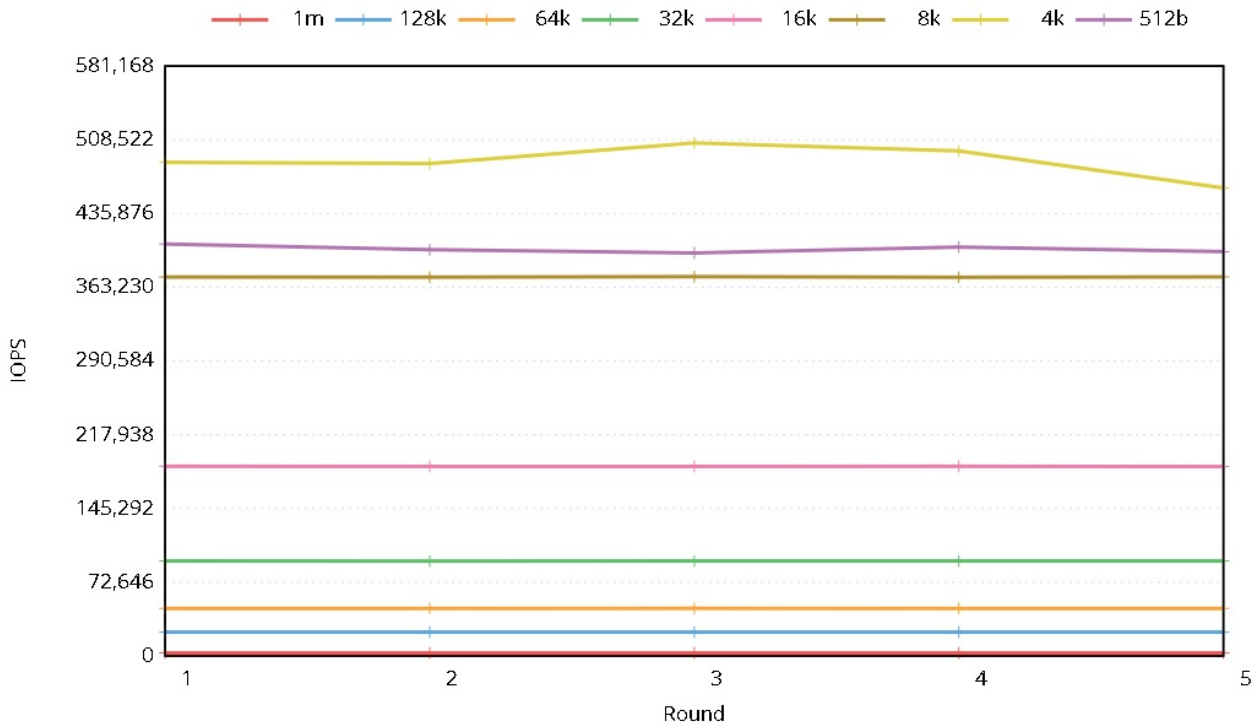


IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE-1.1
Service:		Not Specified	Instance Type:	Not Specified		Page.	1 of 6
Test Platform		Storage Platform		Setup Parameters		Test Parameters	
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	VS	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A

IOPS Steady State Convergence Plot - All Block Sizes

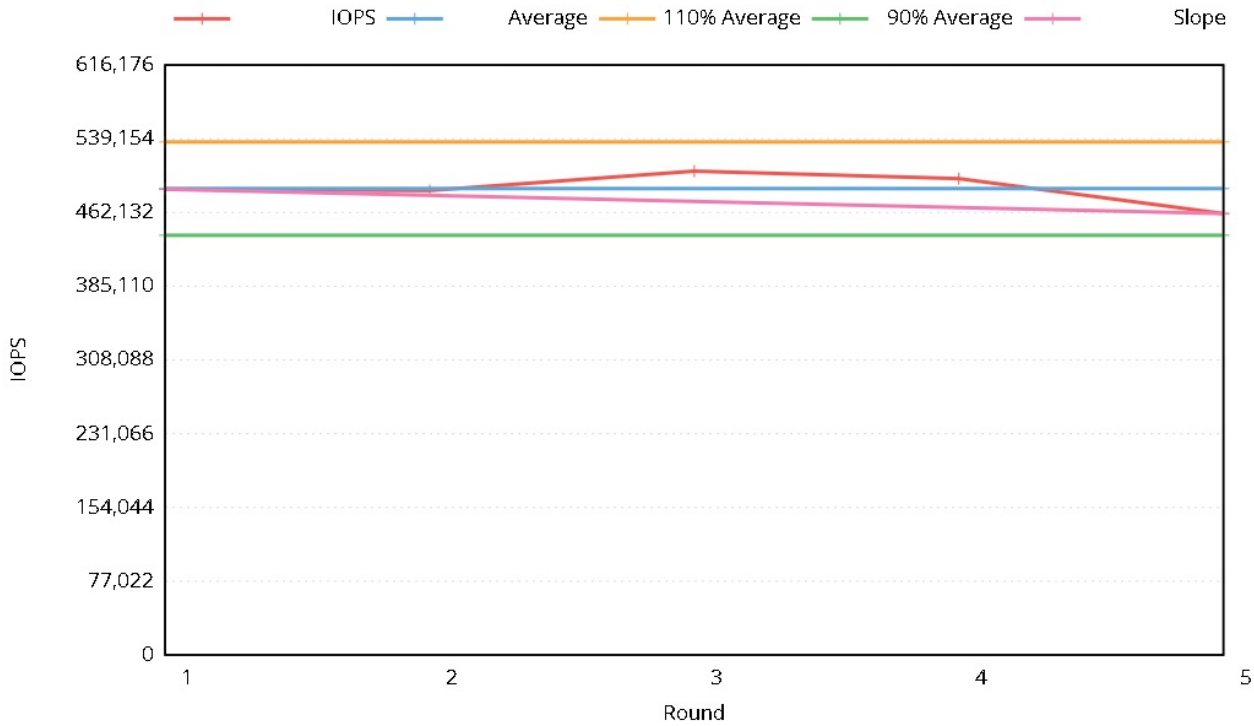


Plot A.1 - IOPS Steady State Convergence Plot - All Block Sizes

IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE 1.1
Service:	Not Specified	Instance Type:	Not Specified		Tested By:	CloudHarmony	
Page.	2 of 6						
Test Platform		Storage Platform		Setup Parameters		Test Parameters	
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	VS	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A

IOPS Steady State Measurement Window

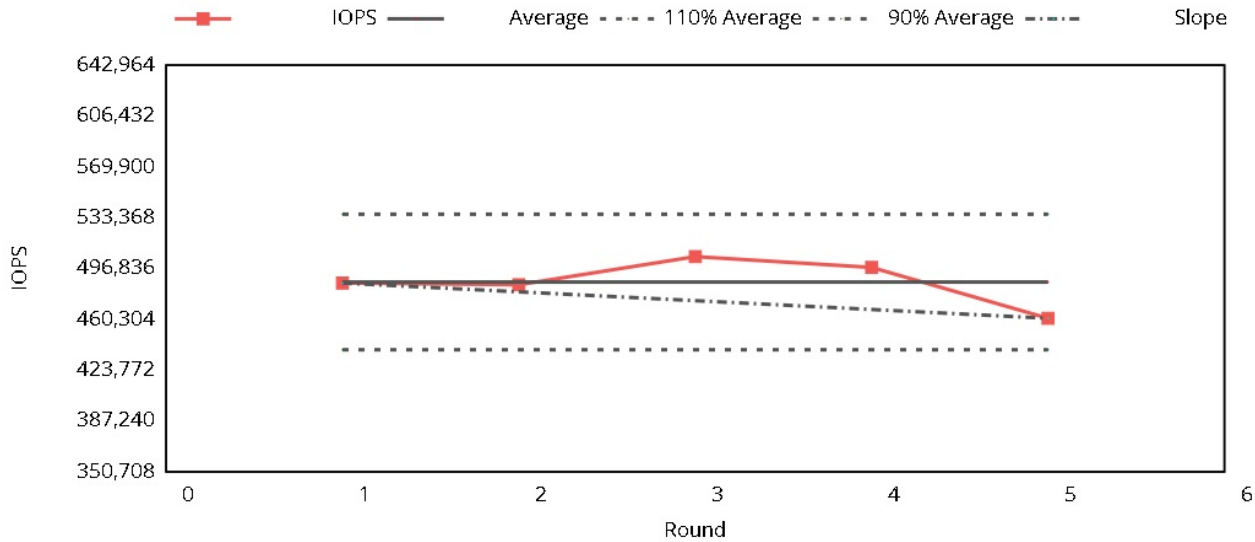


Plot A.2 - IOPS Steady State Measurement Window

## IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE 1.1
Service:	Not Specified	Instance Type:	Not Specified		Tested By:	CloudHarmony	
Page.	3 of 6						
Test Platform		Storage Platform		Setup Parameters		Test Parameters	
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	VS	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A

## IOPS Steady State Measurement Window - RND/4KiB



## Steady State Determination Data

Average IOPS:			487096
Allowed Maximum Data Excursion:	97419.2024	Measured Maximum Data Excursion:	44331.72
Allowed Maximum Slope Excursion:	48709.6012	Measured Maximum Slope Excursion:	15287.3
Least Squares Linear Fit Formula:			$-3821.825 * R + 498561.487$

Plot A.3 - IOPS Steady State Measurement Window - RND/4KiB

## IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE 1.1
						Page.	4 of 6
Service:	Not Specified	Instance Type:	Not Specified		Tested By:	CloudHarmony	
Test Platform		Storage Platform		Setup Parameters		Test Parameters	
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	\S	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A

## IOPS - All RW Mix &amp; BS - Tabular Data

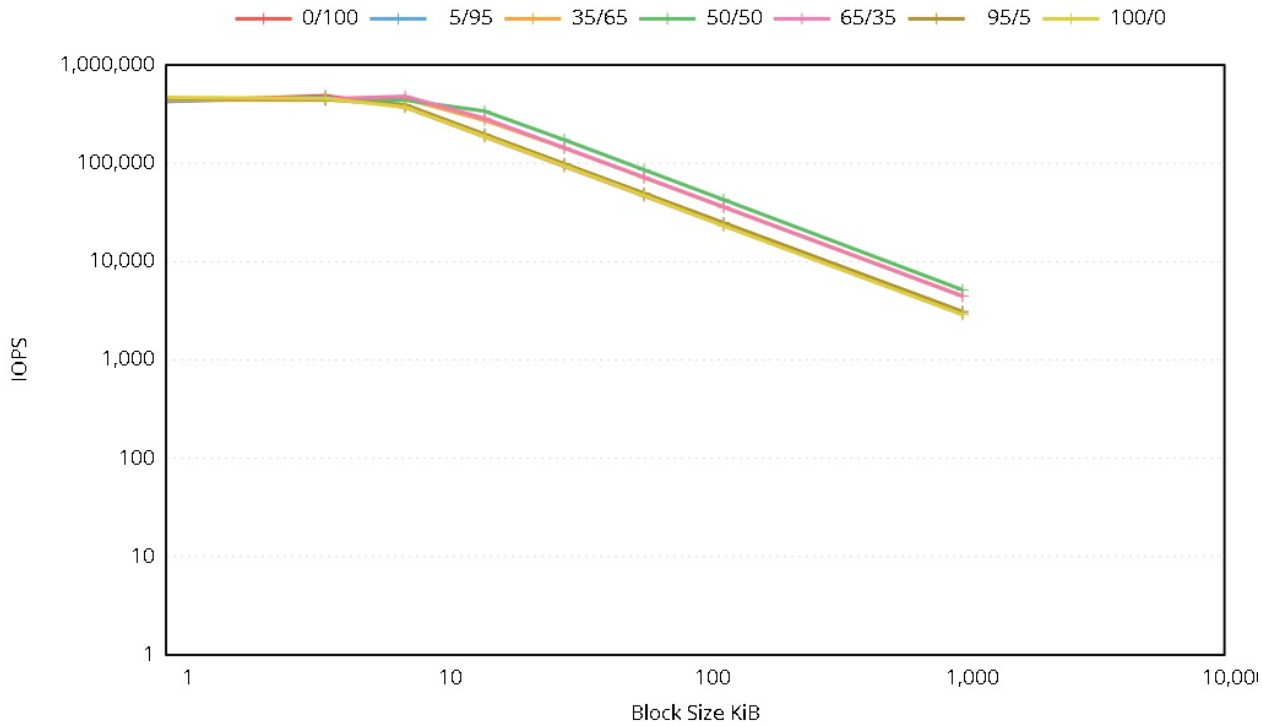
Block Size (KiB)	Read / Write Mix %						
	0/100	5/95	35/65	50/50	65/35	95/5	100/0
512b	400844.3	407336.3	440715.2	450828.1	455521.5	462741.8	473587.1
4k	487096	467987.8	440659.5	453133.6	451931.2	444791.9	456219.8
8k	373326.6	392381.8	453639.2	439278.2	481006.3	392986.7	373594.5
16k	186735.3	196324.8	274845.9	339572.3	286407.3	197120.8	187230.2
32k	93503.7	98399.6	143501.9	173271.5	143906.9	98839.7	93954.7
64k	46798.9	49251.8	71853.2	85934.1	72123.7	49474.8	47018.4
128k	23422	24654.6	35948.7	42647.4	36061.3	24764.4	23146.9
1m	2926.8	3085.4	4466.9	5171.4	4474.3	3101.2	2898

Plot A.4 - IOPS - All RW Mix &amp; BS - Tabular Data

## IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE 1.1
Service:	Not Specified	Instance Type:	Not Specified		Tested By:	CloudHarmony	
Test Platform	Storage Platform		Setup Parameters		Test Parameters		
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	VS	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A

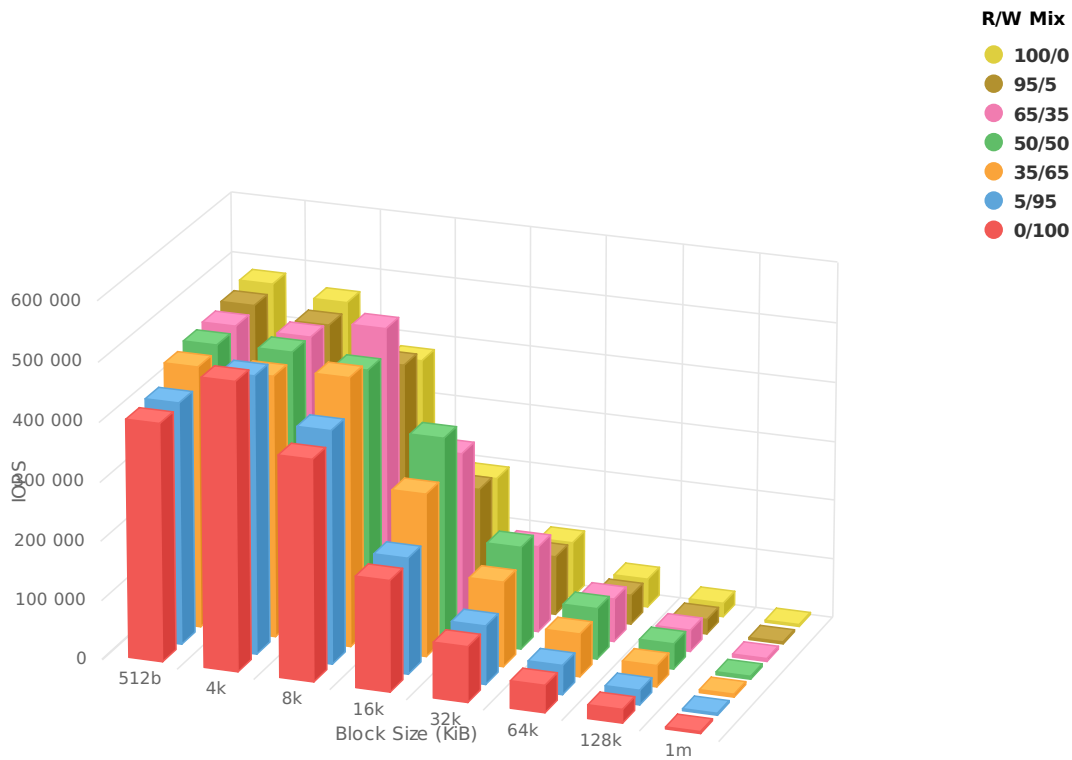
## IOPS - All RW Mix &amp; BS - 2D Plot



Plot A.5 - IOPS - All RW Mix &amp; BS - 2D Plot

### IOPS Test - Report Page

SNIA SSS TWG	Solid State Storage Performance Test Spec		IOPS - Block Size x RW Mix Matrix			Rev.	PTSE 1.1
Service:	Not Specified	Instance Type:	Not Specified		Tested By:	CloudHarmony	
Page.	6 of 6						
Test Platform		Storage Platform		Setup Parameters		Test Parameters	
Provider	Not Specified	Storage Config	Not Specified	Data Pattern	RND	Data Pattern	RND
Service	Not Specified	# Devices	32	AR	100%	AR & Amount	100%
Region		Devices	/dev/sdb, /dev/sdc, /dev/sdd, /dev/sde, ..., /dev/sdad, /dev/sdae, /dev/sdaf, /dev/sdag	AR Segments	N/A	Test Stimulus 1	IOPS Loop
Instance ID	Not Specified	Device Capacities	1000 GiB	Pre Condition 1	None	RW Mix	Outer Loop
CPU	Intel Xeon Platinum 8167M 2.00GHz	Purge Methods	None	TOIO - TC/QD	N/A	Block Sizes	Inner Loop
Memory	754 GB	Drive Model		Duration	N/A	TOIO - TC/QD	TC 96/QD 64
Operating System	VS	Drive Type		Pre Condition 2	IOPS Loop	Steady State	1 - 5
Test SW	ch-block-storage 1.0	Drive Interface		TOIO - TC/QD	TC 96/QD 64	Test Stimulus 2	N/A
Test ID	us-ashburn-1 BM.Standard2.52 block direct1	Notes		SS Rouds	1 - 5	TOIO - TC/QD	N/A
Notes				Notes		Steady State	N/A
<b>IOPS -All RW Mix &amp; BS - 3D Columns</b>							



Plot A.6 - IOPS -All RW Mix & BS - 3D Columns