



Performance Report

PAC Storage 5000 Ultra All Flash NVMe

Updated: February, 2026

Summary: PAC Storage 5000 Ultra is All-Flash U.2 NVMe unified storage system. Equipped with U.2 NVMe SSD, delivering better performance with lower latency.

Block Level:

Performance Result										
PAC Storage Model Name: PS 5024UR			RAID 5 (Session=4)				RAID 6 (Session=4)			
FW: 1.71P.05			Read		Write		Read		Write	
IO Type	RAID Configuration	Size	IOPS	MB/s	IOPS	MB/s	IOPS	MB/s	IOPS	MB/s
End-to-End Sequential (Thread=64)	Write Back Cache: Enable Cache Synchronization: Enable Adaptive write policy: Enable	64K	1,695,067	111,087	399,828	26,203	1,757,002	115,146	330,622	21,667
		1M	Not tested	131,267	Not tested	39,729	Not tested	129,096	Not tested	34,680
		5M (Thread=1)	19,628	102,910	3,051	15,996	19,434	101,894	2,810	14,734
	Write Back Cache: Enable Cache Synchronization: Enable	1M	Not tested	129,773	Not tested	30,089	Not tested	129,263	Not tested	28,579
End-to-End Random (Thread=128)	Write Back Cache: Enable Cache Synchronization: Enable Adaptive write policy: Enable	4K	1,756,657	7,194	479,018	1,962	1,765,278	7,230	378,480	1,550
		8K	1,759,907	14,417	474,920	3,890	1,744,866	14,293	374,555	3,068
		64K	1,117,530	73,238	198,989	13,040	1,133,517	74,285	154,085	10,098
		128K	653,554	85,662	104,549	13,703	647,116	84,818	77,597	10,170
		512K	179,306	94,008	44,397	23,276	179,363	94,226	31,406	16,466
		1M	Not tested	94,132	Not tested	25,788	Not tested	94,232	Not tested	21,577
All Cache Hit Random (Thread=128)		4K (Config1)	1,072,414	4,392	539,641	2,209	1,070,418	4,384	474,456	1,943
All Cache Hit Sequential (Thread=64)		512B (Config1)	1,078,115	552	452,365	231	1,070,744	547	480,964	245
1M		Not tested	146,425	Not tested	46,202	Not tested	146,457	Not tested	37,615	
End-to-End Database (Thread=128)	Iometer- OLTP (70% Read, 30% Write) Write Back Cache: Enable Cache Synchronization: Enable Adaptive write policy: Enable	2K	937,402	1,919	Not tested	Not tested	849,653	1,740	Not tested	Not tested
		4K	974,684	3,992	Not tested	Not tested	848,384	3,475	Not tested	Not tested
		8K	970,865	7,952	Not tested	Not tested	842,081	6,898	Not tested	Not tested
		1M	Not tested	61,025	Not tested	Not tested	Not tested	59,565	Not tested	Not tested
End-to-End VDI (Thread=128)	Iometer - VDI Profile (20% Read, 80% Write) Write Back Cache: Enable Cache Synchronization: Enable Adaptive write policy: Enable	4K	564,908	2,313	Not tested	Not tested	442,341	1,811	Not tested	Not tested

File Level:

Performance Result					
PAC Storage Model Name: PS 5024UR					
		RAID 5 (NFSv4.0)			
I/O Parameters		Read		Write	
	I/O Size	IOPS	MB/s	IOPS	MB/s
Sequential	8K	1,167,487	9,563	263,210	2,156
	32K	848,861	27,815	173,750	5,693
	64K	450,231	29,506	118,643	7,775
	1M	Not Tested	22,682	Not Tested	16,705
	1M(All cache hit)	Not Tested	56,339	Not Tested	20,187
Random	4K	858,135	3,515	290,384	1,189
	8K	823,531	6,745	274,003	2,244
	16K	769,765	12,611	237,992	3,899
	1M	Not Tested	23,862	Not Tested	18,048
	2K(Read70%, Write30%)	349,065	714	149,647	306
	4K(Read70%, Write30%)	389,382	1,595	166,863	683
	8K(Read70%, Write30%)	370,194	3,032	158,590	1,298
	1M(Read70%, Write30%)	Not Tested	12,595	Not Tested	5,424
Create File	1M	avg: 5,764			
32K Files Random (files/s)		58,268	1,908	96,156	3,150
32K Files Create (files/s)		avg: 4,558			

Test Configuration:

Performance Test Report		
Test Configuration		
1RAID	Controller	PS5024UR(HB1,2,3,4 BCM200G*1Port)
	FW	1.71P.05
	RAM	Samsung 4800 DDR5 16GB*8 (each controller)
	Drives	NVMe KIOXIA KCD8XPUG1T92*22 NVMe KIOXIA KCD8XPUG7T68*2 Total: U.2*24
	Hostboard	HB1,2,3,4: BCM200G*1Port HB
	Channel	Host Channel - 0,4,8,12 (Total 8 port)
	8 Port(A*4, B*4) Pool*2 ,Volume*4 ,Folder*8 NFS (Linux),Vdbench CIFS (Windows),Vdbench	R 1~12 Pool-1A, Volume-1 ,2 Share Folders. 1 Folder - CHL-0A-PC1 1 Folder - CHL-4A-PC1 R 1~12 Pool-1A, Volume-2 ,2 Share Folders. 1 Folder - CHL- 8A-PC2 1 Folder - CHL-12A-PC2
		R 13~24 Pool-1B, Volume-3 ,2 Share Folders. 1 Folder - CHL-0B-PC3 1 Folder - CHL-4B-PC3 R 13~24 Pool-1B, Volume-4 ,2 Share Folders. 1 Folder - CHL- 8B-PC4 1 Folder - CHL-12B-PC4
		Server*4. CHL*2 per server.
		Total 8 share folder
	Setting	Default before test
		SSD OP=17%
		Jumbo frame: 9K
		Read-ahead option for NAS file transfer: 2M
		Performance optimization: Better performance for file access service
Server*4	M/B	Manufacturer : Supermicro
		Product : X12SPL-F
	CPU	Intel Xeon Silver 4309Y CPU @2.80GHz 3.60GHZ
		Samsung DDR4 2933 32G*8
	PCI	PCI-E 4.0x16,PCI-E 4.0x8
	System Drive	SATA WD 500G(WD5003ABYX-01WERA1)
	OS.	CentOS8.5
File Vdbench	HBA card	IFT(Broadcom) 200G*1Port HBA*4 IFT(Broadcom) 100G*2Port HBA*2 Broadcom 100G*2Port HBA*2
	DAS	
	Sequential	Files=20, Size=5g, Threads=20, elapsed=120, interval=1,warmup=20
	Random	Files=20, Size=5g, Threads=64, elapsed=120, interval=1,warmup=20
	All Cache	Files=15, Size=5m, Thread=10, elapsed=120,interval=1,warmup=20
	Random 32K File(Windows CIFS)	Files=35000 ,Size=32k ,Threads=10, elapsed=120,interval=1 ,warmup=20

	Random 32K File(Linux NFS)	Files=125000 ,Size=32k ,Threads=10, elapsed=120,interval=1 ,warmup=20
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