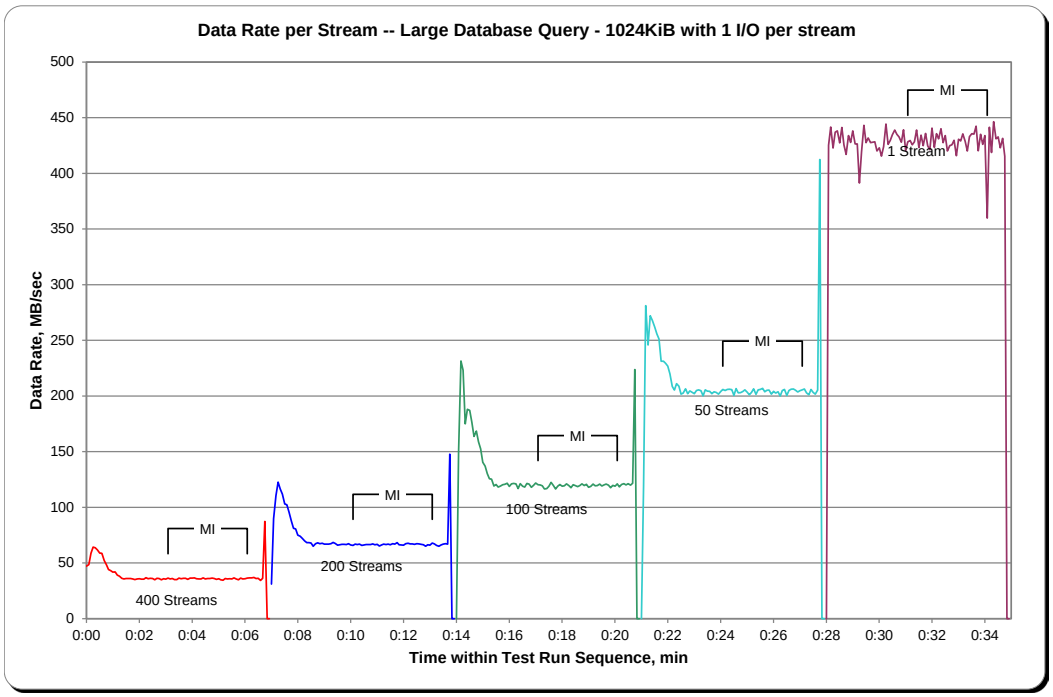
SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Average Data Rate Graph – Complete Test Run



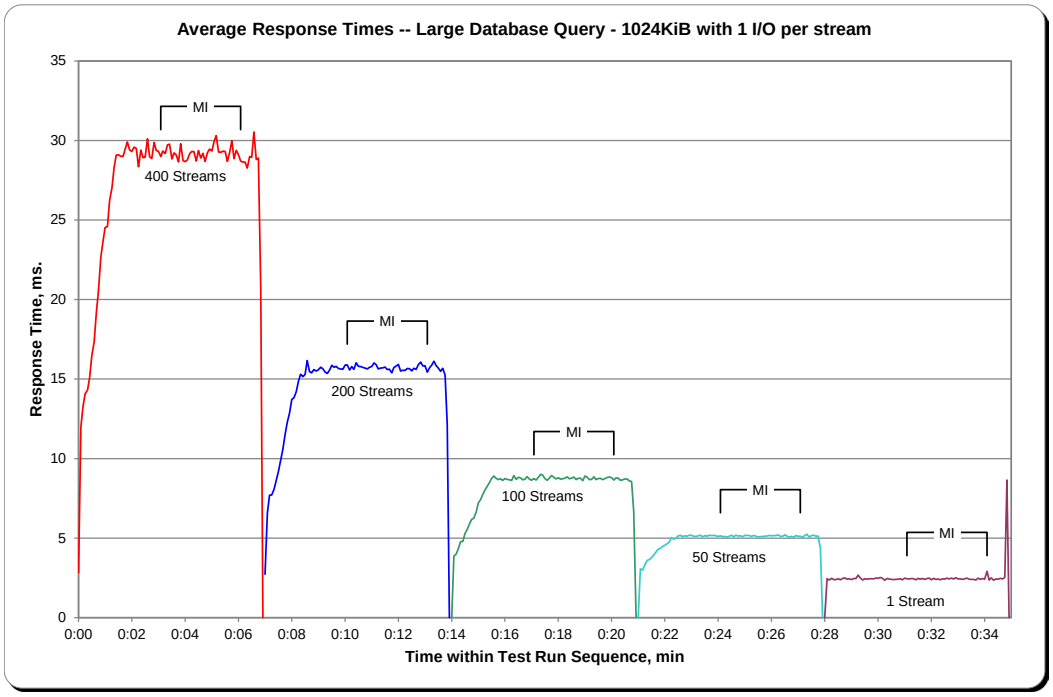
SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Average Data Rate per Stream Graph



SPC-2 "Large Database Query/1024 KiB Transfer Size/1 Outstanding I/O" Average Response Time Graph



Large Database Query Test – 64 KIB TRANSFER SIZE Test Phase

Clause 10.6.8.2.1

5. *A table that will contain the following information for each "64 KiB Transfer Size, 4 Outstanding I/Os" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
6. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "64 KiB Transfer Size, 4 Outstanding I/Os" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*
7. *A table that will contain the following information for each "64 KiB Transfer Size, 1 Outstanding I/O" Test Run:*
   - *The number of Streams specified.*
   - *The average data rate, average data rate per stream, and average Response Time reported at five second intervals.*
8. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the "64 KiB Transfer Size, 1 Outstanding I/O" Test Runs as specified in Clauses 10.1.4 – 10.1.6.*

The SPC-2 "Large Database Query/64 KIB TRANSFER SIZE/4 Outstanding I/Os" Test Run data is contained in the table that appears on the next page. That table is followed by graphs illustrating the average Data Rate, average Data Rate per Stream, and average Response Time produced by the same Test Runs. The table and graphs present the data at five-second intervals.

Immediately following the SPC-2 "Large Database Query/64 KIB TRANSFER SIZE/4 Outstanding I/Os" table and graphs will be the SPC-2 "Large Database Query/64 KIB TRANSFER SIZE/1 Outstanding I/O" table and graphs. The table contains the Test Run data and the graphs illustrate the average Data Rate, average Data Rate per Stream, and average Response Time produced by the Test Runs.

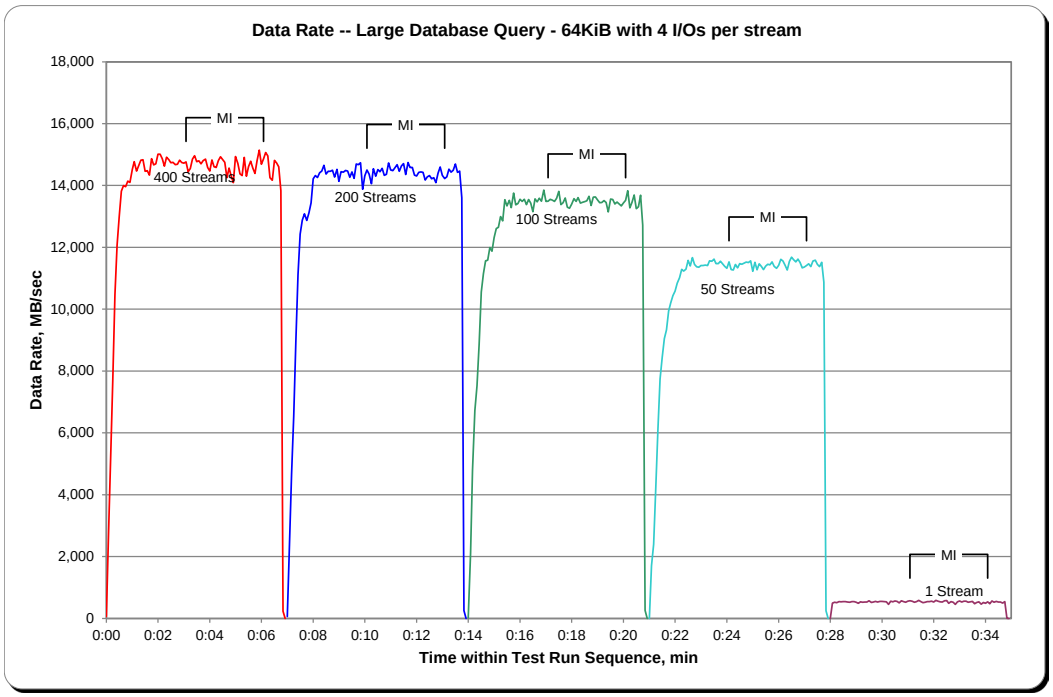
SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Test Run Data – Ramp-Up Period

TR11	400 Streams			TR12	200 Streams			TR13	100 Streams			TR14	50 Streams			TR15	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	64.72	16.18	0.67	0:07:00	60.46	60.46	0.50	0:14:00	20.20	20.20	0.76	0:21:00	0.00	0.00	0.00	0:28:00	0.00	0.00	0.00
0:00:05	2,722.35	57.92	2.83	0:07:05	2,358.30	90.70	1.55	0:14:05	2,105.13	150.37	0.87	0:21:05	1,707.70	341.54	0.64	0:28:05	497.65	497.65	0.52
0:00:10	5,198.96	64.99	3.19	0:07:10	4,676.49	119.91	1.84	0:14:10	4,784.70	199.36	0.95	0:21:10	2,396.20	299.52	0.72	0:28:10	528.07	528.07	0.49
0:00:15	7,722.18	63.30	3.34	0:07:15	6,537.46	116.74	1.85	0:14:15	6,720.44	224.01	1.06	0:21:15	4,226.61	281.77	0.65	0:28:15	510.89	510.89	0.51
0:00:20	10,475.74	65.47	3.50	0:07:20	8,967.97	118.00	1.85	0:14:20	7,523.30	214.95	1.11	0:21:20	6,115.77	291.23	0.72	0:28:20	546.81	546.81	0.47
0:00:25	12,070.75	62.87	3.77	0:07:25	11,117.19	114.61	2.03	0:14:25	8,872.48	206.34	1.13	0:21:25	7,741.32	309.65	0.79	0:28:25	535.20	535.20	0.48
0:00:30	12,994.98	61.59	4.07	0:07:30	12,429.17	111.97	2.19	0:14:30	10,556.31	185.20	1.26	0:21:30	8,439.44	312.57	0.82	0:28:30	542.80	542.80	0.48
0:00:35	13,818.18	59.56	4.21	0:07:35	12,878.40	106.43	2.35	0:14:35	11,152.03	192.28	1.34	0:21:35	9,048.12	274.19	0.87	0:28:35	543.91	543.91	0.48
0:00:40	13,995.16	55.54	4.50	0:07:40	13,082.37	103.01	2.47	0:14:40	11,562.37	183.53	1.37	0:21:40	9,330.36	274.42	0.95	0:28:40	530.36	530.36	0.49
0:00:45	13,961.53	51.71	4.86	0:07:45	12,871.85	94.65	2.64	0:14:45	11,582.14	165.46	1.47	0:21:45	9,943.65	268.75	0.93	0:28:45	526.05	526.05	0.49
0:00:50	14,144.24	49.11	5.14	0:07:50	13,109.26	87.98	2.82	0:14:50	11,991.70	171.31	1.53	0:21:50	10,212.02	255.30	0.99	0:28:50	542.12	542.12	0.48
0:00:55	14,101.16	45.63	5.54	0:07:55	13,433.43	84.49	3.00	0:14:55	11,873.72	160.46	1.59	0:21:55	10,438.28	254.59	1.01	0:28:55	547.65	547.65	0.47
0:01:00	14,515.03	44.80	5.69	0:08:00	14,214.77	83.62	3.06	0:15:00	12,314.85	155.88	1.63	0:22:00	10,580.43	258.06	1.01	0:29:00	526.80	526.80	0.49
0:01:05	14,773.05	43.84	5.89	0:08:05	14,324.62	81.39	3.19	0:15:05	12,607.89	157.60	1.63	0:22:05	10,837.41	252.03	1.03	0:29:05	493.33	493.33	0.53
0:01:10	14,467.98	41.22	6.16	0:08:10	14,259.02	77.49	3.27	0:15:10	12,646.48	148.78	1.72	0:22:10	11,015.54	239.47	1.04	0:29:10	540.94	540.94	0.48
0:01:15	14,627.72	39.86	6.42	0:08:15	14,411.04	75.45	3.41	0:15:15	12,996.21	146.02	1.78	0:22:15	11,289.10	245.42	1.06	0:29:15	521.44	521.44	0.50
0:01:20	14,819.23	38.69	6.62	0:08:20	14,468.87	74.97	3.47	0:15:20	12,856.89	139.75	1.81	0:22:20	11,230.41	238.94	1.08	0:29:20	532.99	532.99	0.49
0:01:25	14,835.67	37.85	6.80	0:08:25	14,652.06	74.00	3.50	0:15:25	13,540.80	139.60	1.82	0:22:25	11,297.72	235.37	1.09	0:29:25	532.45	532.45	0.49
0:01:30	14,456.07	36.14	7.19	0:08:30	14,369.49	71.85	3.60	0:15:30	13,341.70	133.42	1.93	0:22:30	11,575.48	231.51	1.11	0:29:30	570.51	570.51	0.45
0:01:35	14,477.74	36.19	7.21	0:08:35	14,456.35	72.28	3.65	0:15:35	13,522.24	135.22	1.93	0:22:35	11,398.98	227.98	1.14	0:29:35	519.40	519.40	0.50
0:01:40	14,335.46	35.84	7.29	0:08:40	14,455.90	72.28	3.62	0:15:40	13,284.83	132.85	1.95	0:22:40	11,669.69	233.39	1.12	0:29:40	529.13	529.13	0.49
0:01:45	14,865.18	37.16	7.09	0:08:45	14,496.30	72.48	3.60	0:15:45	13,756.47	137.56	1.91	0:22:45	11,449.65	228.99	1.14	0:29:45	550.65	550.65	0.47
0:01:50	14,664.92	36.66	7.13	0:08:50	14,271.56	71.36	3.67	0:15:50	13,372.16	133.72	1.95	0:22:50	11,368.78	227.38	1.15	0:29:50	528.18	528.18	0.49
0:01:55	14,701.47	36.75	7.13	0:08:55	14,524.75	72.62	3.61	0:15:55	13,417.20	134.17	1.94	0:22:55	11,359.54	227.19	1.15	0:29:55	554.58	554.58	0.47
0:02:00	15,014.79	37.54	6.99	0:09:00	14,135.31	70.68	3.69	0:16:00	13,555.97	135.56	1.94	0:23:00	11,413.39	228.27	1.14	0:30:00	551.43	551.43	0.47
0:02:05	15,008.69	37.52	6.98	0:09:05	14,446.59	72.23	3.61	0:16:05	13,485.17	134.85	1.94	0:23:05	11,412.92	228.26	1.14	0:30:05	544.90	544.90	0.48
0:02:10	14,866.88	37.17	7.03	0:09:10	14,434.71	72.17	3.65	0:16:10	13,555.11	135.55	1.93	0:23:10	11,426.24	228.52	1.14	0:30:10	538.39	538.39	0.48
0:02:15	14,626.37	36.57	7.16	0:09:15	14,489.81	72.45	3.61	0:16:15	13,380.67	133.81	1.94	0:23:15	11,411.88	228.24	1.14	0:30:15	456.56	456.56	0.57
0:02:20	14,914.62	37.29	7.04	0:09:20	14,465.64	72.33	3.61	0:16:20	13,544.71	135.45	1.94	0:23:20	11,566.67	231.33	1.13	0:30:20	558.72	558.72	0.46
0:02:25	14,832.64	37.08	7.06	0:09:25	14,268.14	71.34	3.67	0:16:25	13,427.28	134.27	1.94	0:23:25	11,549.91	231.00	1.13	0:30:25	539.85	539.85	0.48
0:02:30	14,736.52	36.84	7.09	0:09:30	14,437.54	72.19	3.63	0:16:30	13,154.18	131.54	1.98	0:23:30	11,621.51	232.43	1.12	0:30:30	568.20	568.20	0.46
0:02:35	14,751.47	36.88	7.13	0:09:35	14,233.42	71.17	3.67	0:16:35	13,569.93	135.70	1.93	0:23:35	11,475.34	229.51	1.14	0:30:35	555.51	555.51	0.47
0:02:40	14,675.67	36.69	7.14	0:09:40	14,694.58	73.47	3.54	0:16:40	13,472.65	134.73	1.94	0:23:40	11,472.84	229.46	1.14	0:30:40	503.37	503.37	0.51
0:02:45	14,686.66	36.72	7.11	0:09:45	14,672.35	73.36	3.59	0:16:45	13,586.02	135.86	1.92	0:23:45	11,553.20	231.06	1.13	0:30:45	571.47	571.47	0.45
0:02:50	14,817.74	37.04	7.07	0:09:50	14,734.25	73.67	3.55	0:16:50	13,491.09	134.91	1.92	0:23:50	11,464.69	229.29	1.13	0:30:50	547.83	547.83	0.47
0:02:55	14,745.33	36.86	7.10	0:09:55	13,880.99	69.40	3.76	0:16:55	13,849.82	138.50	1.90	0:23:55	11,387.09	227.74	1.15	0:30:55	525.11	525.11	0.49
0:03:00	14,723.39	36.81	7.10	0:10:00	14,311.99	71.56	3.63	0:17:00	13,484.27	134.84	1.93	0:24:00	11,320.52	226.41	1.15	0:31:00	559.99	559.99	0.46

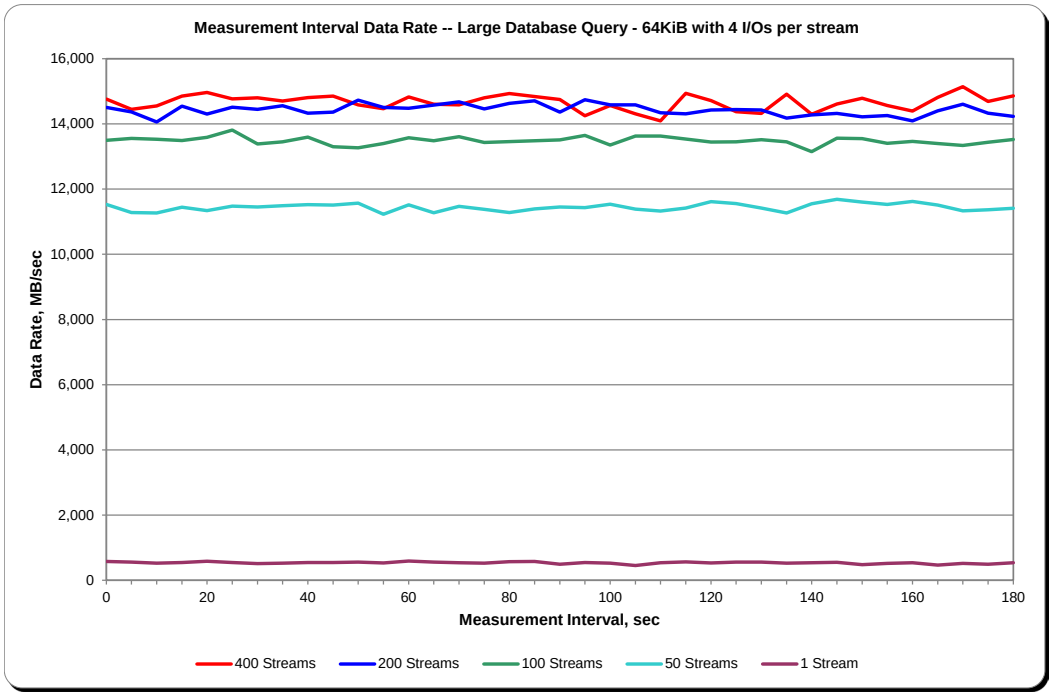
SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Periods

TR11	400 Streams			TR12	200 Streams			TR13	100 Streams			TR14	50 Streams			TR15	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	14,760.61	36.90	7.12	0:10:05	14,503.91	72.52	3.64	0:17:05	13,494.07	134.94	1.94	0:24:05	11,527.30	230.55	1.13	0:31:05	575.56	575.56	0.45
0:03:10	14,444.97	36.11	7.24	0:10:10	14,367.68	71.84	3.63	0:17:10	13,552.73	135.53	1.93	0:24:10	11,278.60	225.57	1.16	0:31:10	559.36	559.36	0.46
0:03:15	14,549.15	36.37	7.24	0:10:15	14,060.15	70.30	3.71	0:17:15	13,528.00	135.28	1.94	0:24:15	11,270.05	225.40	1.16	0:31:15	525.64	525.64	0.49
0:03:20	14,851.73	37.13	7.05	0:10:20	14,543.16	72.72	3.62	0:17:20	13,486.26	134.86	1.93	0:24:20	11,445.64	228.91	1.14	0:31:20	542.31	542.31	0.48
0:03:25	14,961.92	37.40	6.98	0:10:25	14,303.04	71.52	3.66	0:17:25	13,587.29	135.87	1.92	0:24:25	11,338.72	226.77	1.15	0:31:25	585.44	585.44	0.44
0:03:30	14,769.94	36.92	7.10	0:10:30	14,513.86	72.57	3.60	0:17:30	13,813.19	138.13	1.90	0:24:30	11,477.73	229.55	1.14	0:31:30	542.69	542.69	0.48
0:03:35	14,797.72	36.99	7.09	0:10:35	14,447.19	72.24	3.61	0:17:35	13,382.98	133.83	1.95	0:24:35	11,450.92	229.02	1.14	0:31:35	510.17	510.17	0.51
0:03:40	14,698.71	36.75	7.11	0:10:40	14,554.96	72.77	3.62	0:17:40	13,447.13	134.47	1.94	0:24:40	11,487.68	229.75	1.13	0:31:40	523.57	523.57	0.49
0:03:45	14,805.81	37.01	7.08	0:10:45	14,324.85	71.62	3.64	0:17:45	13,595.95	135.96	1.93	0:24:45	11,521.76	230.44	1.14	0:31:45	544.79	544.79	0.48
0:03:50	14,852.67	37.13	7.08	0:10:50	14,359.64	71.80	3.64	0:17:50	13,298.17	132.98	1.97	0:24:50	11,508.04	230.16	1.13	0:31:50	548.03	548.03	0.47
0:03:55	14,583.72	36.46	7.17	0:10:55	14,727.44	73.64	3.58	0:17:55	13,263.85	132.64	1.96	0:24:55	11,567.55	231.35	1.13	0:31:55	555.83	555.83	0.47
0:04:00	14,468.05	36.17	7.23	0:11:00	14,502.60	72.51	3.60	0:18:00	13,394.67	133.95	1.95	0:25:00	11,229.11	224.58	1.16	0:32:00	529.54	529.54	0.49
0:04:05	14,828.85	37.07	7.08	0:11:05	14,481.65	72.41	3.61	0:18:05	13,575.24	135.75	1.94	0:25:05	11,515.15	230.30	1.14	0:32:05	588.54	588.54	0.44
0:04:10	14,601.58	36.50	7.18	0:11:10	14,578.82	72.89	3.57	0:18:10	13,482.46	134.82	1.93	0:25:10	11,271.06	225.42	1.16	0:32:10	555.98	555.98	0.47
0:04:15	14,586.66	36.47	7.17	0:11:15	14,675.26	73.38	3.59	0:18:15	13,607.92	136.08	1.91	0:25:15	11,469.05	229.38	1.13	0:32:15	539.07	539.07	0.48
0:04:20	14,802.71	37.01	7.10	0:11:20	14,459.49	72.30	3.61	0:18:20	13,430.38	134.30	1.95	0:25:20	11,381.60	227.63	1.15	0:32:20	528.63	528.63	0.49
0:04:25	14,931.16	37.33	7.04	0:11:25	14,629.46	73.15	3.56	0:18:25	13,458.59	134.59	1.94	0:25:25	11,279.72	225.59	1.15	0:32:25	574.19	574.19	0.45
0:04:30	14,836.53	37.09	7.03	0:11:30	14,710.98	73.55	3.59	0:18:30	13,480.83	134.81	1.93	0:25:30	11,393.43	227.87	1.14	0:32:30	580.80	580.80	0.45
0:04:35	14,748.28	36.87	7.08	0:11:35	14,358.87	71.79	3.64	0:18:35	13,507.38	135.07	1.93	0:25:35	11,451.96	229.04	1.13	0:32:35	491.28	491.28	0.53
0:04:40	14,251.87	35.63	7.38	0:11:40	14,742.37	73.71	3.54	0:18:40	13,647.94	136.48	1.93	0:25:40	11,432.11	228.64	1.14	0:32:40	546.99	546.99	0.47
0:04:45	14,562.96	36.41	7.19	0:11:45	14,585.89	72.93	3.57	0:18:45	13,352.21	133.52	1.95	0:25:45	11,533.27	230.67	1.13	0:32:45	522.61	522.61	0.50
0:04:50	14,307.69	35.77	7.31	0:11:50	14,586.23	72.93	3.61	0:18:50	13,626.34	136.26	1.91	0:25:50	11,386.39	227.73	1.14	0:32:50	454.12	454.12	0.57
0:04:55	14,092.22	35.23	7.45	0:11:55	14,338.27	71.69	3.64	0:18:55	13,628.41	136.28	1.92	0:25:55	11,324.24	226.48	1.16	0:32:55	538.91	538.91	0.48
0:05:00	14,935.73	37.34	7.05	0:12:00	14,309.49	71.55	3.65	0:19:00	13,534.62	135.35	1.93	0:26:00	11,420.00	228.40	1.14	0:33:00	562.81	562.81	0.46
0:05:05	14,713.03	36.78	7.12	0:12:05	14,427.20	72.14	3.65	0:19:05	13,441.76	134.42	1.93	0:26:05	11,616.33	232.33	1.12	0:33:05	530.53	530.53	0.49
0:05:10	14,375.52	35.94	7.24	0:12:10	14,440.66	72.20	3.61	0:19:10	13,452.81	134.53	1.94	0:26:10	11,557.50	231.15	1.13	0:33:10	559.30	559.30	0.46
0:05:15	14,321.79	35.80	7.31	0:12:15	14,427.34	72.14	3.62	0:19:15	13,515.91	135.16	1.95	0:26:15	11,417.02	228.34	1.14	0:33:15	557.75	557.75	0.46
0:05:20	14,909.85	37.27	7.06	0:12:20	14,179.18	70.90	3.68	0:19:20	13,451.33	134.51	1.94	0:26:20	11,267.88	225.36	1.16	0:33:20	526.07	526.07	0.49
0:05:25	14,298.29	35.75	7.31	0:12:25	14,276.41	71.38	3.69	0:19:25	13,145.75	131.46	1.98	0:26:25	11,546.92	230.94	1.12	0:33:25	538.17	538.17	0.48
0:05:30	14,612.20	36.53	7.18	0:12:30	14,324.11	71.62	3.64	0:19:30	13,560.08	135.60	1.93	0:26:30	11,683.67	233.67	1.12	0:33:30	552.43	552.43	0.47
0:05:35	14,784.27	36.96	7.10	0:12:35	14,219.09	71.10	3.67	0:19:35	13,547.33	135.47	1.93	0:26:35	11,602.47	232.05	1.12	0:33:35	478.66	478.66	0.54
0:05:40	14,561.04	36.40	7.19	0:12:40	14,255.14	71.28	3.70	0:19:40	13,403.09	134.03	1.94	0:26:40	11,530.67	230.61	1.13	0:33:40	518.40	518.40	0.50
0:05:45	14,392.75	35.98	7.26	0:12:45	14,093.03	70.47	3.71	0:19:45	13,461.22	134.61	1.94	0:26:45	11,622.26	232.45	1.12	0:33:45	535.83	535.83	0.48
0:05:50	14,813.85	37.03	7.09	0:12:50	14,397.16	71.99	3.63	0:19:50	13,400.05	134.00	1.96	0:26:50	11,510.11	230.20	1.14	0:33:50	465.44	465.44	0.56
0:05:55	15,141.66	37.85	6.94	0:12:55	14,600.50	73.00	3.57	0:19:55	13,338.25	133.38	1.96	0:26:55	11,333.94	226.68	1.15	0:33:55	518.51	518.51	0.50
0:06:00	14,689.91	36.72	7.09	0:13:00	14,328.99	71.64	3.66	0:20:00	13,437.25	134.37	1.93	0:27:00	11,365.14	227.30	1.14	0:34:00	492.70	492.70	0.53
0:06:05	14,858.21	37.15	7.07	0:13:05	14,226.76	71.13	3.68	0:20:05	13,521.39	135.21	1.94	0:27:05	11,414.53	228.29	1.14	0:34:05	539.69	539.69	0.48
0:06:10	15,066.74	37.67	6.96	0:13:10	14,278.69	71.39	3.66	0:20:10	13,831.87	138.32	1.89	0:27:10	11,464.56	229.29	1.14	0:34:10	477.32	477.32	0.54
0:06:15	14,953.55	37.38	7.01	0:13:15	14,528.29	72.64	3.61	0:20:15	13,277.89	132.78	1.97	0:27:15	11,376.34	227.53	1.14	0:34:15	564.18	564.18	0.46
0:06:20	14,251.00	35.63	7.28	0:13:20	14,433.27	72.17	3.62	0:20:20	13,459.67	134.60	1.93	0:27:20	11,560.32	231.21	1.13	0:34:20	522.34	522.34	0.50
0:06:25	14,166.10	35.42	7.43	0:13:25	14,493.32	72.47	3.61	0:20:25	13,695.50	136.96	1.91	0:27:25	11,582.74	231.65	1.13	0:34:25	549.44	549.44	0.47
0:06:30	14,814.43	37.04	7.10	0:13:30	14,693.51	73.47	3.55	0:20:30	13,248.54	132.49	1.99	0:27:30	11,447.73	228.95	1.13	0:34:30	534.79	534.79	0.48
0:06:35	14,729.55	36.82	7.11	0:13:35	14,427.97	72.14	3.65	0:20:35	13,312.09	133.12	1.95	0:27:35	11,376.40	227.53	1.15	0:34:35	530.99	530.99	0.49
0:06:40	14,603.42	36.51	7.15	0:13:40	14,468.45	72.34	3.60	0:20:40	13,684.17	136.84	1.91	0:27:40	11,517.96	230.36	1.13	0:34:40	496.03	496.03	0.52
0:06:45	13,833.42	61.76	7.02	0:13:45	13,602.57	120.38	3.49	0:20:45	12,718.23	282.63	1.85	0:27:45	10,872.43	374.91	1.08	0:34:45	547.34	547.34	0.47
0:06:50	232.06	0.00	5.57	0:13:50	256.05	0.00	2.54	0:20:50	259.95	0.00	1.43	0:27:50	247.44	0.00	0.91	0:34:50	4.56	0.00	0.36
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00

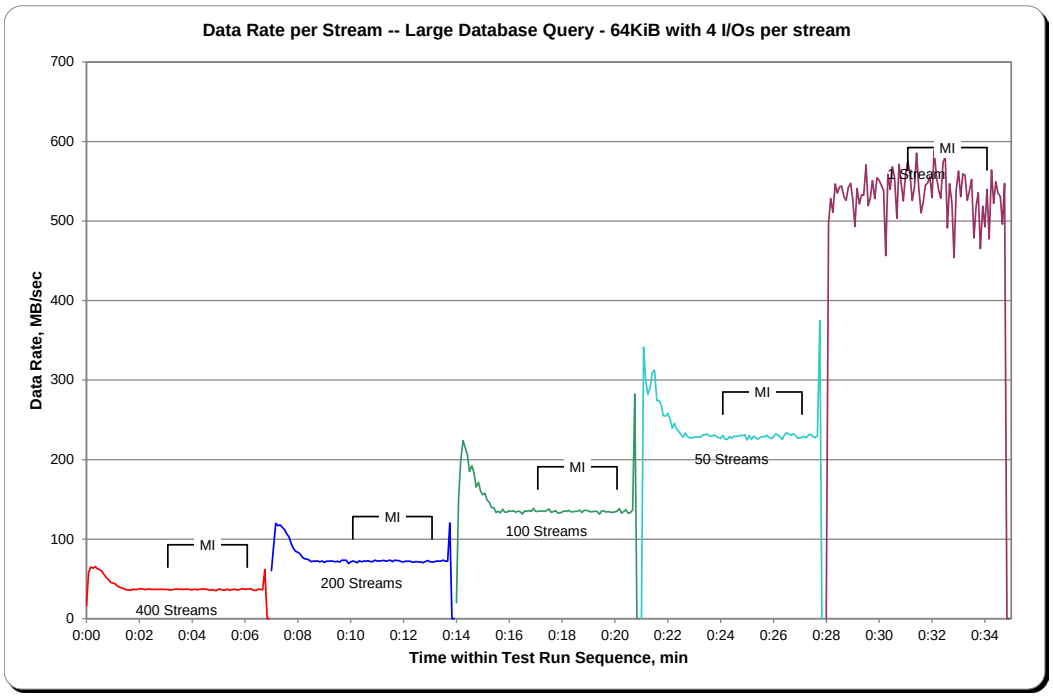
SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate Graph – Complete Test Run



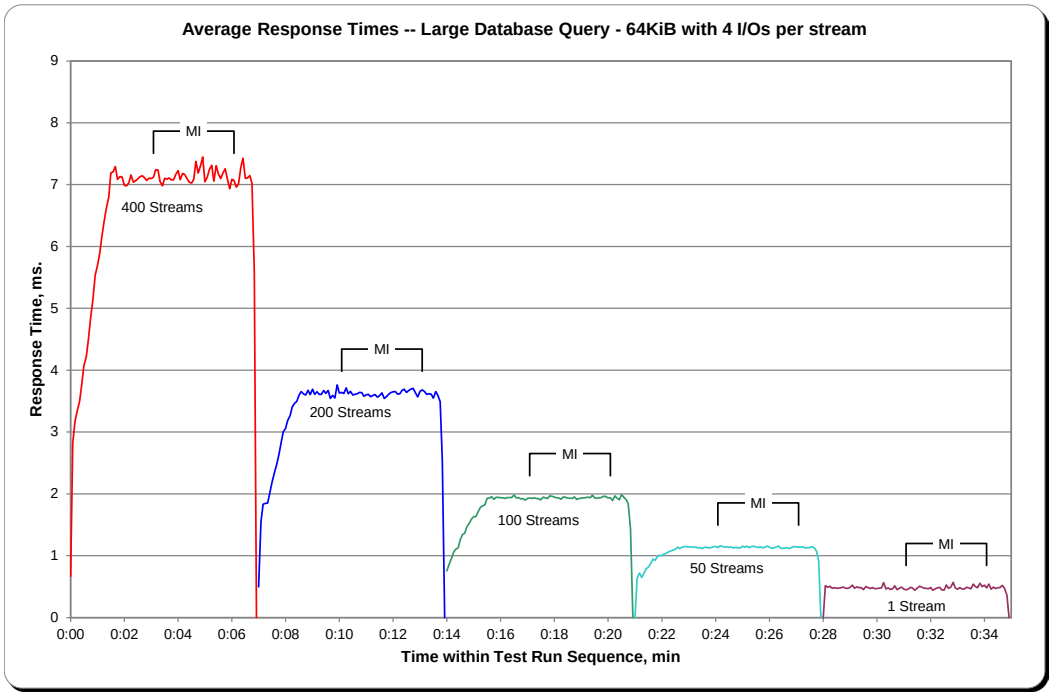
SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Average Data Rate per Stream Graph



SPC-2 "Large Database Query/64 KiB Transfer Size/4 Outstanding I/Os" Average Response Time Graph



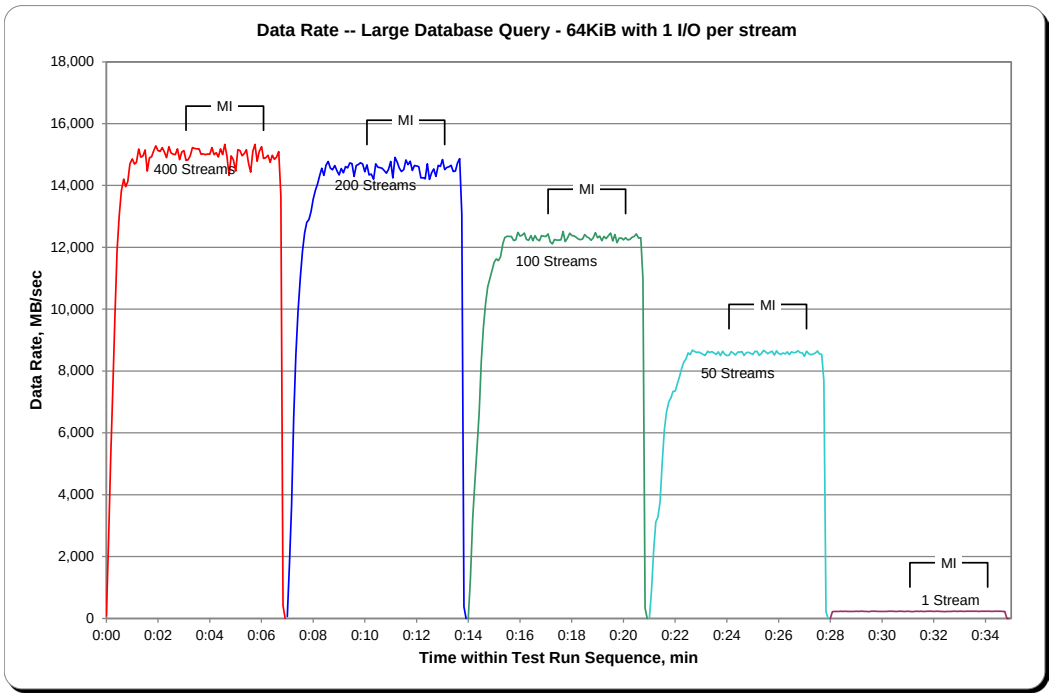
SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Test Run Data – Ramp-Up Period

TR16	400 Streams			TR17	200 Streams			TR18	100 Streams			TR19	50 Streams			TR20	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:00:00	79.57	15.91	0.30	0:07:00	62.31	62.31	0.28	0:14:00	0.00	0.00	0.00	0:21:00	0.00	0.00	0.00	0:28:00	0.00	0.00	0.00
0:00:05	2,447.33	54.39	0.71	0:07:05	1,737.71	115.85	0.44	0:14:05	1,241.40	103.45	0.31	0:21:05	900.67	112.58	0.30	0:28:05	223.88	223.88	0.29
0:00:10	5,148.07	62.78	0.82	0:07:10	3,644.98	86.79	0.48	0:14:10	3,240.74	147.31	0.35	0:21:10	2,191.51	156.54	0.30	0:28:10	230.31	230.31	0.28
0:00:15	7,408.57	65.56	0.87	0:07:15	6,518.48	106.86	0.51	0:14:15	4,406.32	157.37	0.35	0:21:15	3,114.54	207.64	0.30	0:28:15	230.95	230.95	0.28
0:00:20	9,784.32	63.12	0.89	0:07:20	8,525.13	112.17	0.50	0:14:20	5,498.31	166.62	0.36	0:21:20	3,278.41	204.90	0.31	0:28:20	230.59	230.59	0.28
0:00:25	11,901.78	62.64	0.96	0:07:25	9,914.66	112.67	0.53	0:14:25	6,641.45	150.94	0.38	0:21:25	3,772.08	179.62	0.31	0:28:25	234.46	234.46	0.28
0:00:30	13,021.34	59.19	1.03	0:07:30	11,038.25	107.17	0.57	0:14:30	8,311.58	148.42	0.39	0:21:30	5,039.06	162.55	0.32	0:28:30	230.63	230.63	0.28
0:00:35	13,830.73	56.92	1.09	0:07:35	11,882.57	102.44	0.60	0:14:35	9,416.00	149.46	0.41	0:21:35	6,092.11	174.06	0.34	0:28:35	232.43	232.43	0.28
0:00:40	14,200.46	55.25	1.15	0:07:40	12,470.95	98.98	0.63	0:14:40	10,173.35	141.30	0.43	0:21:40	6,676.54	180.45	0.35	0:28:40	226.79	226.79	0.28
0:00:45	13,962.09	49.16	1.27	0:07:45	12,805.43	94.16	0.67	0:14:45	10,719.82	137.43	0.45	0:21:45	7,006.04	179.64	0.35	0:28:45	227.55	227.55	0.28
0:00:50	14,129.23	46.48	1.35	0:07:50	12,898.87	89.58	0.71	0:14:50	10,987.35	139.08	0.46	0:21:50	7,136.45	182.99	0.35	0:28:50	230.23	230.23	0.28
0:00:55	14,698.10	45.65	1.40	0:07:55	13,160.70	84.91	0.73	0:14:55	11,244.98	137.13	0.47	0:21:55	7,334.11	178.88	0.35	0:28:55	230.29	230.29	0.28
0:01:00	14,860.93	44.23	1.45	0:08:00	13,559.02	83.18	0.76	0:15:00	11,515.84	135.48	0.47	0:22:00	7,356.60	179.43	0.36	0:29:00	234.04	234.04	0.28
0:01:05	14,695.89	41.87	1.54	0:08:05	13,834.44	80.43	0.79	0:15:05	11,625.50	133.63	0.48	0:22:05	7,599.34	176.73	0.36	0:29:05	227.62	227.62	0.28
0:01:10	14,744.29	40.96	1.57	0:08:10	14,045.11	78.46	0.81	0:15:10	11,572.91	133.02	0.49	0:22:10	7,821.10	173.80	0.36	0:29:10	235.84	235.84	0.27
0:01:15	15,178.79	40.48	1.58	0:08:15	14,315.04	77.38	0.84	0:15:15	11,698.48	124.45	0.50	0:22:15	8,091.34	172.16	0.37	0:29:15	233.87	233.87	0.28
0:01:20	14,916.40	38.44	1.67	0:08:20	14,558.24	75.82	0.85	0:15:20	12,128.77	123.76	0.51	0:22:20	8,287.36	172.65	0.37	0:29:20	230.36	230.36	0.28
0:01:25	14,954.64	38.05	1.70	0:08:25	14,331.09	73.12	0.88	0:15:25	12,318.27	123.18	0.52	0:22:25	8,395.30	171.33	0.37	0:29:25	229.17	229.17	0.28
0:01:30	15,152.09	37.98	1.71	0:08:30	14,661.13	73.31	0.89	0:15:30	12,357.05	123.57	0.53	0:22:30	8,588.61	171.77	0.37	0:29:30	223.45	223.45	0.29
0:01:35	14,469.38	36.17	1.80	0:08:35	14,774.96	73.87	0.88	0:15:35	12,351.68	123.52	0.53	0:22:35	8,529.75	170.59	0.38	0:29:35	232.14	232.14	0.28
0:01:40	14,895.07	37.24	1.76	0:08:40	14,561.49	72.81	0.90	0:15:40	12,350.54	123.51	0.53	0:22:40	8,679.38	173.59	0.38	0:29:40	231.27	231.27	0.28
0:01:45	14,927.44	37.32	1.75	0:08:45	14,505.89	72.53	0.89	0:15:45	12,219.39	122.19	0.53	0:22:45	8,635.63	172.71	0.38	0:29:45	234.46	234.46	0.28
0:01:50	15,119.85	37.80	1.73	0:08:50	14,644.94	73.22	0.89	0:15:50	12,244.05	122.44	0.53	0:22:50	8,598.87	171.98	0.38	0:29:50	230.28	230.28	0.28
0:01:55	15,281.44	38.20	1.71	0:08:55	14,474.34	72.37	0.90	0:15:55	12,482.03	124.82	0.52	0:22:55	8,611.52	172.23	0.38	0:29:55	230.42	230.42	0.28
0:02:00	15,126.54	37.82	1.72	0:09:00	14,342.17	71.71	0.90	0:16:00	12,364.80	123.65	0.53	0:23:00	8,582.74	171.65	0.38	0:30:00	229.96	229.96	0.28
0:02:05	15,102.97	37.76	1.73	0:09:05	14,548.68	72.74	0.90	0:16:05	12,395.59	123.96	0.52	0:23:05	8,541.58	170.83	0.38	0:30:05	227.77	227.77	0.28
0:02:10	15,228.64	38.07	1.72	0:09:10	14,409.32	72.05	0.91	0:16:10	12,460.32	124.60	0.52	0:23:10	8,503.34	170.07	0.38	0:30:10	229.39	229.39	0.28
0:02:15	15,078.43	37.70	1.74	0:09:15	14,609.92	73.05	0.89	0:16:15	12,253.72	122.54	0.53	0:23:15	8,644.68	172.89	0.38	0:30:15	232.46	232.46	0.28
0:02:20	14,900.66	37.25	1.75	0:09:20	14,572.16	72.86	0.89	0:16:20	12,226.14	122.26	0.53	0:23:20	8,601.62	172.03	0.38	0:30:20	232.14	232.14	0.28
0:02:25	15,251.45	38.13	1.72	0:09:25	14,727.78	73.64	0.89	0:16:25	12,382.40	123.82	0.53	0:23:25	8,628.06	172.56	0.38	0:30:25	231.10	231.10	0.28
0:02:30	15,053.83	37.63	1.74	0:09:30	14,706.28	73.53	0.89	0:16:30	12,217.23	122.17	0.53	0:23:30	8,587.85	171.76	0.38	0:30:30	230.53	230.53	0.28
0:02:35	15,012.41	37.53	1.73	0:09:35	14,291.83	71.46	0.90	0:16:35	12,383.17	123.83	0.52	0:23:35	8,542.03	170.84	0.38	0:30:35	229.75	229.75	0.28
0:02:40	14,997.42	37.49	1.75	0:09:40	14,644.01	73.22	0.89	0:16:40	12,255.90	122.56	0.53	0:23:40	8,623.33	172.47	0.38	0:30:40	233.48	233.48	0.28
0:02:45	15,187.60	37.97	1.72	0:09:45	14,678.99	73.39	0.89	0:16:45	12,215.72	122.16	0.53	0:23:45	8,498.40	169.97	0.38	0:30:45	235.94	235.94	0.27
0:02:50	14,841.97	37.10	1.76	0:09:50	14,732.86	73.66	0.89	0:16:50	12,377.41	123.77	0.53	0:23:50	8,641.13	172.82	0.38	0:30:50	231.02	231.02	0.28
0:02:55	15,079.70	37.70	1.73	0:09:55	14,694.28	73.47	0.88	0:16:55	12,358.47	123.58	0.52	0:23:55	8,537.31	170.75	0.38	0:30:55	230.49	230.49	0.28
0:03:00	15,129.28	37.82	1.73	0:10:00	14,447.19	72.24	0.91	0:17:00	12,353.06	123.53	0.52	0:24:00	8,502.85	170.06	0.38	0:31:00	232.73	232.73	0.28

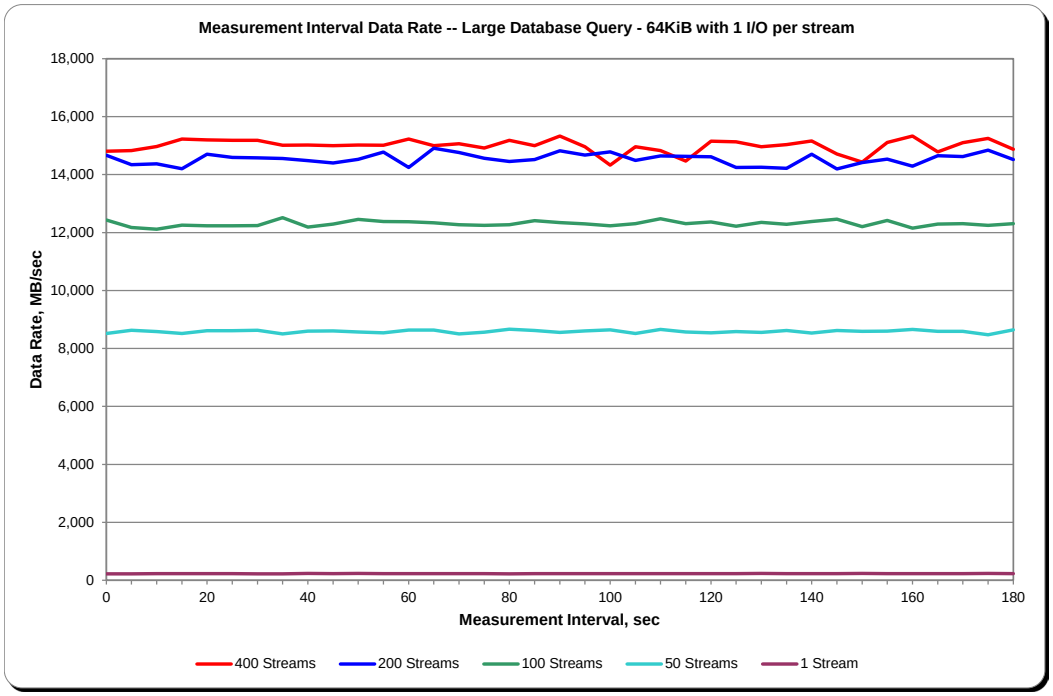
SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Test Run Data Measurement Interval, Run-Out, and Ramp-Down Period

TR16	400 Streams			TR17	200 Streams			TR18	100 Streams			TR19	50 Streams			TR20	1 Stream		
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms
0:03:05	14,809.96	37.02	1.77	0:10:05	14,667.46	73.34	0.89	0:17:05	12,432.56	124.33	0.52	0:24:05	8,514.08	170.28	0.38	0:31:05	226.07	226.07	0.29
0:03:10	14,831.21	37.08	1.76	0:10:10	14,344.67	71.72	0.91	0:17:10	12,176.58	121.77	0.53	0:24:10	8,625.68	172.51	0.38	0:31:10	221.38	221.38	0.29
0:03:15	14,967.38	37.42	1.74	0:10:15	14,368.07	71.84	0.90	0:17:15	12,113.83	121.14	0.54	0:24:15	8,580.69	171.61	0.38	0:31:15	230.46	230.46	0.28
0:03:20	15,223.39	38.06	1.72	0:10:20	14,201.20	71.01	0.92	0:17:20	12,257.04	122.57	0.53	0:24:20	8,516.20	170.32	0.38	0:31:20	233.19	233.19	0.28
0:03:25	15,200.68	38.00	1.73	0:10:25	14,701.05	73.51	0.89	0:17:25	12,232.83	122.33	0.53	0:24:25	8,613.44	172.27	0.38	0:31:25	228.29	228.29	0.28
0:03:30	15,183.29	37.96	1.72	0:10:30	14,592.36	72.96	0.89	0:17:30	12,233.97	122.34	0.53	0:24:30	8,613.33	172.27	0.38	0:31:30	231.71	231.71	0.28
0:03:35	15,183.78	37.96	1.72	0:10:35	14,576.28	72.88	0.90	0:17:35	12,240.82	122.41	0.53	0:24:35	8,630.93	172.62	0.38	0:31:35	224.50	224.50	0.29
0:03:40	15,010.35	37.53	1.74	0:10:40	14,557.68	72.79	0.90	0:17:40	12,510.61	125.11	0.52	0:24:40	8,503.72	170.07	0.38	0:31:40	224.98	224.98	0.29
0:03:45	15,018.24	37.55	1.74	0:10:45	14,480.74	72.40	0.90	0:17:45	12,186.55	121.87	0.54	0:24:45	8,595.03	171.90	0.38	0:31:45	234.27	234.27	0.28
0:03:50	15,001.01	37.50	1.73	0:10:50	14,400.51	72.00	0.90	0:17:50	12,289.85	122.90	0.53	0:24:50	8,609.38	172.19	0.38	0:31:50	232.01	232.01	0.28
0:03:55	15,017.22	37.54	1.74	0:10:55	14,527.24	72.64	0.90	0:17:55	12,454.57	124.55	0.52	0:24:55	8,572.43	171.45	0.38	0:31:55	235.82	235.82	0.27
0:04:00	15,009.95	37.52	1.75	0:11:00	14,776.37	73.88	0.89	0:18:00	12,379.58	123.80	0.52	0:25:00	8,537.21	170.74	0.38	0:32:00	226.82	226.82	0.28
0:04:05	15,229.36	38.07	1.71	0:11:05	14,243.65	71.22	0.91	0:18:05	12,372.09	123.72	0.53	0:25:05	8,633.18	172.66	0.38	0:32:05	232.60	232.60	0.28
0:04:10	14,995.69	37.49	1.74	0:11:10	14,910.16	74.55	0.88	0:18:10	12,334.83	123.35	0.52	0:25:10	8,632.14	172.64	0.38	0:32:10	232.47	232.47	0.28
0:04:15	15,062.61	37.66	1.74	0:11:15	14,765.86	73.83	0.89	0:18:15	12,270.60	122.71	0.53	0:25:15	8,505.06	170.10	0.38	0:32:15	226.61	226.61	0.28
0:04:20	14,918.78	37.30	1.75	0:11:20	14,561.51	72.81	0.90	0:18:20	12,249.21	122.49	0.53	0:25:20	8,563.84	171.28	0.38	0:32:20	230.62	230.62	0.28
0:04:25	15,185.52	37.96	1.72	0:11:25	14,452.95	72.26	0.90	0:18:25	12,270.60	122.71	0.53	0:25:25	8,667.59	173.35	0.37	0:32:25	222.41	222.41	0.29
0:04:30	14,997.61	37.49	1.75	0:11:30	14,517.39	72.59	0.90	0:18:30	12,412.46	124.12	0.52	0:25:30	8,622.22	172.44	0.37	0:32:30	229.22	229.22	0.28
0:04:35	15,329.09	38.32	1.72	0:11:35	14,822.94	74.11	0.88	0:18:35	12,341.53	123.42	0.53	0:25:35	8,556.17	171.12	0.38	0:32:35	227.79	227.79	0.28
0:04:40	14,958.99	37.40	1.74	0:11:40	14,671.90	73.36	0.88	0:18:40	12,301.68	123.02	0.53	0:25:40	8,607.67	172.15	0.38	0:32:40	230.98	230.98	0.28
0:04:45	14,326.39	35.82	1.82	0:11:45	14,784.91	73.92	0.88	0:18:45	12,230.95	122.31	0.53	0:25:45	8,641.73	172.83	0.38	0:32:45	231.69	231.69	0.28
0:04:50	14,958.30	37.40	1.75	0:11:50	14,487.82	72.44	0.90	0:18:50	12,309.35	123.09	0.53	0:25:50	8,519.00	170.38	0.38	0:32:50	231.34	231.34	0.28
0:04:55	14,830.38	37.08	1.76	0:11:55	14,646.51	73.23	0.89	0:18:55	12,474.97	124.75	0.52	0:25:55	8,653.95	173.08	0.38	0:32:55	229.18	229.18	0.28
0:05:00	14,467.90	36.17	1.80	0:12:00	14,629.27	73.15	0.89	0:19:00	12,308.00	123.08	0.53	0:26:00	8,568.23	171.36	0.38	0:33:00	233.39	233.39	0.28
0:05:05	15,155.08	37.89	1.73	0:12:05	14,612.48	73.06	0.89	0:19:05	12,362.88	123.63	0.53	0:26:05	8,541.91	170.84	0.38	0:33:05	231.92	231.92	0.28
0:05:10	15,130.27	37.83	1.74	0:12:10	14,244.58	71.22	0.92	0:19:10	12,216.12	122.16	0.53	0:26:10	8,584.74	171.69	0.38	0:33:10	227.81	227.81	0.28
0:05:15	14,964.87	37.41	1.74	0:12:15	14,251.26	71.26	0.91	0:19:15	12,351.24	123.51	0.53	0:26:15	8,554.49	171.09	0.38	0:33:15	234.17	234.17	0.28
0:05:20	15,035.42	37.59	1.73	0:12:20	14,214.38	71.07	0.92	0:19:20	12,282.58	122.83	0.53	0:26:20	8,618.57	172.37	0.38	0:33:20	232.57	232.57	0.28
0:05:25	15,157.82	37.89	1.73	0:12:25	14,702.36	73.51	0.89	0:19:25	12,378.85	123.79	0.53	0:26:25	8,530.79	170.62	0.38	0:33:25	233.18	233.18	0.28
0:05:30	14,711.71	36.78	1.78	0:12:30	14,195.79	70.98	0.92	0:19:30	12,464.36	124.64	0.52	0:26:30	8,623.87	172.48	0.38	0:33:30	231.65	231.65	0.28
0:05:35	14,429.89	36.07	1.80	0:12:35	14,413.75	72.07	0.90	0:19:35	12,203.77	122.04	0.53	0:26:35	8,590.67	171.81	0.38	0:33:35	235.32	235.32	0.27
0:05:40	15,106.62	37.77	1.74	0:12:40	14,534.22	72.67	0.90	0:19:40	12,414.77	124.15	0.52	0:26:40	8,601.59	172.03	0.38	0:33:40	233.51	233.51	0.28
0:05:45	15,330.76	38.33	1.71	0:12:45	14,293.18	71.47	0.91	0:19:45	12,153.12	121.53	0.53	0:26:45	8,655.99	173.12	0.37	0:33:45	230.81	230.81	0.28
0:05:50	14,782.09	36.96	1.77	0:12:50	14,652.54	73.26	0.89	0:19:50	12,294.40	122.94	0.53	0:26:50	8,593.81	171.88	0.38	0:33:50	231.23	231.23	0.28
0:05:55	15,100.75	37.75	1.73	0:12:55	14,621.20	73.11	0.89	0:19:55	12,304.32	123.04	0.53	0:26:55	8,594.78	171.90	0.38	0:33:55	233.48	233.48	0.28
0:06:00	15,252.43	38.13	1.71	0:13:00	14,841.11	74.21	0.88	0:20:00	12,244.80	122.45	0.53	0:27:00	8,475.24	169.50	0.38	0:34:00	234.92	234.92	0.27
0:06:05	14,873.10	37.18	1.75	0:13:05	14,515.56	72.58	0.90	0:20:05	12,307.83	123.08	0.53	0:27:05	8,644.41	172.89	0.38	0:34:05	233.01	233.01	0.28
0:06:10	14,891.99	37.23	1.76	0:13:10	14,583.58	72.92	0.89	0:20:10	12,238.86	122.39	0.53	0:27:10	8,557.28	171.15	0.38	0:34:10	232.37	232.37	0.28
0:06:15	14,979.23	37.45	1.74	0:13:15	14,604.34	73.02	0.89	0:20:15	12,255.86	122.56	0.53	0:27:15	8,524.71	170.49	0.38	0:34:15	230.88	230.88	0.28
0:06:20	14,750.05	36.88	1.78	0:13:20	14,655.49	73.28	0.89	0:20:20	12,324.19	123.24	0.53	0:27:20	8,552.31	171.05	0.38	0:34:20	234.73	234.73	0.27
0:06:25	14,978.78	37.45	1.74	0:13:25	14,454.24	72.27	0.90	0:20:25	12,355.05	123.55	0.53	0:27:25	8,583.23	171.66	0.38	0:34:25	233.45	233.45	0.28
0:06:30	14,843.55	37.11	1.75	0:13:30	14,465.31	72.33	0.90	0:20:30	12,431.70	124.32	0.52	0:27:30	8,651.82	173.04	0.38	0:34:30	231.55	231.55	0.28
0:06:35	14,920.19	37.30	1.76	0:13:35	14,727.05	73.64	0.89	0:20:35	12,293.87	122.94	0.53	0:27:35	8,553.14	171.06	0.38	0:34:35	235.53	235.53	0.27
0:06:40	15,097.71	37.74	1.73	0:13:40	14,867.13	74.34	0.88	0:20:40	12,310.24	123.10	0.53	0:27:40	8,540.91	170.82	0.38	0:34:40	228.22	228.22	0.28
0:06:45	13,661.44	60.72	1.68	0:13:45	13,080.02	115.75	0.86	0:20:45	10,987.02	192.75	0.51	0:27:45	7,685.16	265.01	0.37	0:34:45	230.50	230.50	0.28
0:06:50	414.07	0.00	1.24	0:13:50	376.38	0.00	0.69	0:20:50	333.29	0.00	0.41	0:27:50	212.19	0.00	0.34	0:34:50	1.35	0.00	0.31
0:06:55	0.00	0.00	0.00	0:13:55	0.00	0.00	0.00	0:20:55	0.00	0.00	0.00	0:27:55	0.00	0.00	0.00	0:34:55	0.00	0.00	0.00

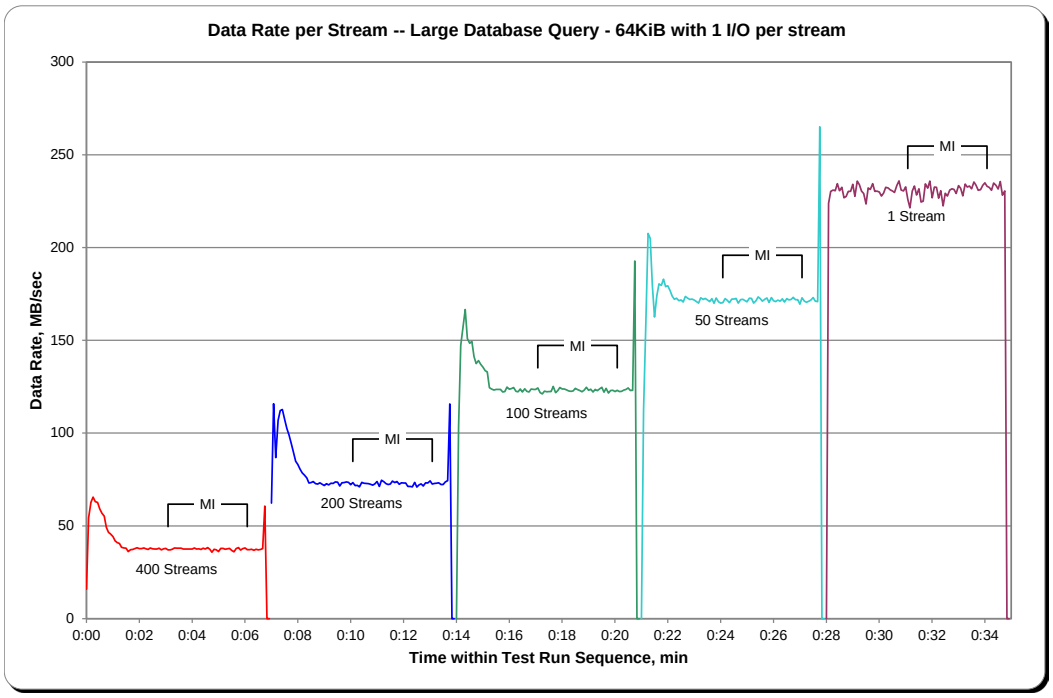
SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Average Data Rate Graph – Complete Test Run



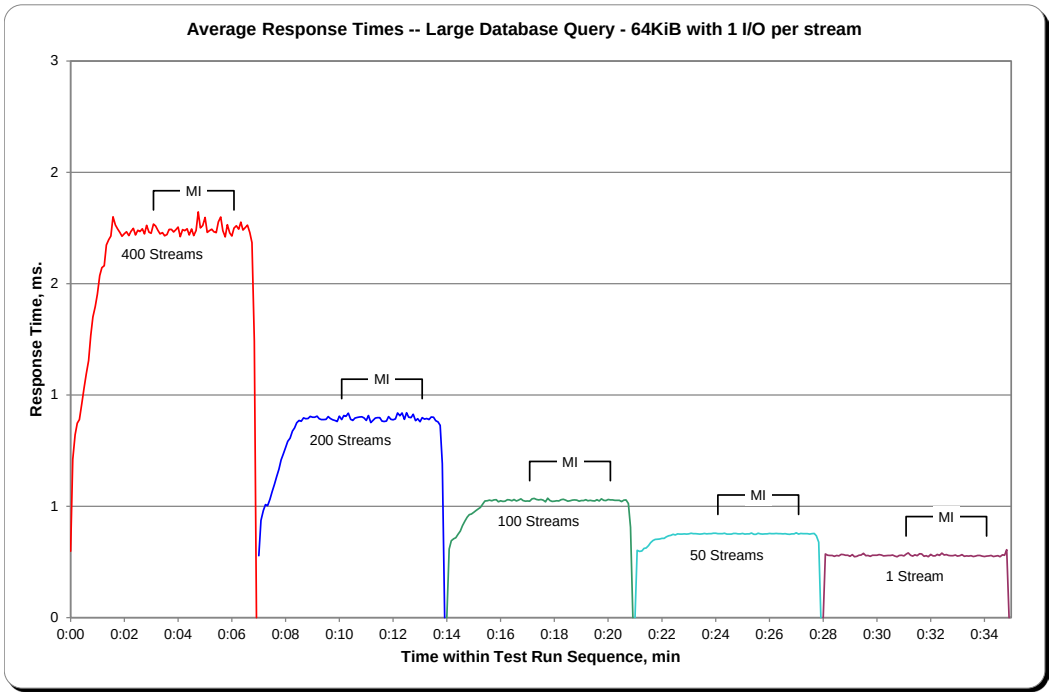
SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Average Data Rate Graph – Measurement Interval (MI) Only



SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Average Data Rate per Stream Graph



SPC-2 "Large Database Query/64 KiB Transfer Size/1 Outstanding I/O" Average Response Time Graph



Video on Demand Delivery Test

Clause 6.4.4.1

The Video on Demand Delivery Test represents the I/O operations required to enable individualized video entertainment for a community of subscribers, which draw from a digital film library.

Clause 6.4.2.2

The Video on Demand Delivery Test consists of one (1) Test Run.

The BC shall not be restarted or manually disturbed, altered, or adjusted during the execution of the Video on Demand Delivery Test. If power is lost to the BC during this Test all results shall be rendered invalid and the Test re-run in its entirety.

Clause 10.6.8.3

The Full Disclosure Report will contain the following content for the Video on Demand Delivery Test:

1. *A listing of the SPC-2 Workload Generator commands and parameters used to execute the Test Run in the Video on Demand Delivery Test.*
2. *The human readable SPC-2 Test Results File for the Test Run in the Video on Demand Delivery Test.*
3. *A table that contains the following information for the Test Run in the Video on Demand Delivery Test:*
    - *The number Streams specified.*
    - *The Ramp-Up duration in seconds.*
    - *The Measurement Interval duration in seconds.*
    - *The average data rate, in MB per second, for the Measurement Interval.*
    - *The average data rate, in MB per second, per Stream for the Measurement Interval.*
4. *A table that contains the following information for the single Video on Demand Delivery Test Run:*
    - *The number Streams specified.*
    - *The average data rate, average data rate per stream, average Response Time, and Maximum Response Time reported at 60 second intervals.*
5. *Average Data Rate (intervals), Average Data Rate per Stream (intervals), and Average Response Time (intervals) graphs for the single Video on Demand Delivery Test Run as specified in Clauses 10.1.4-2-10.1.6.*
6. *A Maximum Response Time (intervals) graph, which will utilize the format defined in Clause 10.1.6, substituting maximum Response Time data for average Response Time data.*

SPC-2 Workload Generator Commands and Parameters

The SPC-2 Workload Generator commands and parameters for the Video on Demand Delivery Test Run are documented in "Appendix E: SPC-2 Workload Generator Execution Commands and Parameters" on Page 138.

SPC-2 Test Results File

A link to the SPC-2 Test Results file generated from the Video on Demand Delivery Test Run is listed below.

SPC-2 Video on Demand Delivery Test Results File

SPC-2 Video on Demand Delivery Test Run Data

The number of Streams specified, Ramp-Up duration in seconds, Measurement Interval duration in seconds, average Data Rate for the Measurement Interval, and average Data Rate per Stream for the Measurement Interval are listed in the following table.

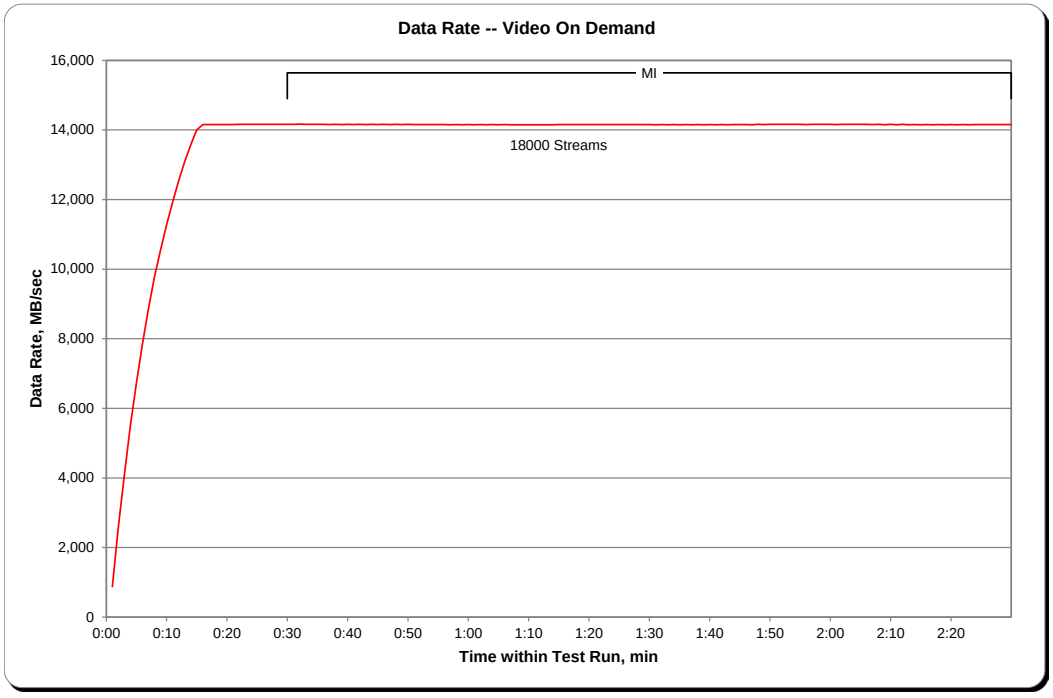
SPC-2-VOD	TR1
Number of Streams	18000
Ramp-up Time, sec	1800
Measurement Interval, sec	7200
Average Data Rate, MB/sec	14,155.80
Per Stream Data Rate, MB/sec	0.79
Average Response Time, ms	4.80
Average Max Response Time, ms	150.25

Video on Demand Delivery Test – TEST RUN DATA BY INTERVAL

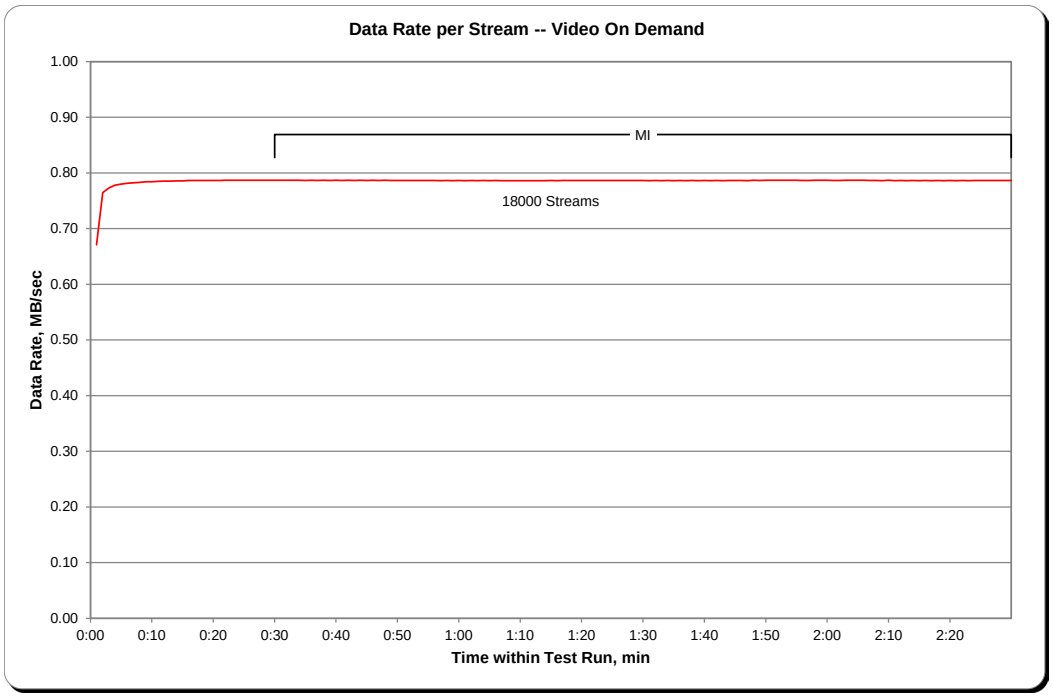
The SPC-2 Video on Demand Delivery Test Run data is contained in the table that appears below. That table is followed by graphs illustrating the average Data Rate and average Data Rate per Stream produced by the same Test Runs. The table and graphs present the data at sixty second intervals.

TR1	18000 Streams				TR1	18000 Streams				TR1	18000 Streams			
Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Maximum Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Maximum Response Time, ms	Test Run Sequence Time	Data Rate, MB/sec	Data Rate / Stream, MB/sec	Response Time, ms	Maximum Response Time, ms
0:01:00	876.28	0.67	1.96	63.57	0:51:00	14,152.59	0.79	4.78	167.87	1:41:00	14,150.31	0.79	4.80	178.56
0:02:00	2,597.76	0.76	1.43	66.63	0:52:00	14,155.86	0.79	4.81	149.93	1:42:00	14,155.74	0.79	4.89	165.66
0:03:00	4,084.95	0.77	1.43	77.77	0:53:00	14,152.83	0.79	4.77	136.49	1:43:00	14,148.81	0.79	4.84	170.10
0:04:00	5,494.10	0.78	1.55	89.32	0:54:00	14,156.03	0.79	4.73	138.79	1:44:00	14,154.53	0.79	4.81	165.39
0:05:00	6,752.57	0.78	1.69	88.61	0:55:00	14,152.79	0.79	4.83	157.09	1:45:00	14,152.16	0.79	4.77	173.61
0:06:00	7,867.40	0.78	1.87	90.81	0:56:00	14,155.76	0.79	4.75	120.55	1:46:00	14,155.78	0.79	4.85	164.56
0:07:00	8,880.42	0.78	2.14	96.82	0:57:00	14,150.92	0.79	4.76	115.54	1:47:00	14,148.17	0.79	4.83	169.52
0:08:00	9,790.98	0.78	2.40	101.61	0:58:00	14,153.79	0.79	4.78	129.01	1:48:00	14,159.36	0.79	4.81	152.12
0:09:00	10,551.91	0.78	2.64	103.78	0:59:00	14,151.04	0.79	4.77	122.71	1:49:00	14,152.67	0.79	4.84	162.17
0:10:00	11,267.58	0.78	2.93	128.61	1:00:00	14,154.63	0.79	4.80	121.99	1:50:00	14,159.31	0.79	4.81	158.74
0:11:00	11,939.29	0.78	3.19	123.66	1:01:00	14,150.89	0.79	5.09	176.96	1:51:00	14,159.12	0.79	4.76	144.04
0:12:00	12,546.19	0.79	3.52	122.93	1:02:00	14,155.15	0.79	4.89	193.47	1:52:00	14,161.13	0.79	4.77	178.56
0:13:00	13,091.21	0.79	3.87	122.00	1:03:00	14,150.58	0.79	4.87	181.63	1:53:00	14,159.02	0.79	4.76	164.76
0:14:00	13,570.62	0.79	4.23	130.99	1:04:00	14,152.83	0.79	4.87	179.26	1:54:00	14,159.36	0.79	4.80	146.46
0:15:00	13,999.18	0.79	4.61	133.45	1:05:00	14,150.76	0.79	4.75	154.25	1:55:00	14,161.06	0.79	4.66	151.66
0:16:00	14,157.56	0.79	4.80	112.21	1:06:00	14,152.81	0.79	4.76	180.43	1:56:00	14,157.38	0.79	4.73	117.93
0:17:00	14,157.42	0.79	4.75	116.62	1:07:00	14,150.50	0.79	4.81	161.85	1:57:00	14,158.71	0.79	4.65	121.38
0:18:00	14,157.55	0.79	4.70	126.15	1:08:00	14,150.28	0.79	4.84	174.53	1:58:00	14,159.50	0.79	4.74	140.93
0:19:00	14,154.15	0.79	4.71	119.01	1:09:00	14,148.07	0.79	4.75	177.46	1:59:00	14,159.36	0.79	4.64	100.96
0:20:00	14,157.24	0.79	4.67	119.18	1:10:00	14,148.89	0.79	4.78	161.26	2:00:00	14,159.53	0.79	4.59	108.93
0:21:00	14,153.91	0.79	4.76	167.28	1:11:00	14,150.84	0.79	4.74	150.32	2:01:00	14,157.55	0.79	4.92	182.81
0:22:00	14,159.46	0.79	4.83	189.29	1:12:00	14,148.88	0.79	4.78	140.57	2:02:00	14,158.74	0.79	4.76	178.94
0:23:00	14,161.21	0.79	4.79	163.47	1:13:00	14,150.73	0.79	4.74	155.57	2:03:00	14,159.78	0.79	4.83	170.45
0:24:00	14,159.18	0.79	4.77	164.28	1:14:00	14,147.37	0.79	4.80	151.20	2:04:00	14,159.18	0.79	4.83	170.06
0:25:00	14,161.20	0.79	4.79	182.06	1:15:00	14,154.20	0.79	4.76	142.97	2:05:00	14,159.34	0.79	4.89	158.50
0:26:00	14,159.31	0.79	4.74	175.02	1:16:00	14,151.57	0.79	4.70	121.64	2:06:00	14,159.38	0.79	4.86	161.29
0:27:00	14,162.89	0.79	4.75	181.90	1:17:00	14,154.30	0.79	4.69	98.73	2:07:00	14,157.50	0.79	4.88	156.76
0:28:00	14,158.94	0.79	4.68	183.55	1:18:00	14,152.20	0.79	4.72	122.79	2:08:00	14,158.16	0.79	4.84	164.40
0:29:00	14,161.69	0.79	4.71	152.88	1:19:00	14,153.94	0.79	4.80	132.84	2:09:00	14,148.82	0.79	4.81	154.04
0:30:00	14,160.91	0.79	4.72	148.96	1:20:00	14,154.46	0.79	4.70	125.55	2:10:00	14,159.45	0.79	4.75	155.15
0:31:00	14,161.51	0.79	4.83	169.43	1:21:00	14,154.07	0.79	4.78	175.73	2:11:00	14,148.38	0.79	4.80	161.77
0:32:00	14,164.37	0.79	4.76	153.41	1:22:00	14,155.50	0.79	4.79	179.41	2:12:00	14,157.81	0.79	4.76	149.98
0:33:00	14,161.27	0.79	4.80	144.75	1:23:00	14,154.13	0.79	4.76	184.71	2:13:00	14,149.00	0.79	4.86	149.95
0:34:00	14,161.05	0.79	4.77	136.38	1:24:00	14,156.42	0.79	4.85	186.56	2:14:00	14,157.60	0.79	4.86	173.10
0:35:00	14,158.36	0.79	4.79	144.87	1:25:00	14,154.41	0.79	4.87	153.67	2:15:00	14,150.78	0.79	4.82	138.53
0:36:00	14,161.36	0.79	4.74	118.36	1:26:00	14,157.39	0.79	4.79	175.71	2:16:00	14,156.21	0.79	4.89	113.81
0:37:00	14,154.66	0.79	4.67	125.48	1:27:00	14,155.53	0.79	4.76	154.06	2:17:00	14,150.50	0.79	4.83	109.21
0:38:00	14,162.91	0.79	4.75	108.42	1:28:00	14,157.11	0.79	4.69	154.71	2:18:00	14,154.52	0.79	4.82	102.46
0:39:00	14,152.65	0.79	4.75	113.02	1:29:00	14,154.24	0.79	4.67	155.86	2:19:00	14,150.82	0.79	4.77	112.36
0:40:00	14,161.00	0.79	4.77	119.96	1:30:00	14,154.30	0.79	4.70	147.17	2:20:00	14,155.86	0.79	4.81	121.31
0:41:00	14,154.21	0.79	5.00	155.43	1:31:00	14,151.06	0.79	4.77	146.76	2:21:00	14,150.96	0.79	4.97	189.57
0:42:00	14,161.29	0.79	4.94	168.97	1:32:00	14,153.85	0.79	4.66	145.48	2:22:00	14,156.02	0.79	4.99	179.24
0:43:00	14,156.31	0.79	4.99	176.19	1:33:00	14,151.02	0.79	4.72	131.80	2:23:00	14,150.75	0.79	5.11	176.12
0:44:00	14,159.63	0.79	4.85	172.13	1:34:00	14,153.75	0.79	4.76	152.05	2:24:00	14,156.20	0.79	4.90	173.76
0:45:00	14,156.28	0.79	4.80	176.56	1:35:00	14,150.57	0.79	4.67	146.81	2:25:00	14,152.74	0.79	4.87	155.60
0:46:00	14,159.56	0.79	4.95	167.03	1:36:00	14,154.68	0.79	4.66	92.23	2:26:00	14,156.28	0.79	4.75	155.86
0:47:00	14,154.57	0.79	4.82	161.21	1:37:00	14,150.61	0.79	4.66	122.70	2:27:00	14,152.92	0.79	4.88	163.27
0:48:00	14,159.40	0.79	4.86	158.86	1:38:00	14,155.76	0.79	4.59	118.35	2:28:00	14,156.04	0.79	4.93	144.81
0:49:00	14,156.22	0.79	4.91	157.22	1:39:00	14,150.75	0.79	4.62	108.18	2:29:00	14,153.90	0.79	4.85	151.82
0:50:00	14,157.79	0.79	4.81	164.30	1:40:00	14,155.53	0.79	4.70	117.40	2:30:00	14,154.49	0.79	4.89	153.26

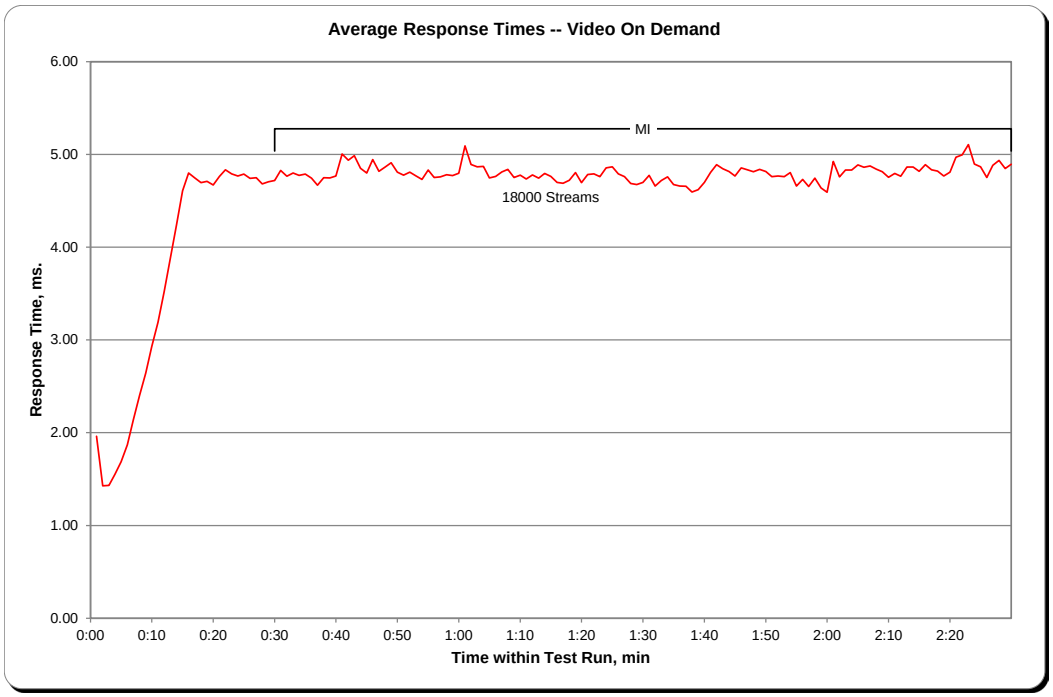
SPC-2 Video on Demand Delivery Average Data Rate Graph



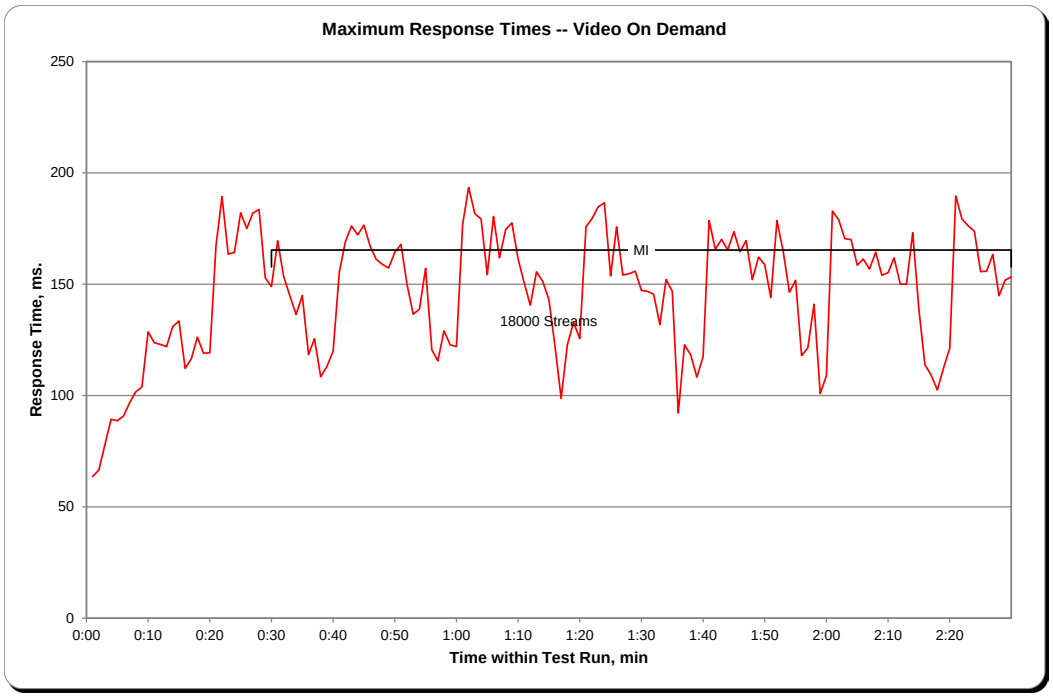
SPC-2 Video on Demand Delivery Average Data Rate per Stream Graph



SPC-2 Video on Demand Delivery Average Response Time Graph



SPC-2 Video on Demand Delivery Maximum Response Time Graph



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-2 Workload Generator will write a specific pattern at randomly selected locations throughout the Total ASU Capacity (Persistence Test Run 1). The SPC-2 Workload Generator will retain the information necessary to later validate the pattern written at each location.

The Tested Storage Configuration 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.

Restart the TSC, and if the Host System(s) were shutdown and powered off, restart the Host System(s).

The SPC-2 Workload Generator will utilize the retained data from Persistence Test Run 1 to verify (Persistence Run 2) the bit patterns written in Persistence Test Run 1 and their corresponding location.

Clause 10.6.8.4

The Full Disclosure Report will contain the following content for the Data Persistence Test:

1. *A listing of the SPC-2 Workload Generator commands and parameters used to execute each of the Test Runs in the Persistence Test.*
2. *The human readable SPC-2 Test Results File for each of the Test Runs in the Data Persistence Test.*
3. *A table from the successful Persistence Test, which contains the results from the test.*

SPC-2 Workload Generator Commands and Parameters

The SPC-2 Workload Generator commands and parameters for the Persistence Test Runs are documented in "Appendix E: SPC-2 Workload Generator Execution Commands and Parameters" on Page 138.

Data Persistence Test Results File

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

Persistence 1 Test Run Results File

Persistence 2 Test Run Results File

Data Persistence Test Results

Data Persistence Test Results	
Data Persistence Test Number: 1	
Total Number of Logical Blocks Written	1,661,172
Total Number of Logical Blocks Re-referenced	11,521
Total Number of Logical Blocks Verified	1,649,651
Total Number of Logical Blocks that Failed Verification	0
Number of Failed I/O Requests in the process of the Test	0

PRICED STORAGE CONFIGURATION AVAILABILITY DATE

Clause 10.6.9

The committed delivery date 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 must be the date at which all components are committed to be available. All availability dates, whether for individual components or for the Priced Storage Configuration as a whole, must be disclosed to a precision of one day.

*The FDR shall state: "The **Priced Storage Configuration**, as documented in this Full Disclosure Report will be available for shipment to customers on MMMM DD, YYYY." Where **Priced Storage Configuration** is the Priced Storage Configuration Name as described in Clause 10.6.5.3, #1 and MM is month, DD is the day, and YY is the year of the date that the Priced Storage Configuration, as documented, is available for shipment to customers as described above.*

The HP P9500 XP Disk Array, as documented in this SPC-2 Full Disclosure Report, is currently available for customer purchase and shipment.

ANOMALIES OR IRREGULARITIES

Clause 10.6.11

The FDR shall include a clear and complete description of any anomalies or irregularities encountered in the course of executing the SPC-2 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-2 Onsite Audit of the HP P9500 XP Disk Array.

APPENDIX A: SPC-2 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-2 Data Repository Definitions

Total ASU Capacity: The total storage capacity read and written in the course of executing the SPC-2 benchmark.

Application Storage Unit (ASU): The logical interface between the storage and SPC-2 Workload Generator. The ASU is 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-2 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-2 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 ASU.

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 sum of unused storage capacity within the Physical Storage Capacity, Configured Storage Capacity, and Addressable Storage Capacity.

SPC-2 Data Protection Levels

RAID5: User data is distributed across the disks in the array. Check data corresponding to user data is distributed across multiple disks in the form of bit-by-bit parity.

Mirroring: Two or more identical copies of user data are maintained on separate disks.

Other Protection Level: Any data protection other than **RAID5** or **Mirroring**.

Unprotected: There is no data protection provided.

SPC-2 Test Execution Definitions

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

Completion Time: The time recorded by the Workload Generator when an I/O Request is completed by the Tested Storage Configuration (TSC) as signaled by System Software.

Data Rate: The data volume, in MB, transferred by all Measured I/O Requests in an SPC-2 Test Run divided by the length of the Test Run in seconds.

Failed I/O Request: Any I/O Request issued by the SPC-2 Workload Generator that meets one of the following conditions *(see "I/O Completion Types" illustrated below)*:

- The I/O Request was signaled as failed by System Software.
- The I/O Request started within the Measurement Interval, but did not complete prior to the end of the appropriate Run-Out period..
- The I/O Request started within the Run-Out period, but did not complete prior to the end of the appropriate Ramp-Down period.

I/O Request Throughput: The total number of Measured I/O Requests in an SPC-2 Test Run divided by the duration of the Measurement Interval in seconds.

Measured I/O Request: A Completed I/O Request that begins (Start Time) within a Measurement Interval and completes (Completion Time) prior to the end of the appropriate Ramp Down *(see "I/O Completion Types" illustrated below).*

Measurement Interval: A specified, contiguous period of time, after the TSC has reached Steady State, when data is collected by the Workload Generator to produce the test results for a SPC-2 Test Run *(see "SPC-2 Test Run Components" illustrated below, Test Run 1: T_2-T_3 and Test Run 2: T_7-T_8).*

Outstanding I/O Requests: The Outstanding I/O Requests parameter specifies the maximum number of concurrent I/O Requests, associated with a give Stream, which have been issued but not yet completed. *(Clause 3.4.4 of the SPC-2 Benchmark Specification).*

Ramp-Down: A specified, contiguous period of time in which the TSC is required to complete I/O Requests started but not completed during the preceding Run-Out period. Ramp-Down begins at the end of the preceding Run-Out period *(see "SPC-2 Test Run Components" illustrated below, Test Run 1: T_4-T_5 and Test Run 2: T_9-T_{10}).* The Workload Generator will not submit any I/O Requests during the Ramp-Down.

Ramp-Up: A specified, contiguous period of 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. The Ramp-Up period ends at the beginning of the Measurement Interval *(see "SPC-2 Test Run Components" illustrated below, Test Run 1: T_0-T_2 and Test Run 2: T_5-T_7).*

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

Run-Out: A specified, contiguous period of time in which the TSC is required to complete I/O Requests started but not completed during the preceding Measurement Interval. The Run-Out period begins at the end of the preceding Measurement Interval and is a component of the Steady State period *(see "SPC-2 Test Run Components" illustrated below, Test Run 1: T_3-T_4 and Test Run 2: T_9-T_{10}).* The Workload Generator will continue to submit I/O Requests at the Test Run's specified rate during the Run-Out period.

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 TSC.

Steady State: The period during which the workload presented to the TSC by the SPC-2 Workload Generator is constant and the resulting TSC I/O Request Throughput is both consistent and sustainable. The Steady State period includes both the Measurement Interval and Run-Out periods *(see "SPC-2 Test Run Components" illustrated below, Test Run 1: T_1-T_4 and Test Run 2: T_6-T_9).*

Steady State is achieved only after caches in the TSC have filled and as a result the I/O Request Throughput of the TSC has stabilized.

Stream: A collection of Stream Segments that started within a Test Run.

Stream Segment: A sequentially organized pattern of I/O requests, which transfers a contiguous range of data.

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

Test Phase: A collection of one or more SPC-2 Test Runs sharing a common objective and intended to be run in a specific sequence.

Test Run: The execution of SPC-2 that produces specific SPC-2 test results. SPC-2 Test Runs have specified, measured Ramp-Up, Measurement Interval, Run-Out and Ramp-Down periods. "SPC-2 Test Run Components" *(see below)* illustrates the Ramp-Up, Steady State, Measurement Interval, Run-Out, and Ramp-Down components contained in two uninterrupted SPC-2 Test Runs *(Test Run 1: T_0-T_5 and Test Run 2: T_5-T_{10})*.

Test Run Sequence: A related sequence of Large File Processing (LFP) or Large Database Query (LDQ) Test Runs. Each Test Run Sequence will consist of five Test Runs, which vary the number of Streams as follows:

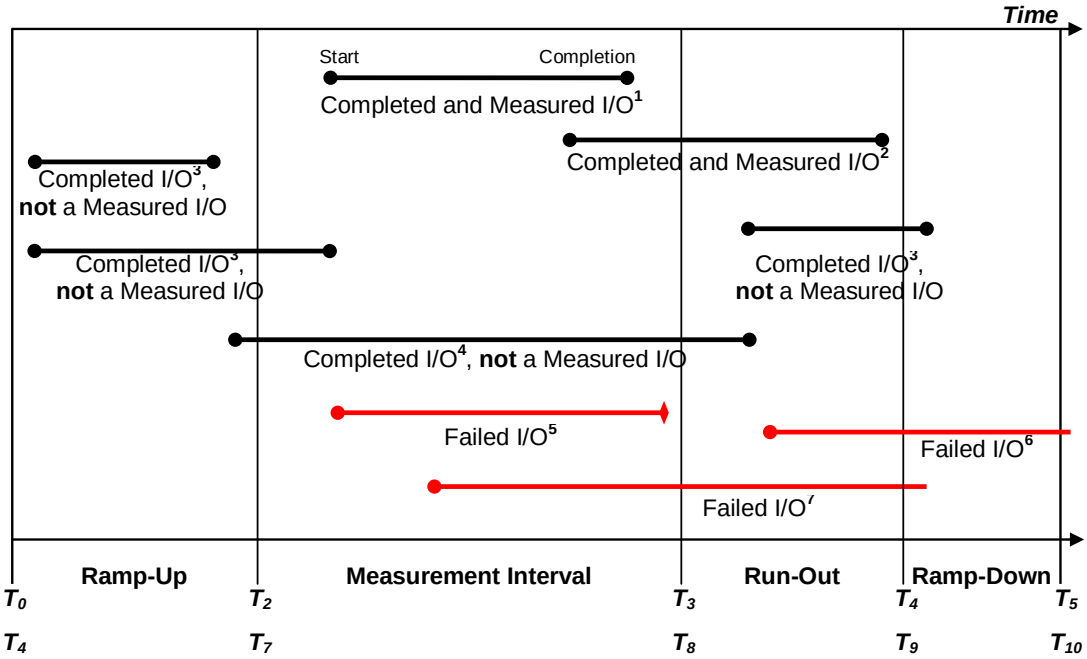
- Test Run 1: Maximum number of Streams, which is selected by the Test Sponsor
- Test Run 2: 50% of the maximum number of Streams used in Test Run 1.
- Test Run 3: 25% of the maximum number of Streams used in Test Run 1.
- Test Run 4: 12.5% of the maximum number of Streams used in Test Run 1.
- Test Run 5: 1 Stream.

Each of the five Test Runs in a Test Run Sequence will share the same attributes with the exception of the number of Streams. For example:

- Large File Processing, Read, 1024 KiB Transfer Size: Maximum Streams
- Large File Processing, Read, 1024 KiB Transfer Size: 50% of Maximum Streams
- Large File Processing, Read, 1024 KiB Transfer Size: 25% of Maximum Streams
- Large File Processing, Read, 1024 KiB Transfer Size: 12.5% of Maximum Streams
- Large File Processing, Read, 1024 KiB Transfer Size: 1 Stream

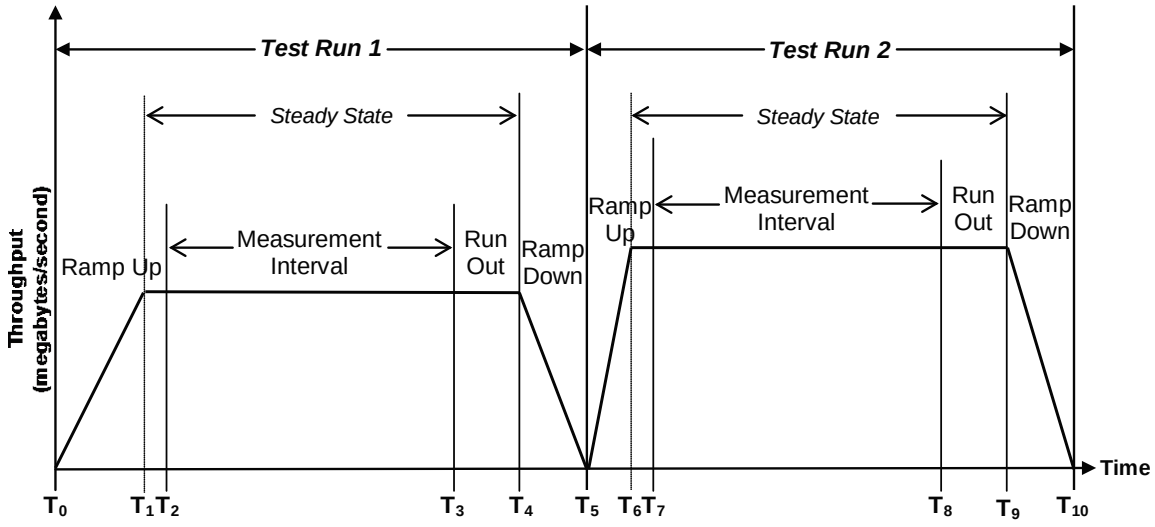
Transfer Size: The Transfer Size parameter specifies the number of bytes in KiB to transfer. *(Clause 3.4.7 of the SPC-2 Benchmark Specification)*

I/O Completion Types



Completed and Measured I/O[1]: *I/O started and completed within the Measurement Interval.*
Completed and Measured I/O[2]: *I/O started within the Measurement Interval and completed within Ramp Down.*
Completed I/O[3]: *I/O started before or after the Measurement Interval – not measured.*
Completed I/O[4]: *I/O started before and completed after the Measurement Interval – not measured.*
Failed I/O[5]: *Signaled as failed by System Software.*
Failed I/O[6]: *I/O did not complete prior to the end of Ramp-Down.*
Failed I/O[7]: *I/O did not complete prior to the end of Run-Out.*

SPC-2 Test Run Components



APPENDIX B: CUSTOMER TUNABLE PARAMETERS AND OPTIONS

No customer tunable parameters and/or options were changed from their default values for the benchmark measurements.

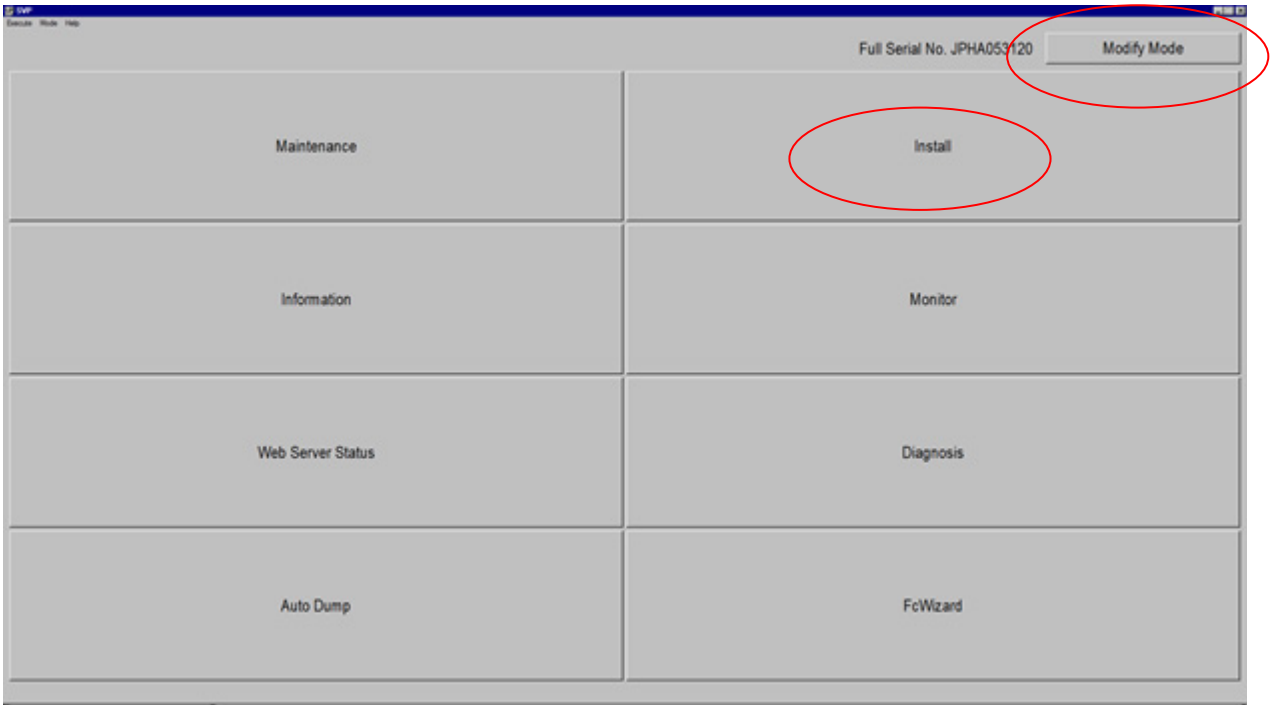
APPENDIX C: TESTED STORAGE CONFIGURATION (TSC) CREATION

Creation of the required SPC-2 Logical Volumes was done using the P9500 SVP utility, which is executed on the integrated server included with the P95000 SVP disk array. The reference to ldevs *(seen by the disk array)*, LUNs *(seen by the Host Systems)* and SPC Logical Volumes *(seen by the SPC-2 Workload Generator)* all refer to the same entity.

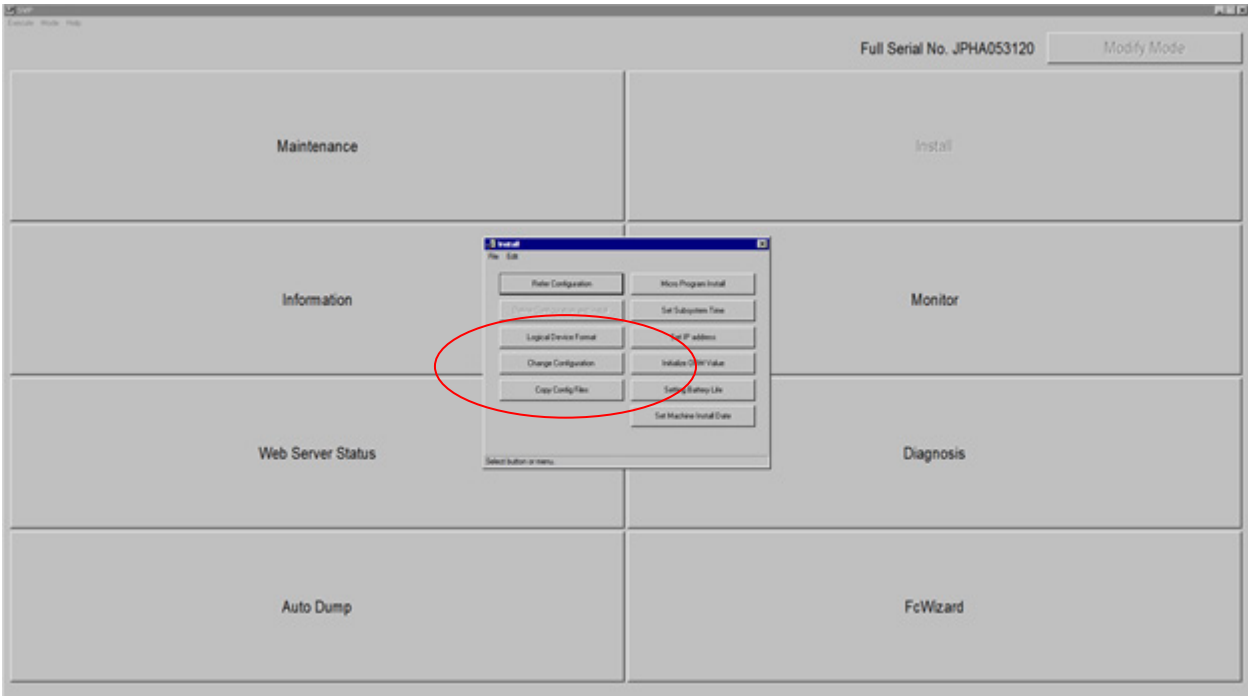
The following is a compilation, with associated screenshots, of the operations required to create those volumes.

1. The P9500 Disk Array SVP *(Service Processor)* application is launched to begin the installation of the disks and the subsequent creation of ldevs.

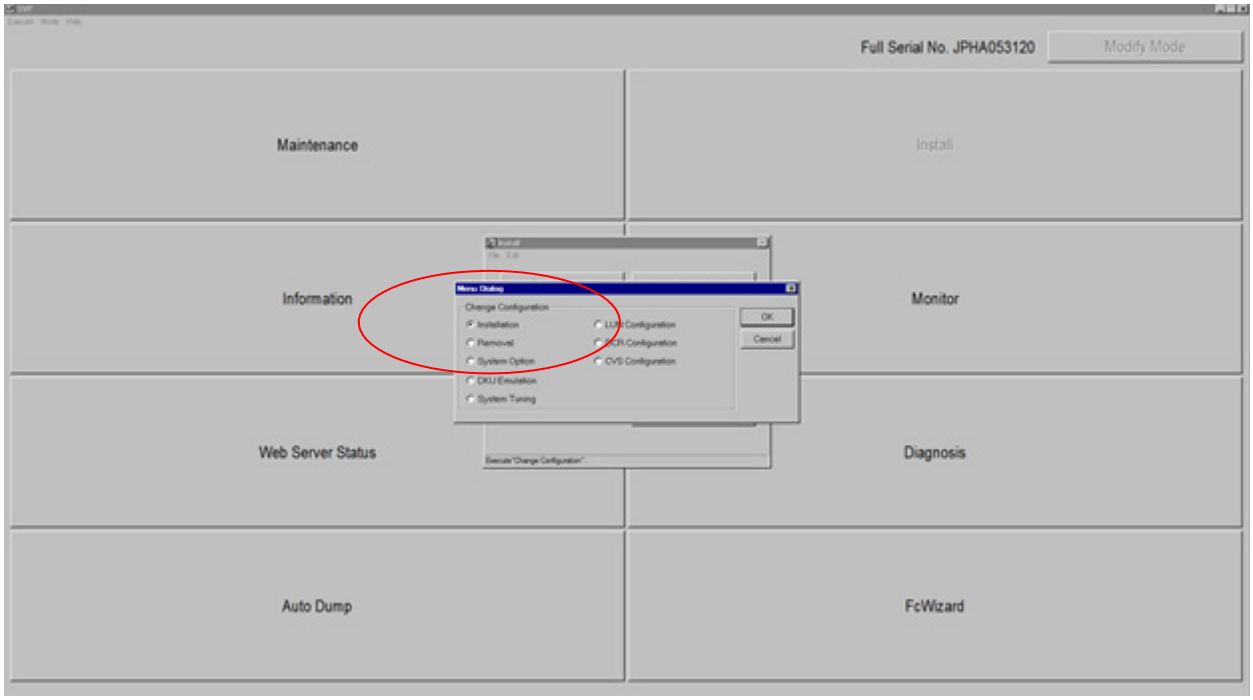
2. The SVP application is then put into **Modify** mode by selecting **View Mode** in the previous screen *(step #1)*, which grants permissions to make changes to the array. The **Install** utility is then launched.



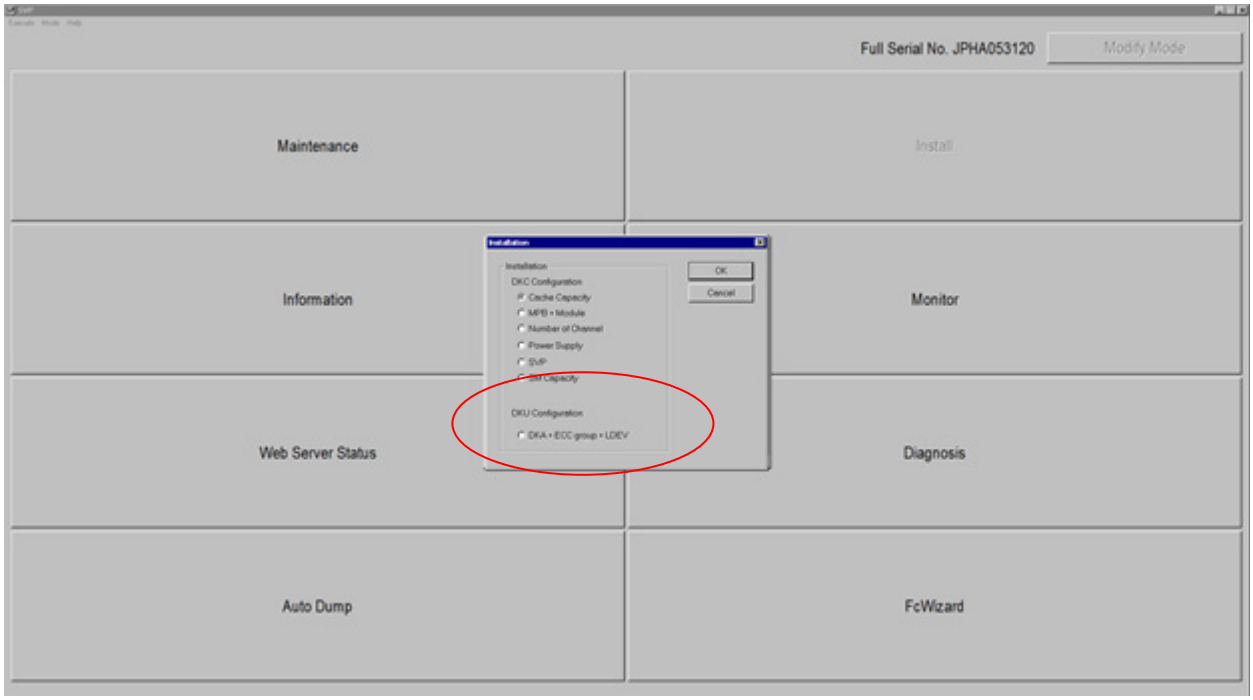
3. The **Change Configuration** utility is launched



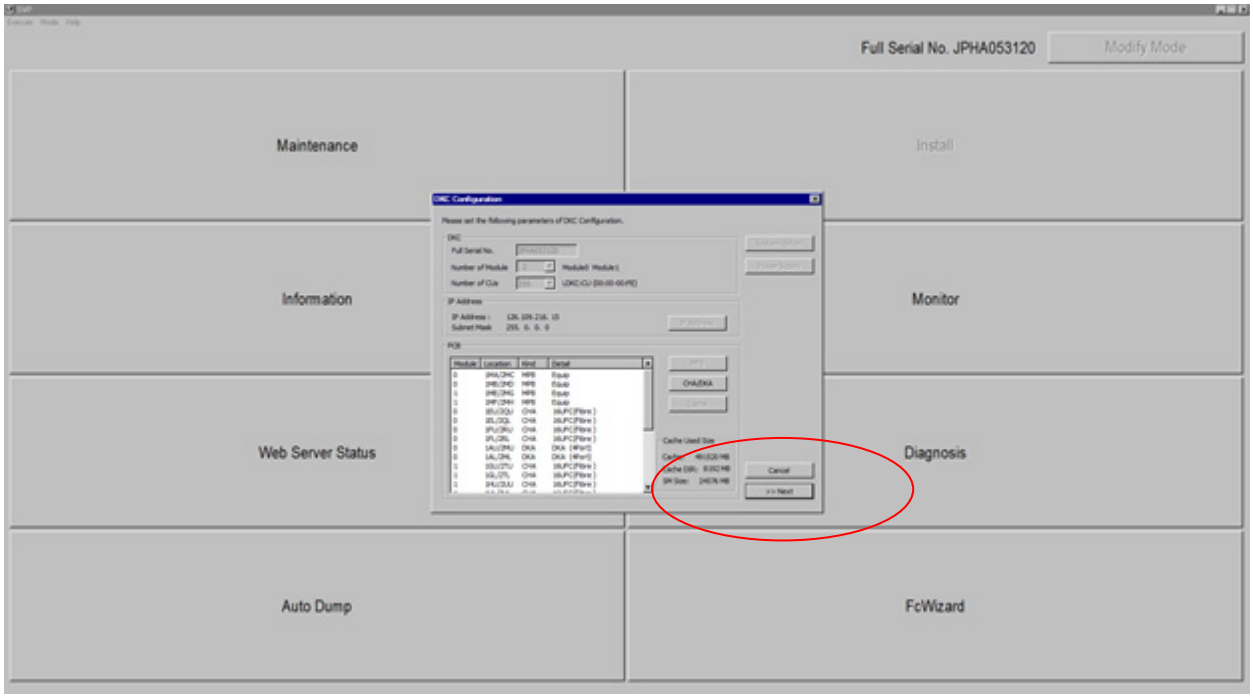
4. The **Installation** utility is launched.



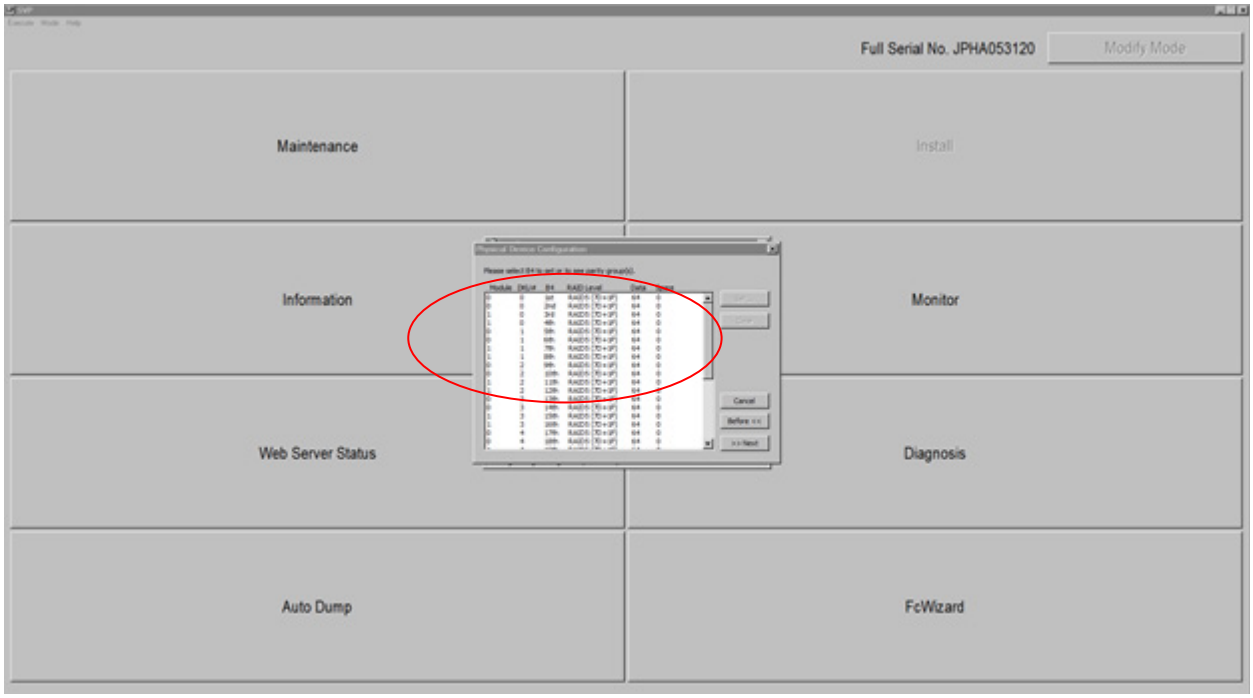
5. The **DKA+ECC group+LDEV** utility is launched.



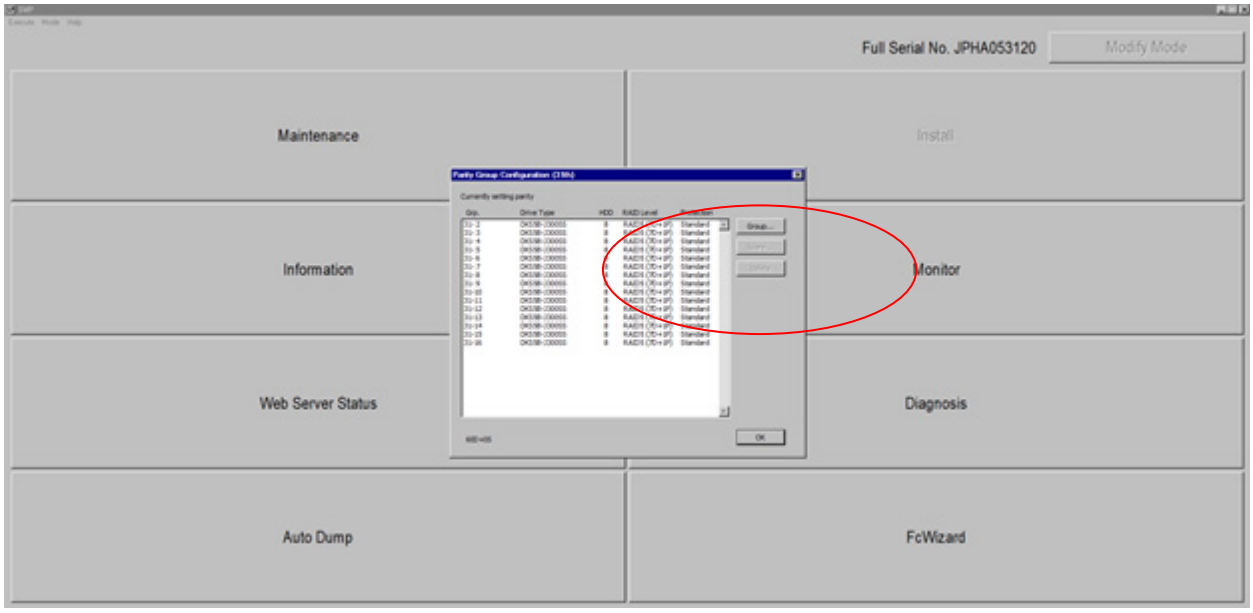
6. Click **>>Next** to proceed to the next relevant screen.



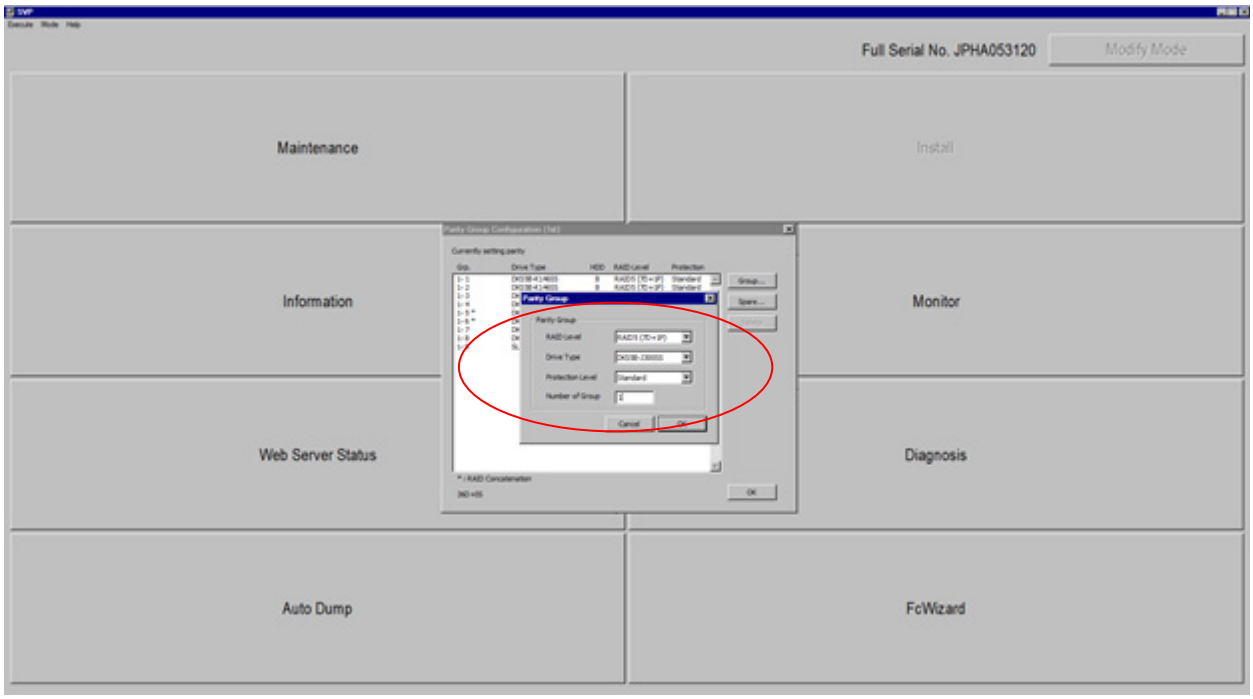
7. Highlight all of the entries in the **Physical Device Configuration** screen and click on **>> Next**.



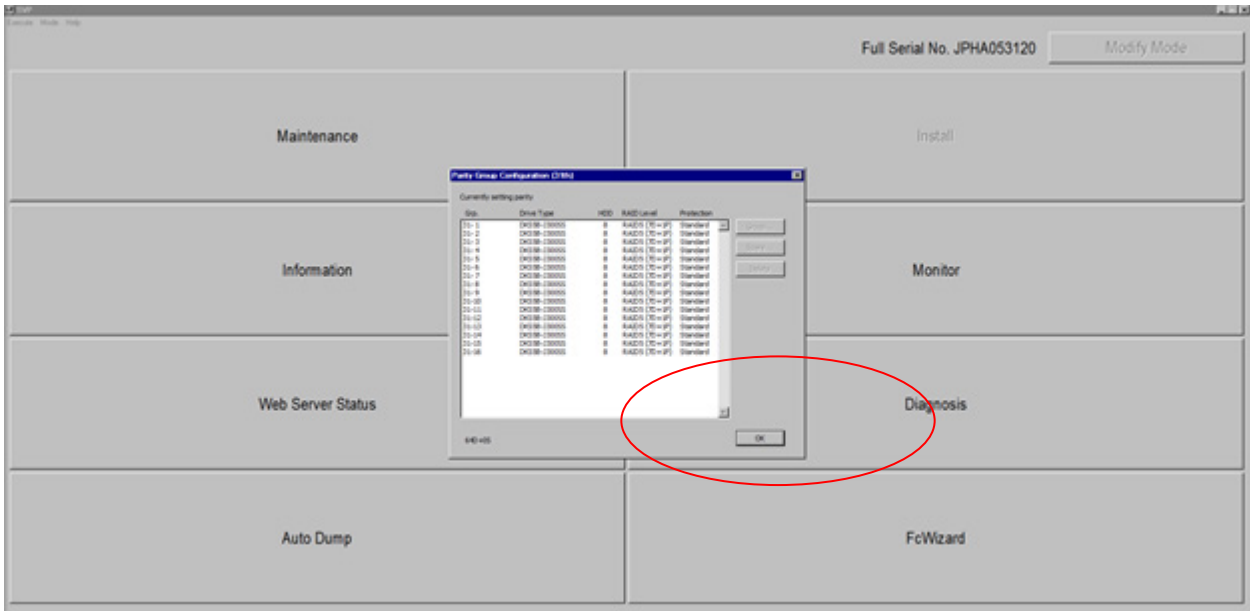
8. Select **Group** to proceed to the RAID group definition screen.



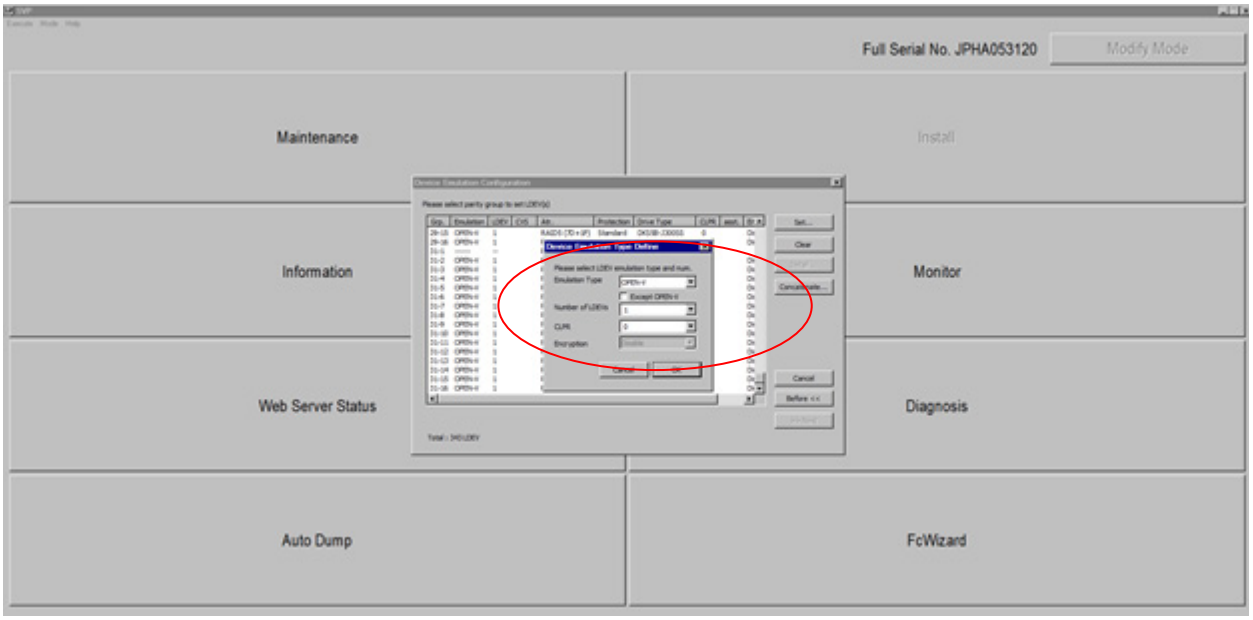
9. The RAID group is created and defined as a RAID-5, 7D+1P *(eight disk)* group.



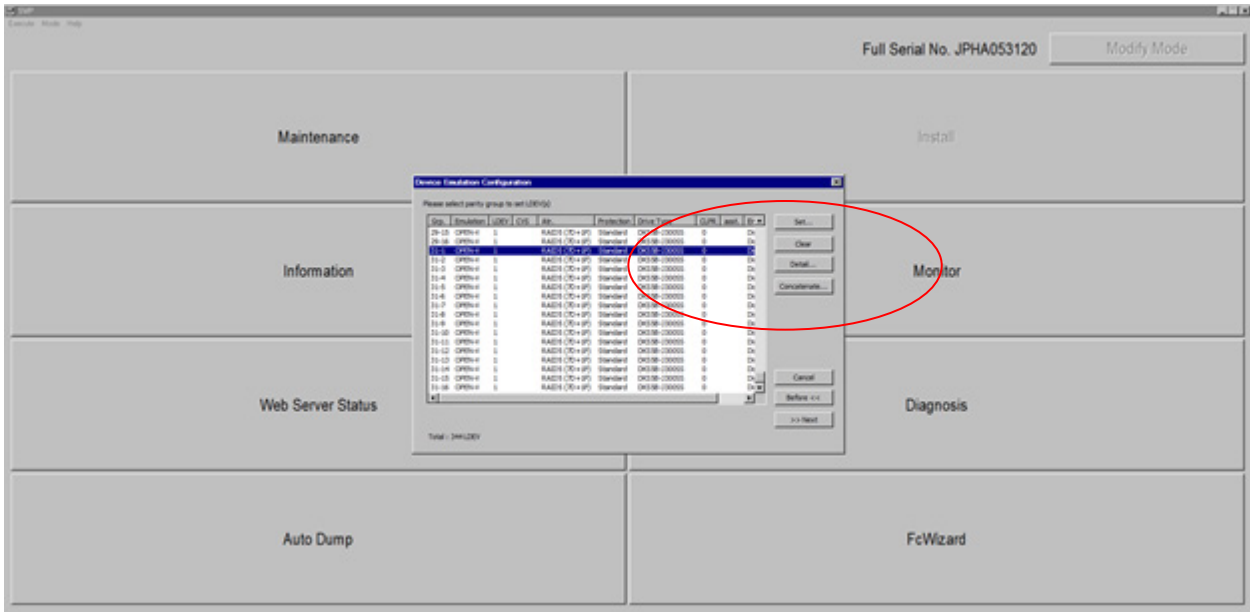
10. After selecting **OK**, the previous screen is displayed and **OK** is selected again.



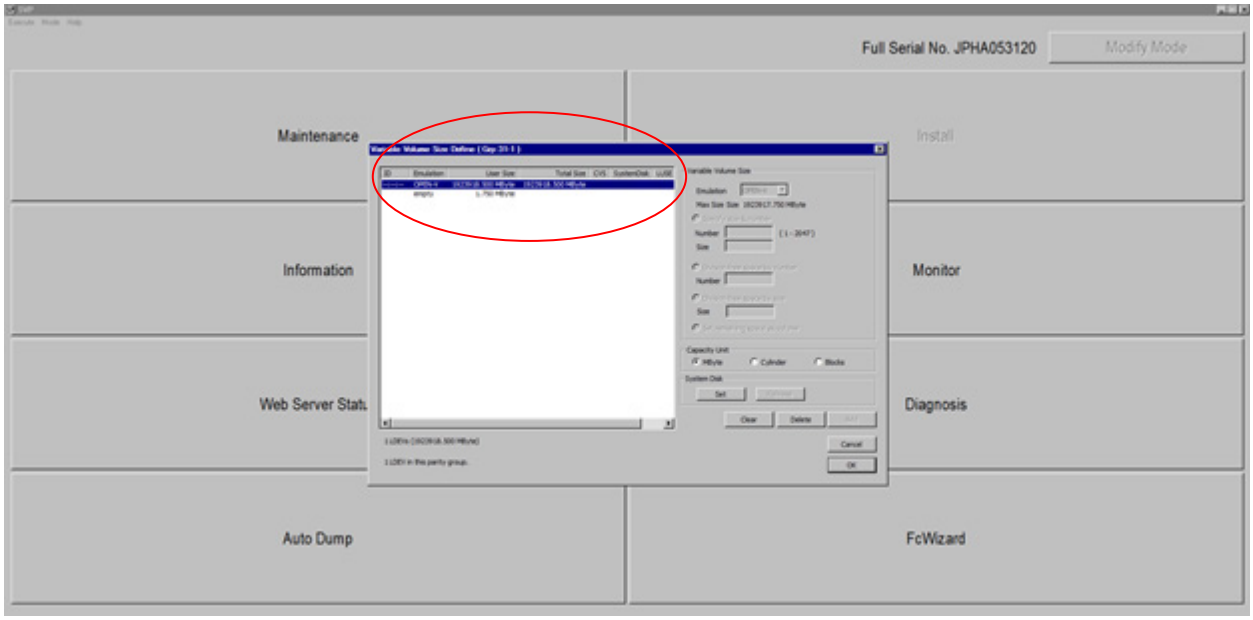
11. In this step, the device emulation type is defined as ***Open-V***, which is the device emulation type for open systems.



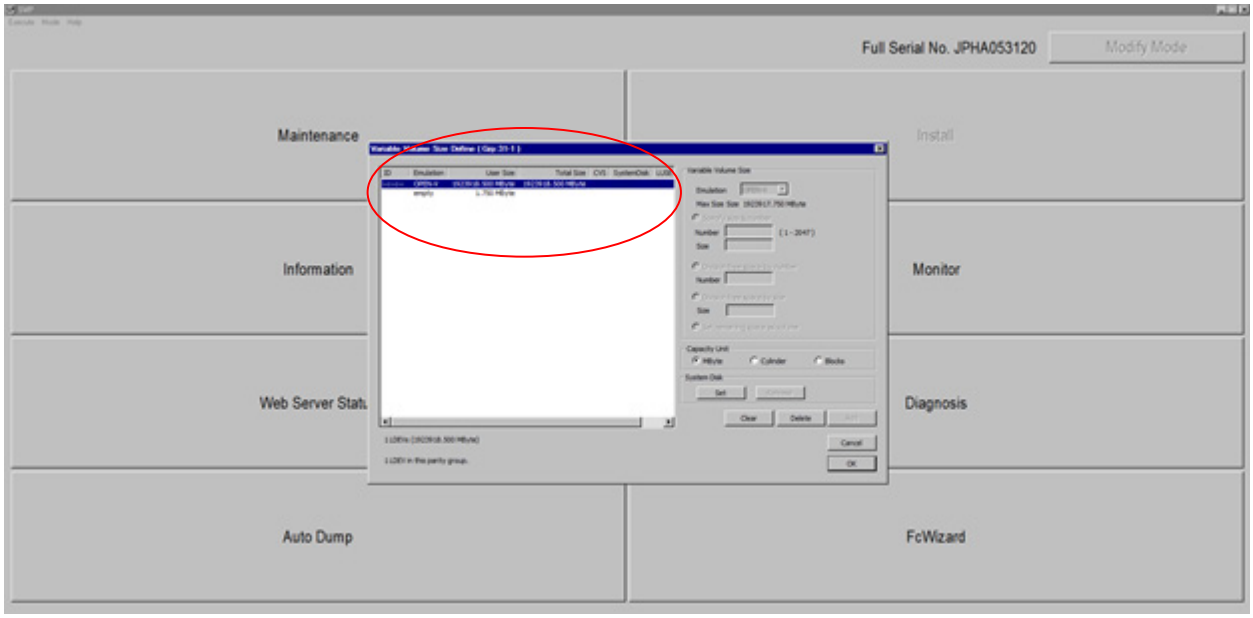
12. Returning to the **Device Emulation Configuration** screen, highlight a RAID group and then select **Detail** to configure that RAID group.



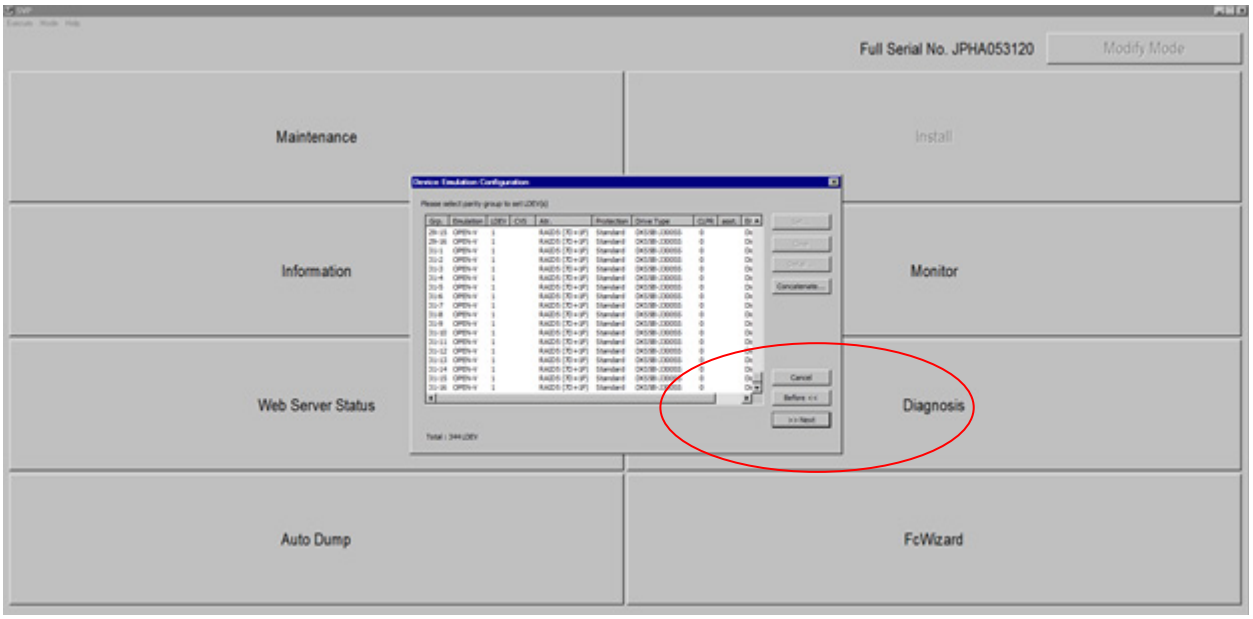
13. This screen displays the total usable storage capacity of the selected RAID group minus the capacity used for RAID-5 parity.



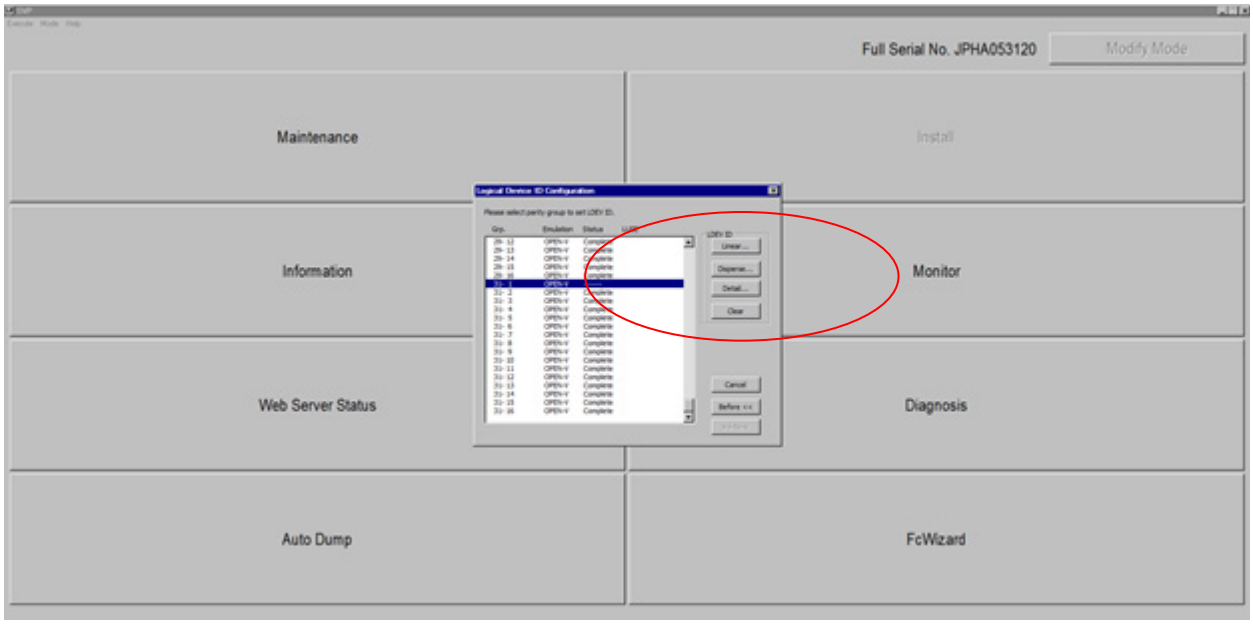
14. At this point, define the size of each ldev, using the default one logical device per 8-disk array group as seen below, which utilizes all of the usable storage capacity of the selected RAID group, so no further action is required.



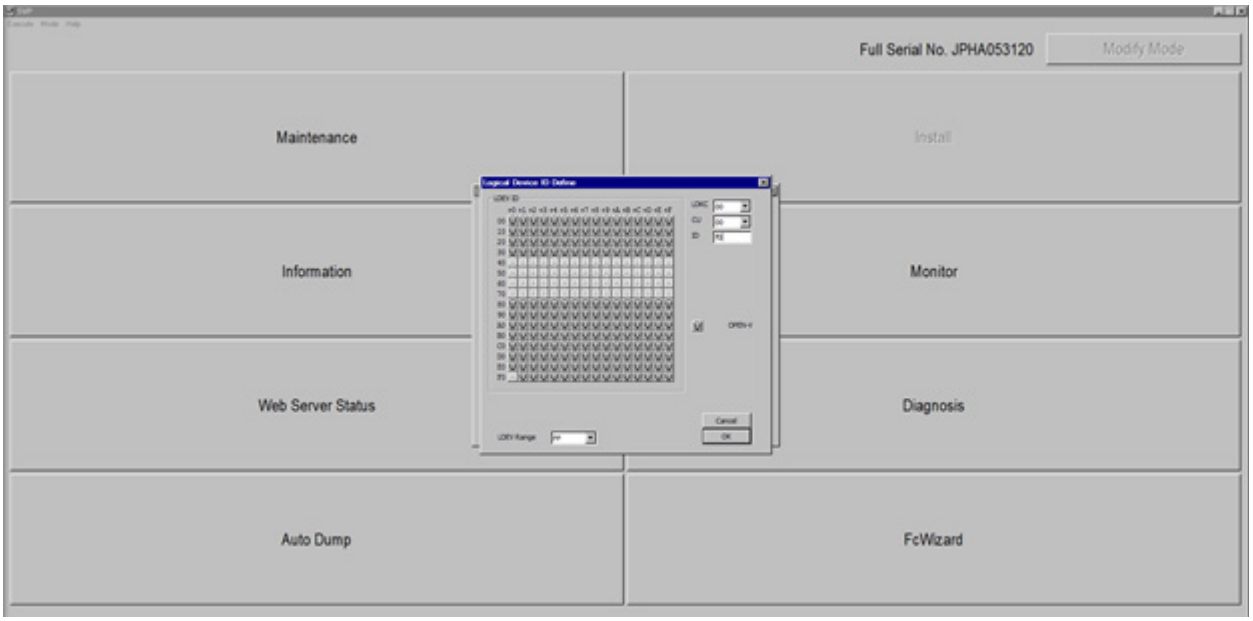
15. After completing steps #7 - #14 for all 64 array groups *(512 disks total)*, return to the **Device Emulation Configuration** screen and select **>>Next**.



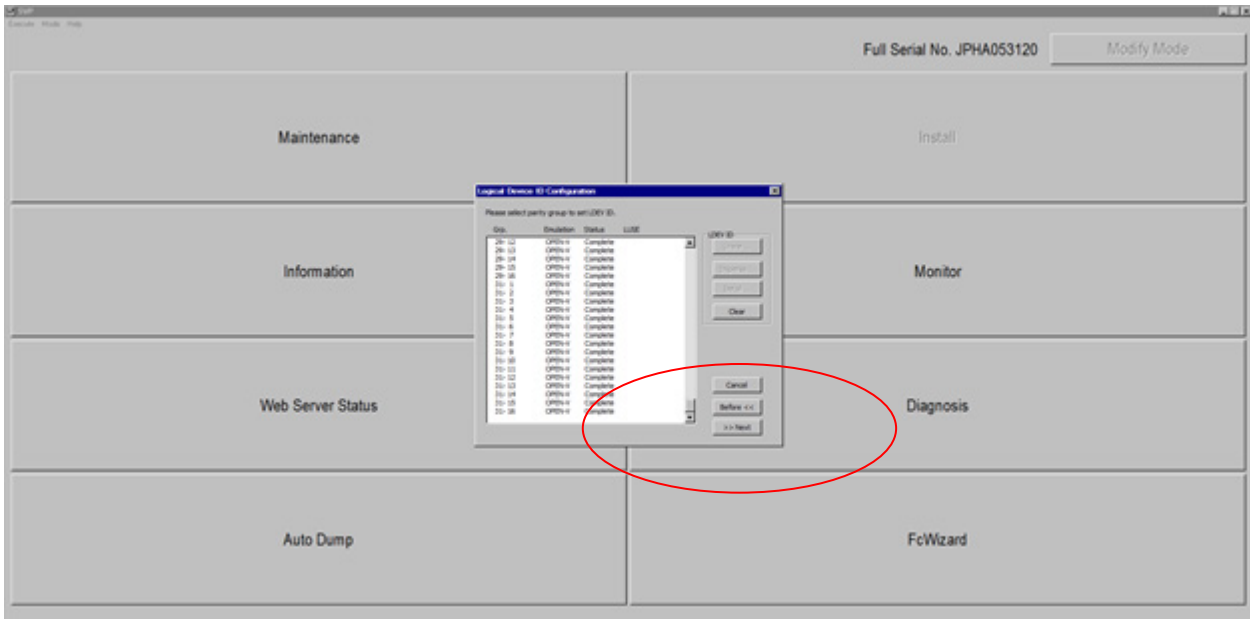
16. Select **Linear** in the **Logical Device ID Configuration** screen to assign Control Unit (CU) IDs ***(cu:ldev)*** for each ldev. The ldevs will be assigned in a linear mode in step #17 and will reside in one CU.



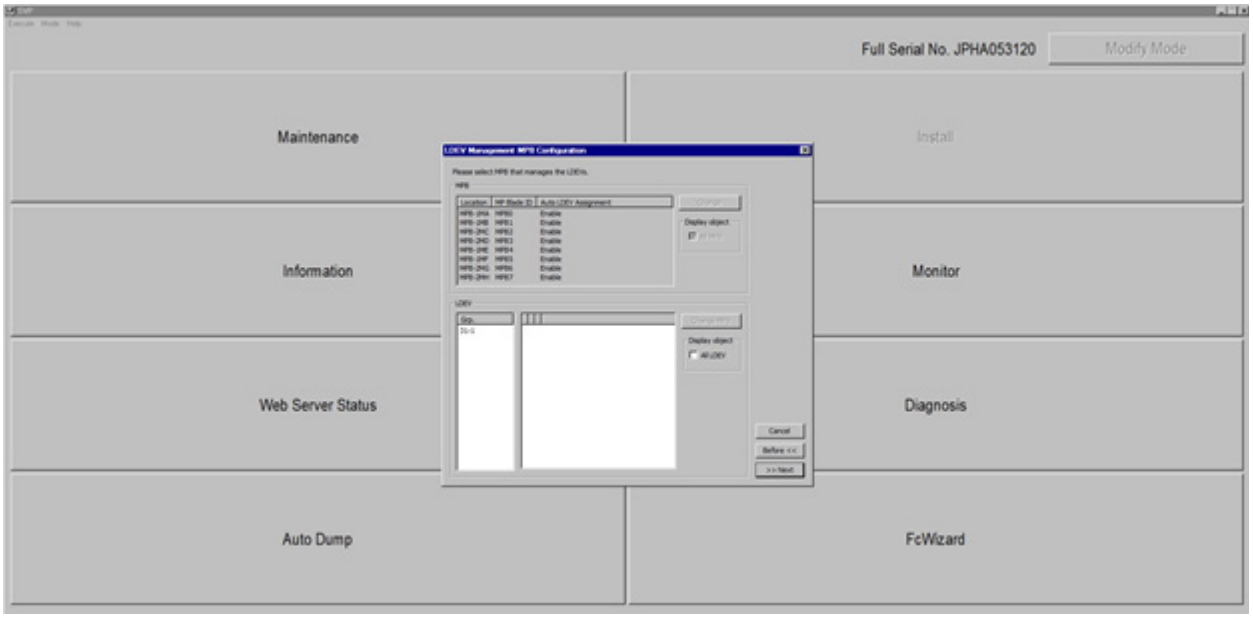
17. The specific CU and volume numbers are assigned manually to each ldev as illustrated below.



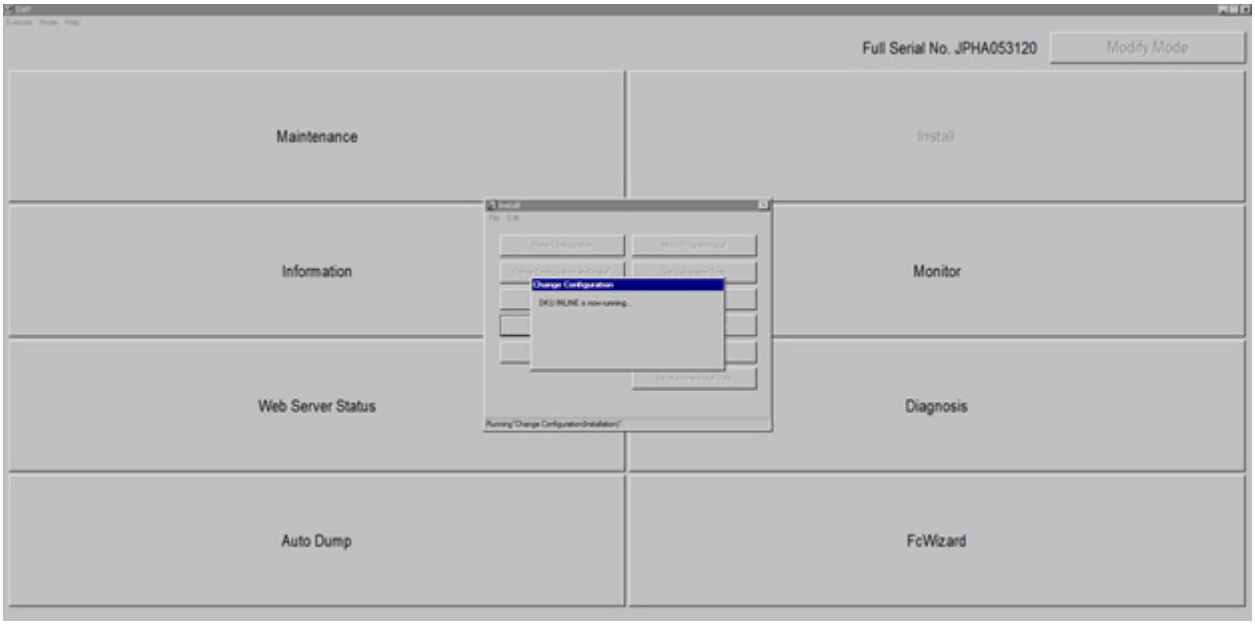
18. One the ***cu:ldev*** assignments are completed, **>>Next** is selected.



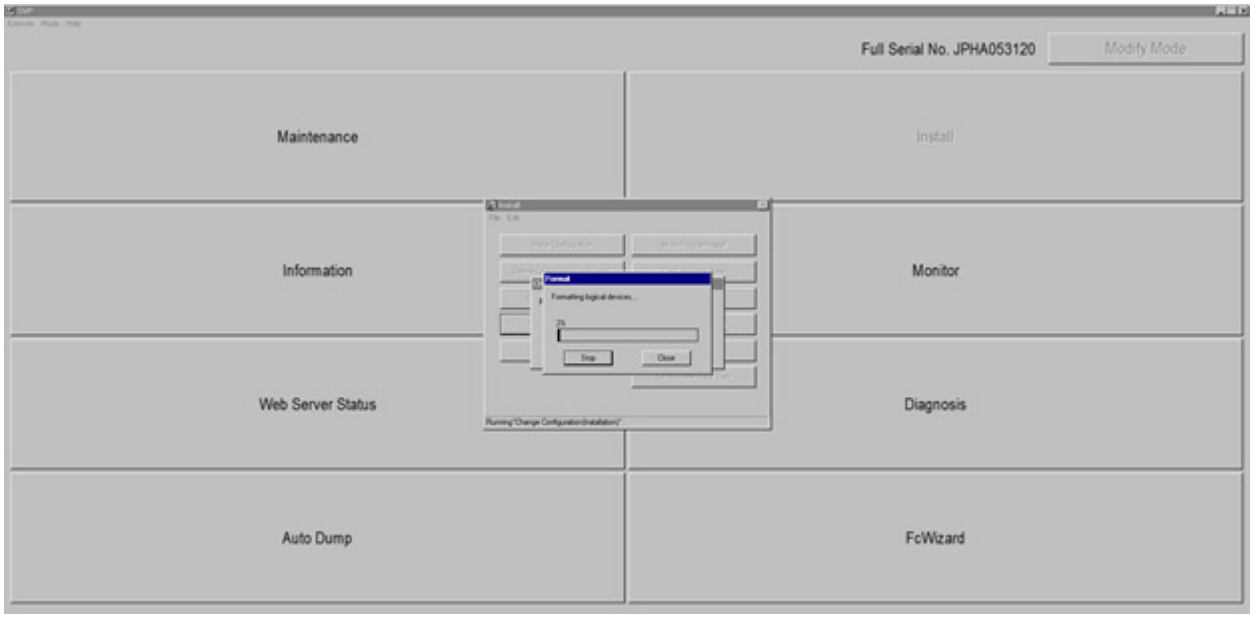
19. Logical devices (ldevs) are automatically assigned to the MPs *(microprocessor blades)* in a round-robin fashion to all 8 MP blades.



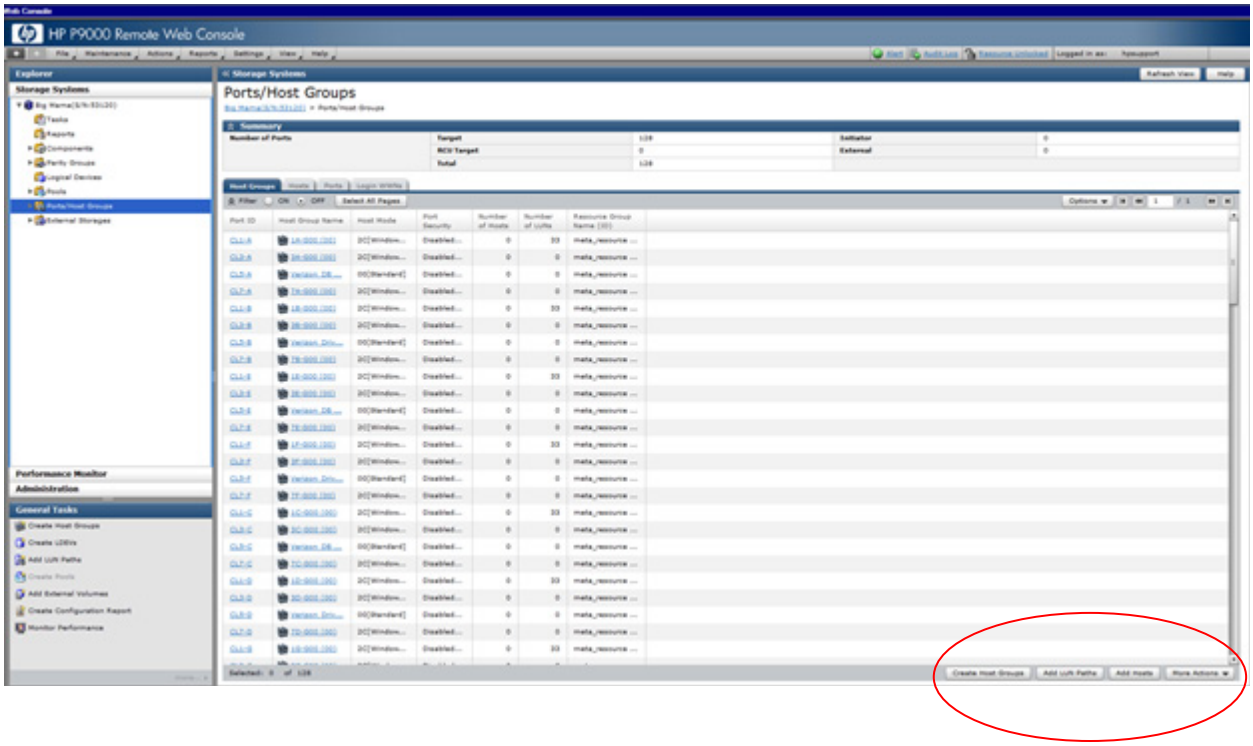
20. The ldevs are brought online and diagnostics are run as illustrated below.



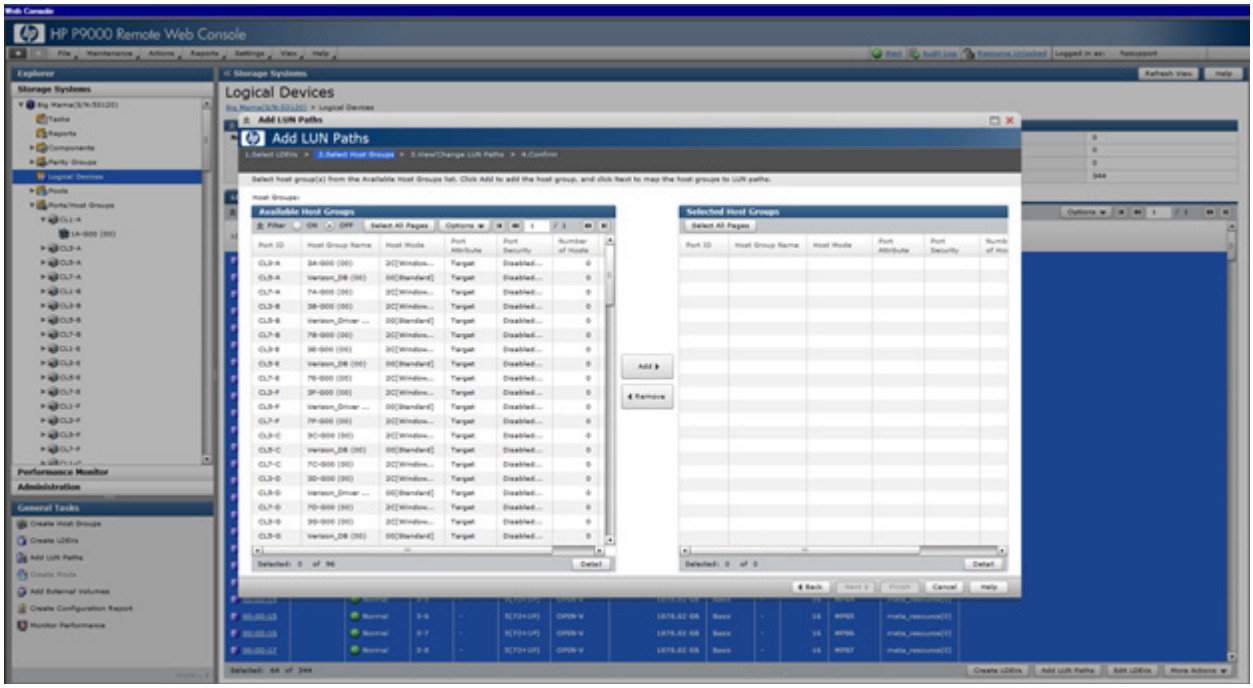
21. One the diagnostics have completed, the ldevs are formatted and are then available to be presented the Host Systems.



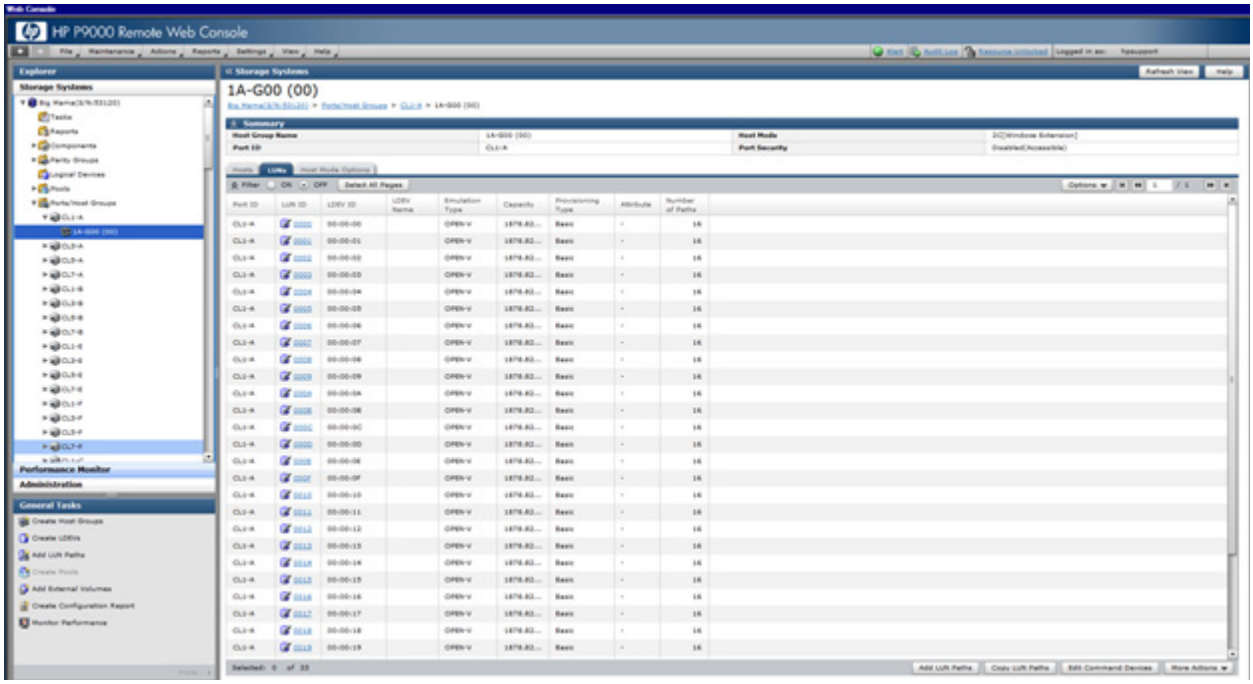
22. The ldevs are presented to the Host Systems as LUNs using the Remote Web Console as seen below, which is accessed via a browser window opened on the integrated server included with the P9500 disk array.



23. The 64 ldevs are selected and assigned to 32 ports and host groups for Host System presentation.



24. The 64 LUNs are then available to the specified Host Systems for use as the SPC-2 Logical Volumes, used by the SPC-2 Workload Generator.



APPENDIX D: SPC-2 WORKLOAD GENERATOR STORAGE COMMANDS AND PARAMETERS

Common Command Lines: LUNs

The following command lines were identical in all of the following command and parameter files, appearing as noted in each file.

```
sd=default,host=localhost,size=1870g

***

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
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sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
```

```
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63


***

sd=default,host=slave1,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
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sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
```

```
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
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sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
***

sd=default,host=slave2,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
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sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
```

```
  sd=sd36,lun=\\.\PhysicalDrive35
  sd=sd37,lun=\\.\PhysicalDrive36
  sd=sd38,lun=\\.\PhysicalDrive37
  sd=sd39,lun=\\.\PhysicalDrive38
  sd=sd40,lun=\\.\PhysicalDrive39
  sd=sd41,lun=\\.\PhysicalDrive40
  sd=sd42,lun=\\.\PhysicalDrive41
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  sd=sd60,lun=\\.\PhysicalDrive59
  sd=sd61,lun=\\.\PhysicalDrive60
  sd=sd62,lun=\\.\PhysicalDrive61
  sd=sd63,lun=\\.\PhysicalDrive62
  sd=sd64,lun=\\.\PhysicalDrive63
  ***
  ***

  sd=default,host=slave3,size=1870g

  sd=sd1,lun=\\.\PhysicalDrive0
  sd=sd2,lun=\\.\PhysicalDrive1
  sd=sd3,lun=\\.\PhysicalDrive2
  sd=sd4,lun=\\.\PhysicalDrive3
  sd=sd5,lun=\\.\PhysicalDrive4
  sd=sd6,lun=\\.\PhysicalDrive5
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  sd=sd27,lun=\\.\PhysicalDrive26
  sd=sd28,lun=\\.\PhysicalDrive27
  sd=sd29,lun=\\.\PhysicalDrive28
```

```
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
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sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
***

sd=default,host=slave4,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
```

```
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave5,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
```

```
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave6,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
```

```
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave7,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
```

```
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave8,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
```

```
  sd=sd8,lun=\\.\PhysicalDrive7
  sd=sd9,lun=\\.\PhysicalDrive8
  sd=sd10,lun=\\.\PhysicalDrive9
  sd=sd11,lun=\\.\PhysicalDrive10
  sd=sd12,lun=\\.\PhysicalDrive11
  sd=sd13,lun=\\.\PhysicalDrive12
  sd=sd14,lun=\\.\PhysicalDrive13
  sd=sd15,lun=\\.\PhysicalDrive14
  sd=sd16,lun=\\.\PhysicalDrive15
  sd=sd17,lun=\\.\PhysicalDrive16
  sd=sd18,lun=\\.\PhysicalDrive17
  sd=sd19,lun=\\.\PhysicalDrive18
  sd=sd20,lun=\\.\PhysicalDrive19
  sd=sd21,lun=\\.\PhysicalDrive20
  sd=sd22,lun=\\.\PhysicalDrive21
  sd=sd23,lun=\\.\PhysicalDrive22
  sd=sd24,lun=\\.\PhysicalDrive23
  sd=sd25,lun=\\.\PhysicalDrive24
  sd=sd26,lun=\\.\PhysicalDrive25
  sd=sd27,lun=\\.\PhysicalDrive26
  sd=sd28,lun=\\.\PhysicalDrive27
  sd=sd29,lun=\\.\PhysicalDrive28
  sd=sd30,lun=\\.\PhysicalDrive29
  sd=sd31,lun=\\.\PhysicalDrive30
  sd=sd32,lun=\\.\PhysicalDrive31
  sd=sd33,lun=\\.\PhysicalDrive32
  sd=sd34,lun=\\.\PhysicalDrive33
  sd=sd35,lun=\\.\PhysicalDrive34
  sd=sd36,lun=\\.\PhysicalDrive35
  sd=sd37,lun=\\.\PhysicalDrive36
  sd=sd38,lun=\\.\PhysicalDrive37
  sd=sd39,lun=\\.\PhysicalDrive38
  sd=sd40,lun=\\.\PhysicalDrive39
  sd=sd41,lun=\\.\PhysicalDrive40
  sd=sd42,lun=\\.\PhysicalDrive41
  sd=sd43,lun=\\.\PhysicalDrive42
  sd=sd44,lun=\\.\PhysicalDrive43
  sd=sd45,lun=\\.\PhysicalDrive44
  sd=sd46,lun=\\.\PhysicalDrive45
  sd=sd47,lun=\\.\PhysicalDrive46
  sd=sd48,lun=\\.\PhysicalDrive47
  sd=sd49,lun=\\.\PhysicalDrive48
  sd=sd50,lun=\\.\PhysicalDrive49
  sd=sd51,lun=\\.\PhysicalDrive50
  sd=sd52,lun=\\.\PhysicalDrive51
  sd=sd53,lun=\\.\PhysicalDrive52
  sd=sd54,lun=\\.\PhysicalDrive53
  sd=sd55,lun=\\.\PhysicalDrive54
  sd=sd56,lun=\\.\PhysicalDrive55
  sd=sd57,lun=\\.\PhysicalDrive56
  sd=sd58,lun=\\.\PhysicalDrive57
  sd=sd59,lun=\\.\PhysicalDrive58
  sd=sd60,lun=\\.\PhysicalDrive59
  sd=sd61,lun=\\.\PhysicalDrive60
  sd=sd62,lun=\\.\PhysicalDrive61
  sd=sd63,lun=\\.\PhysicalDrive62
  sd=sd64,lun=\\.\PhysicalDrive63
  ***
  sd=default,host=slave9,size=1870g

  sd=sd1,lun=\\.\PhysicalDrive0
  sd=sd2,lun=\\.\PhysicalDrive1
  sd=sd3,lun=\\.\PhysicalDrive2
```

```
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave10,size=1870g
```

```
sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
```

```
  sd=sd63,lun=\\.\PhysicalDrive62
  sd=sd64,lun=\\.\PhysicalDrive63
  ***
  sd=default,host=slave11,size=1870g

  sd=sd1,lun=\\.\PhysicalDrive0
  sd=sd2,lun=\\.\PhysicalDrive1
  sd=sd3,lun=\\.\PhysicalDrive2
  sd=sd4,lun=\\.\PhysicalDrive3
  sd=sd5,lun=\\.\PhysicalDrive4
  sd=sd6,lun=\\.\PhysicalDrive5
  sd=sd7,lun=\\.\PhysicalDrive6
  sd=sd8,lun=\\.\PhysicalDrive7
  sd=sd9,lun=\\.\PhysicalDrive8
  sd=sd10,lun=\\.\PhysicalDrive9
  sd=sd11,lun=\\.\PhysicalDrive10
  sd=sd12,lun=\\.\PhysicalDrive11
  sd=sd13,lun=\\.\PhysicalDrive12
  sd=sd14,lun=\\.\PhysicalDrive13
  sd=sd15,lun=\\.\PhysicalDrive14
  sd=sd16,lun=\\.\PhysicalDrive15
  sd=sd17,lun=\\.\PhysicalDrive16
  sd=sd18,lun=\\.\PhysicalDrive17
  sd=sd19,lun=\\.\PhysicalDrive18
  sd=sd20,lun=\\.\PhysicalDrive19
  sd=sd21,lun=\\.\PhysicalDrive20
  sd=sd22,lun=\\.\PhysicalDrive21
  sd=sd23,lun=\\.\PhysicalDrive22
  sd=sd24,lun=\\.\PhysicalDrive23
  sd=sd25,lun=\\.\PhysicalDrive24
  sd=sd26,lun=\\.\PhysicalDrive25
  sd=sd27,lun=\\.\PhysicalDrive26
  sd=sd28,lun=\\.\PhysicalDrive27
  sd=sd29,lun=\\.\PhysicalDrive28
  sd=sd30,lun=\\.\PhysicalDrive29
  sd=sd31,lun=\\.\PhysicalDrive30
  sd=sd32,lun=\\.\PhysicalDrive31
  sd=sd33,lun=\\.\PhysicalDrive32
  sd=sd34,lun=\\.\PhysicalDrive33
  sd=sd35,lun=\\.\PhysicalDrive34
  sd=sd36,lun=\\.\PhysicalDrive35
  sd=sd37,lun=\\.\PhysicalDrive36
  sd=sd38,lun=\\.\PhysicalDrive37
  sd=sd39,lun=\\.\PhysicalDrive38
  sd=sd40,lun=\\.\PhysicalDrive39
  sd=sd41,lun=\\.\PhysicalDrive40
  sd=sd42,lun=\\.\PhysicalDrive41
  sd=sd43,lun=\\.\PhysicalDrive42
  sd=sd44,lun=\\.\PhysicalDrive43
  sd=sd45,lun=\\.\PhysicalDrive44
  sd=sd46,lun=\\.\PhysicalDrive45
  sd=sd47,lun=\\.\PhysicalDrive46
  sd=sd48,lun=\\.\PhysicalDrive47
  sd=sd49,lun=\\.\PhysicalDrive48
  sd=sd50,lun=\\.\PhysicalDrive49
  sd=sd51,lun=\\.\PhysicalDrive50
  sd=sd52,lun=\\.\PhysicalDrive51
  sd=sd53,lun=\\.\PhysicalDrive52
  sd=sd54,lun=\\.\PhysicalDrive53
  sd=sd55,lun=\\.\PhysicalDrive54
  sd=sd56,lun=\\.\PhysicalDrive55
  sd=sd57,lun=\\.\PhysicalDrive56
  sd=sd58,lun=\\.\PhysicalDrive57
```

```
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave12,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
```

```
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave13,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
```

```
  sd=sd51,lun=\\.\PhysicalDrive50
  sd=sd52,lun=\\.\PhysicalDrive51
  sd=sd53,lun=\\.\PhysicalDrive52
  sd=sd54,lun=\\.\PhysicalDrive53
  sd=sd55,lun=\\.\PhysicalDrive54
  sd=sd56,lun=\\.\PhysicalDrive55
  sd=sd57,lun=\\.\PhysicalDrive56
  sd=sd58,lun=\\.\PhysicalDrive57
  sd=sd59,lun=\\.\PhysicalDrive58
  sd=sd60,lun=\\.\PhysicalDrive59
  sd=sd61,lun=\\.\PhysicalDrive60
  sd=sd62,lun=\\.\PhysicalDrive61
  sd=sd63,lun=\\.\PhysicalDrive62
  sd=sd64,lun=\\.\PhysicalDrive63
  ***
  sd=default,host=slave14,size=1870g

  sd=sd1,lun=\\.\PhysicalDrive0
  sd=sd2,lun=\\.\PhysicalDrive1
  sd=sd3,lun=\\.\PhysicalDrive2
  sd=sd4,lun=\\.\PhysicalDrive3
  sd=sd5,lun=\\.\PhysicalDrive4
  sd=sd6,lun=\\.\PhysicalDrive5
  sd=sd7,lun=\\.\PhysicalDrive6
  sd=sd8,lun=\\.\PhysicalDrive7
  sd=sd9,lun=\\.\PhysicalDrive8
  sd=sd10,lun=\\.\PhysicalDrive9
  sd=sd11,lun=\\.\PhysicalDrive10
  sd=sd12,lun=\\.\PhysicalDrive11
  sd=sd13,lun=\\.\PhysicalDrive12
  sd=sd14,lun=\\.\PhysicalDrive13
  sd=sd15,lun=\\.\PhysicalDrive14
  sd=sd16,lun=\\.\PhysicalDrive15
  sd=sd17,lun=\\.\PhysicalDrive16
  sd=sd18,lun=\\.\PhysicalDrive17
  sd=sd19,lun=\\.\PhysicalDrive18
  sd=sd20,lun=\\.\PhysicalDrive19
  sd=sd21,lun=\\.\PhysicalDrive20
  sd=sd22,lun=\\.\PhysicalDrive21
  sd=sd23,lun=\\.\PhysicalDrive22
  sd=sd24,lun=\\.\PhysicalDrive23
  sd=sd25,lun=\\.\PhysicalDrive24
  sd=sd26,lun=\\.\PhysicalDrive25
  sd=sd27,lun=\\.\PhysicalDrive26
  sd=sd28,lun=\\.\PhysicalDrive27
  sd=sd29,lun=\\.\PhysicalDrive28
  sd=sd30,lun=\\.\PhysicalDrive29
  sd=sd31,lun=\\.\PhysicalDrive30
  sd=sd32,lun=\\.\PhysicalDrive31
  sd=sd33,lun=\\.\PhysicalDrive32
  sd=sd34,lun=\\.\PhysicalDrive33
  sd=sd35,lun=\\.\PhysicalDrive34
  sd=sd36,lun=\\.\PhysicalDrive35
  sd=sd37,lun=\\.\PhysicalDrive36
  sd=sd38,lun=\\.\PhysicalDrive37
  sd=sd39,lun=\\.\PhysicalDrive38
  sd=sd40,lun=\\.\PhysicalDrive39
  sd=sd41,lun=\\.\PhysicalDrive40
  sd=sd42,lun=\\.\PhysicalDrive41
  sd=sd43,lun=\\.\PhysicalDrive42
  sd=sd44,lun=\\.\PhysicalDrive43
  sd=sd45,lun=\\.\PhysicalDrive44
  sd=sd46,lun=\\.\PhysicalDrive45
```

```
  sd=sd47,lun=\\.\PhysicalDrive46
  sd=sd48,lun=\\.\PhysicalDrive47
  sd=sd49,lun=\\.\PhysicalDrive48
  sd=sd50,lun=\\.\PhysicalDrive49
  sd=sd51,lun=\\.\PhysicalDrive50
  sd=sd52,lun=\\.\PhysicalDrive51
  sd=sd53,lun=\\.\PhysicalDrive52
  sd=sd54,lun=\\.\PhysicalDrive53
  sd=sd55,lun=\\.\PhysicalDrive54
  sd=sd56,lun=\\.\PhysicalDrive55
  sd=sd57,lun=\\.\PhysicalDrive56
  sd=sd58,lun=\\.\PhysicalDrive57
  sd=sd59,lun=\\.\PhysicalDrive58
  sd=sd60,lun=\\.\PhysicalDrive59
  sd=sd61,lun=\\.\PhysicalDrive60
  sd=sd62,lun=\\.\PhysicalDrive61
  sd=sd63,lun=\\.\PhysicalDrive62
  sd=sd64,lun=\\.\PhysicalDrive63
  ***
  sd=default,host=slave15,size=1870g

  sd=sd1,lun=\\.\PhysicalDrive0
  sd=sd2,lun=\\.\PhysicalDrive1
  sd=sd3,lun=\\.\PhysicalDrive2
  sd=sd4,lun=\\.\PhysicalDrive3
  sd=sd5,lun=\\.\PhysicalDrive4
  sd=sd6,lun=\\.\PhysicalDrive5
  sd=sd7,lun=\\.\PhysicalDrive6
  sd=sd8,lun=\\.\PhysicalDrive7
  sd=sd9,lun=\\.\PhysicalDrive8
  sd=sd10,lun=\\.\PhysicalDrive9
  sd=sd11,lun=\\.\PhysicalDrive10
  sd=sd12,lun=\\.\PhysicalDrive11
  sd=sd13,lun=\\.\PhysicalDrive12
  sd=sd14,lun=\\.\PhysicalDrive13
  sd=sd15,lun=\\.\PhysicalDrive14
  sd=sd16,lun=\\.\PhysicalDrive15
  sd=sd17,lun=\\.\PhysicalDrive16
  sd=sd18,lun=\\.\PhysicalDrive17
  sd=sd19,lun=\\.\PhysicalDrive18
  sd=sd20,lun=\\.\PhysicalDrive19
  sd=sd21,lun=\\.\PhysicalDrive20
  sd=sd22,lun=\\.\PhysicalDrive21
  sd=sd23,lun=\\.\PhysicalDrive22
  sd=sd24,lun=\\.\PhysicalDrive23
  sd=sd25,lun=\\.\PhysicalDrive24
  sd=sd26,lun=\\.\PhysicalDrive25
  sd=sd27,lun=\\.\PhysicalDrive26
  sd=sd28,lun=\\.\PhysicalDrive27
  sd=sd29,lun=\\.\PhysicalDrive28
  sd=sd30,lun=\\.\PhysicalDrive29
  sd=sd31,lun=\\.\PhysicalDrive30
  sd=sd32,lun=\\.\PhysicalDrive31
  sd=sd33,lun=\\.\PhysicalDrive32
  sd=sd34,lun=\\.\PhysicalDrive33
  sd=sd35,lun=\\.\PhysicalDrive34
  sd=sd36,lun=\\.\PhysicalDrive35
  sd=sd37,lun=\\.\PhysicalDrive36
  sd=sd38,lun=\\.\PhysicalDrive37
  sd=sd39,lun=\\.\PhysicalDrive38
  sd=sd40,lun=\\.\PhysicalDrive39
  sd=sd41,lun=\\.\PhysicalDrive40
  sd=sd42,lun=\\.\PhysicalDrive41
```

```
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
sd=default,host=slave16,size=1870g

sd=sd1,lun=\\.\PhysicalDrive0
sd=sd2,lun=\\.\PhysicalDrive1
sd=sd3,lun=\\.\PhysicalDrive2
sd=sd4,lun=\\.\PhysicalDrive3
sd=sd5,lun=\\.\PhysicalDrive4
sd=sd6,lun=\\.\PhysicalDrive5
sd=sd7,lun=\\.\PhysicalDrive6
sd=sd8,lun=\\.\PhysicalDrive7
sd=sd9,lun=\\.\PhysicalDrive8
sd=sd10,lun=\\.\PhysicalDrive9
sd=sd11,lun=\\.\PhysicalDrive10
sd=sd12,lun=\\.\PhysicalDrive11
sd=sd13,lun=\\.\PhysicalDrive12
sd=sd14,lun=\\.\PhysicalDrive13
sd=sd15,lun=\\.\PhysicalDrive14
sd=sd16,lun=\\.\PhysicalDrive15
sd=sd17,lun=\\.\PhysicalDrive16
sd=sd18,lun=\\.\PhysicalDrive17
sd=sd19,lun=\\.\PhysicalDrive18
sd=sd20,lun=\\.\PhysicalDrive19
sd=sd21,lun=\\.\PhysicalDrive20
sd=sd22,lun=\\.\PhysicalDrive21
sd=sd23,lun=\\.\PhysicalDrive22
sd=sd24,lun=\\.\PhysicalDrive23
sd=sd25,lun=\\.\PhysicalDrive24
sd=sd26,lun=\\.\PhysicalDrive25
sd=sd27,lun=\\.\PhysicalDrive26
sd=sd28,lun=\\.\PhysicalDrive27
sd=sd29,lun=\\.\PhysicalDrive28
sd=sd30,lun=\\.\PhysicalDrive29
sd=sd31,lun=\\.\PhysicalDrive30
sd=sd32,lun=\\.\PhysicalDrive31
sd=sd33,lun=\\.\PhysicalDrive32
sd=sd34,lun=\\.\PhysicalDrive33
sd=sd35,lun=\\.\PhysicalDrive34
sd=sd36,lun=\\.\PhysicalDrive35
sd=sd37,lun=\\.\PhysicalDrive36
sd=sd38,lun=\\.\PhysicalDrive37
```

```
sd=sd39,lun=\\.\PhysicalDrive38
sd=sd40,lun=\\.\PhysicalDrive39
sd=sd41,lun=\\.\PhysicalDrive40
sd=sd42,lun=\\.\PhysicalDrive41
sd=sd43,lun=\\.\PhysicalDrive42
sd=sd44,lun=\\.\PhysicalDrive43
sd=sd45,lun=\\.\PhysicalDrive44
sd=sd46,lun=\\.\PhysicalDrive45
sd=sd47,lun=\\.\PhysicalDrive46
sd=sd48,lun=\\.\PhysicalDrive47
sd=sd49,lun=\\.\PhysicalDrive48
sd=sd50,lun=\\.\PhysicalDrive49
sd=sd51,lun=\\.\PhysicalDrive50
sd=sd52,lun=\\.\PhysicalDrive51
sd=sd53,lun=\\.\PhysicalDrive52
sd=sd54,lun=\\.\PhysicalDrive53
sd=sd55,lun=\\.\PhysicalDrive54
sd=sd56,lun=\\.\PhysicalDrive55
sd=sd57,lun=\\.\PhysicalDrive56
sd=sd58,lun=\\.\PhysicalDrive57
sd=sd59,lun=\\.\PhysicalDrive58
sd=sd60,lun=\\.\PhysicalDrive59
sd=sd61,lun=\\.\PhysicalDrive60
sd=sd62,lun=\\.\PhysicalDrive61
sd=sd63,lun=\\.\PhysicalDrive62
sd=sd64,lun=\\.\PhysicalDrive63
***
```

Video on Demand Delivery *(VOD)*

```
host=localhost,
java=(c:\java\bin\java -Xmx 1024m -Xss64k -Xincgc),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=1,

host=default,java=(c:\java\bin\java           -Xmx1500m           -Xss64k           -
Xincgc),spc2="c:\spc\spc2",shell=spc2,jvms=6
*host=(10.10.2.1,slave1),
*java=(c:\java\bin\java -Xmx 5120m -Xss64k -Xincgc),
*spc2="c:\spc\spc2",
*shell=spc2,
*jvms=6,
*maxstreams=250

host=(10.10.2.2,slave2),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.3,slave3),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.4,slave4),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
```

```
maxstreams=250

host=(10.10.2.5,slave5),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.6,slave6),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.7,slave7),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.8,slave8),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.9,slave9),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.10,slave10),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.11,slave11),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.12,slave12),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.13,slave13),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.14,slave14),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.15,slave15),
```

```
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250

host=(10.10.2.16,slave16),
spc2="c:\spc\spc2",
shell=spc2,
jvms=6,
maxstreams=250


sd=default,host=localhost,size=1870g

***
```

Common Command Lines: LUNs

```
***
* Video On Demand:

maxlatestart=10
videosegmentduration=1200
maxlatevod=0
reportinginterval=5
reportinginterval=5
rd=default,rampup=1800,periods=900,measurement=7200,runout=45,rampdown=15,buffers=8
rd=TR1_SPC-2-VOD11.0,streams=18000
```

Common Command Lines: Parameters

The following command lines were identical in LFP, LDQ and both Persistence Test Run files, appearing as noted in each file.

```
host=localhost,
java=(c:\java\bin\java -Xss64k),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=1,


host=(10.10.2.1,slave1),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=500

host=(10.10.2.2,slave2),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=500

host=(10.10.2.3,slave3),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=500
```

```
  host=(10.10.2.4,slave4),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.5,slave5),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.6,slave6),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.7,slave7),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.8,slave8),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.9,slave9),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.10,slave10),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.11,slave11),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.12,slave12),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.13,slave13),
  spc2="c:\spc\spc2",
  shell=spc2,
  jvms=1,
  maxstreams=500

  host=(10.10.2.14,slave14),
  spc2="c:\spc\spc2",
  shell=spc2,
```

```
jvms=1,
maxstreams=500

host=(10.10.2.15,slave15),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=500

host=(10.10.2.16,slave16),
spc2="c:\spc\spc2",
shell=spc2,
jvms=1,
maxstreams=500
```

Large File Processing Test *(LFP)*

Common Command Lines: Parameters

Common Command Lines: LUNs

```
*** Large File Processing Tests

maxlatestart=0
reportinginterval=5
segmentlength=512m
rd=default,measurement=180,runout=45,rampdown=15,buffers=1

** LFP, "write" Test Phase

rd=default,rdpct=0,xfersize=1024k
rd=TR1_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR2_SPC-2-FP2.0,streams=200
rd=TR3_SPC-2-FP2.0,streams=100
rd=TR4_SPC-2-FP2.0,streams=50
rd=TR5_SPC-2-FP2.0,streams=1

rd=default,xfersize=256k
rd=TR6_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR7_SPC-2-FP2.0,streams=200
rd=TR8_SPC-2-FP2.0,streams=100
rd=TR9_SPC-2-FP2.0,streams=50
rd=TR10_SPC-2-FP2.0,streams=1

** LFP, "read-write" Test Phase

rd=default,rdpct=50,xfersize=1024k
rd=TR11_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR12_SPC-2-FP2.0,streams=200
rd=TR13_SPC-2-FP2.0,streams=100
rd=TR14_SPC-2-FP2.0,streams=50
rd=TR15_SPC-2-FP2.0,streams=1

rd=default,xfersize=256k
rd=TR16_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR17_SPC-2-FP2.0,streams=200
rd=TR18_SPC-2-FP2.0,streams=100
```

```
rd=TR19_SPC-2-FP2.0,streams=50
rd=TR20_SPC-2-FP2.0,streams=1

** LFP, "read" Test Phase

rd=default,rdpct=100,xfersize=1024k
rd=TR21_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR22_SPC-2-FP2.0,streams=200
rd=TR23_SPC-2-FP2.0,streams=100
rd=TR24_SPC-2-FP2.0,streams=50
rd=TR25_SPC-2-FP2.0,streams=1

rd=default,xfersize=256k
rd=TR26_SPC-2-FP2.0,rampup=180,periods=90,streams=400
rd=default,rampup=180,periods=90
rd=TR27_SPC-2-FP2.0,streams=200
rd=TR28_SPC-2-FP2.0,streams=100
rd=TR29_SPC-2-FP2.0,streams=50
rd=TR30_SPC-2-FP2.0,streams=1
```

Large Database Query Test *(LDQ)*

Common Command Lines: Parameters

Common Command Lines: LUNs

```
***
* Large database Processing:
*
maxlatestart=0
reportinginterval=5
segmentlength=512m

* Fixed parameters
rd=default,rdpct=99,rampup=180,measurement=180,runout=45,rampdown=15,periods=90


rd=default,xfersize=1024k,buffers=4,streams=400
rd=TR1_SPC-2-DQ2.0,streams=400
rd=TR2_SPC-2-DQ2.0,streams=200
rd=TR3_SPC-2-DQ2.0,streams=100
rd=TR4_SPC-2-DQ2.0,streams=50
rd=TR5_SPC-2-DQ2.0,streams=1

rd=default,xfersize=1024k,buffers=1,streams=400
rd=TR6_SPC-2-DQ2.0,streams=400
rd=TR7_SPC-2-DQ2.0,streams=200
rd=TR8_SPC-2-DQ2.0,streams=100
rd=TR9_SPC-2-DQ2.0,streams=50
rd=TR10_SPC-2-DQ2.0,streams=1


rd=default,xfersize=64k,buffers=4,streams=400
rd=TR11_SPC-2-DQ2.0,streams=400
rd=TR12_SPC-2-DQ2.0,streams=200
rd=TR13_SPC-2-DQ2.0,streams=100
rd=TR14_SPC-2-DQ2.0,streams=50
rd=TR15_SPC-2-DQ2.0,streams=1

rd=default,xfersize=64k,buffers=1,streams=400
rd=TR16_SPC-2-DQ2.0,streams=400
rd=TR17_SPC-2-DQ2.0,streams=200
```

```
rd=TR18_SPC-2-DQ2.0,streams=100
rd=TR19_SPC-2-DQ2.0,streams=50
rd=TR20_SPC-2-DQ2.0,streams=1
```

Persistence Test Run 1 *(write phase)*

Common Command Lines: Parameters

Common Command Lines: LUNs

```
*
maxlatestart=0
reportinginterval=5
segmentlength=512m

* Fixed parameters
rd=default,rampup=180,periods=90,measurement=300,runout=0,rampdown=0,buffers=1

* prstw, "write" Test Phase

rd=default,rdpct=0,xfersize=1024k
rd=TR1_SPC-2-persist-w,streams=400
```

Persistence Test Run 2 *(read phase)*

Common Command Lines: Parameters

Common Command Lines: LUNs

```
***
* Persistence Read Test:
*
maxlatestart=0
reportinginterval=5
segmentlength=512m

maxpersistenceerrors=10

* Fixed parameters
rd=default,rampup=0,periods=0,measurement=300,runout=0,rampdown=0,buffers=1

* prstr, "read" Test Phase

rd=default,rdpct=100,xfersize=1024k
rd=TR1_SPC-2-persist-r,streams=0
```

APPENDIX E: SPC-2 WORKLOAD GENERATOR EXECUTION COMMANDS AND PARAMETERS

Video on Demand Delivery, Large File Processing Test, Large Database Query Tests, and Persistence Test Run 1

The following script was used to execute the Video on Demand Delivery, Large File Processing and Large Database Query Tests, as well as, Persistence Test Run 1.

```
rem spc2 execution batch file

chdir c:\spc\spc2

rem call spc2.bat -f prefill.txt -o c:\spc\spc2\spc2_output\prefill

rem init volumes
call spc2.bat -f allhostparmfile.lfp -o c:\spc\spc2\spc2_output\init -init

rem lfp test
call spc2.bat -f allhostparmfile.lfp -o c:\spc\spc2\spc2_output\lfp

rem ldq test
call spc2.bat -f allhostparmfile.ldq -o c:\spc\spc2\spc2_output\ldq

rem vod test
call spc2.bat -f allhostparmfile.vod -o c:\spc\spc2\spc2_output\vod

rem prstw test
call spc2.bat -f allhostparmfile.prstw -o c:\spc\spc2\spc2_output\prstw
```

Persistence Test Run 2

The following script was used to execute Persistence Test Run 2.

```
rem spc2 execution batch file

rem persist-r test
spc2.bat -f allhostparmfile.prstr -o c:\spc\spc2\spc2_output\perstr
```