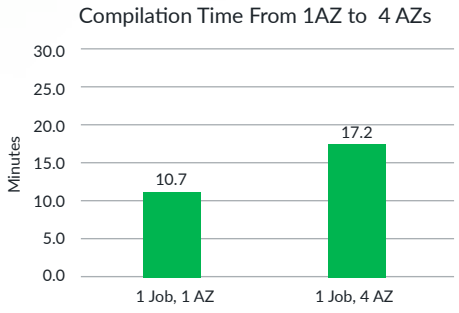
PERFORMANCE IN AWS

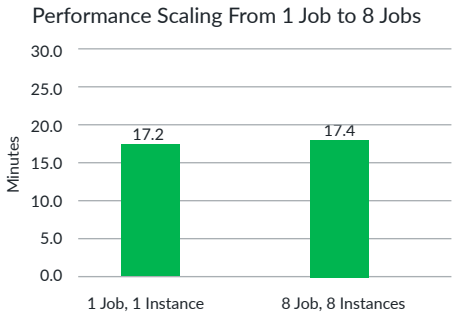
LINUX KERNEL COMPILATION RESULTS WITH WEKA.IO DRIVER

WekaIO can scale the compilation workload from 1 to 8 simultaneous compilations with only a minimal, 1% impact to the job completion time.

PERFORMANCE AT SCALE
WekaIO file system completes 8 jobs across 4 availability zones in the same time as it takes to run one job.

OPTIMIZED FOR BIG WORKLOADS
File system scales linearly with increased cluster size





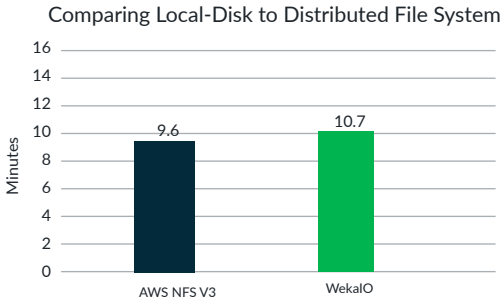
NOTES:
- Compilation command:- make –j12 of Linux Kernel 4.9.9 , Centos 6.7
- All tests were done on 8 X r3.8xlarge

COMPARING KERNEL COMPILATION ON LOCAL DISK IN AMAZON VS. RESILIENT SYSTEM

The WekaIO high-performance distributed file system took only 1.1 minute longer than a single non-resilient software compile on local disk in Amazon.

LOW LATENCY
Only 11% more overhead with the WekaIO shared, distributed file system vs. local disk in AWS

BASELINE
The best possible baseline scenario is direct attached disk inside a server; it took 5.6 minutes to run the test on local disk.

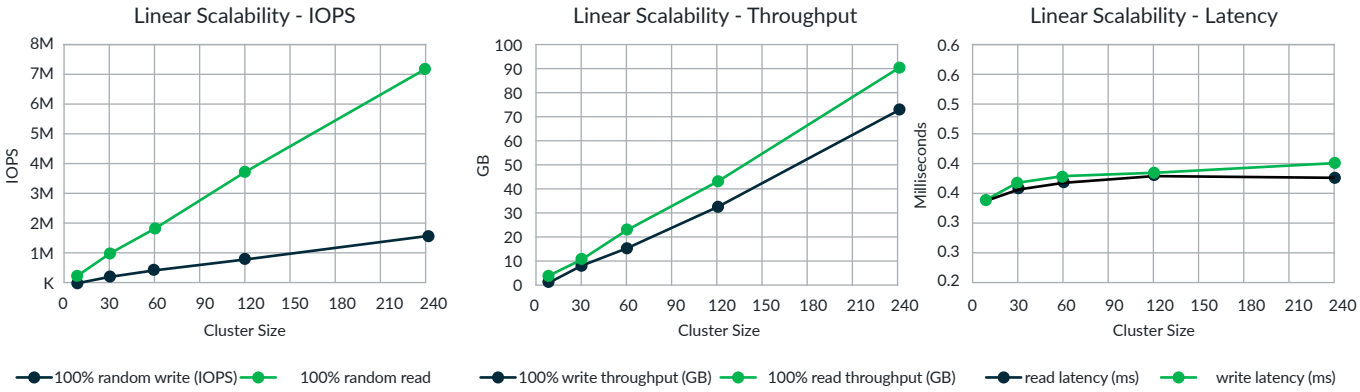


WekaIO compared its distributed file system to the baseline fastest kernel compile time in Amazon. A single non-resilient software compile on local SSD with one network hop took 9.6 minutes, while a cluster of 8 WekaIO nodes with full data resilience took just one minute longer. This demonstrates the low latency overhead achieved between the nodes in the distributed environment.

NOTES:
- Compilation command:- make –j12 of Linux Kernel 4.9.9 , Centos 6.7
- All tests were done on 8 X r3.8xlarge

FILE SYSTEM SCALES LINEARLY WITH CLUSTER SIZE

WekaIO exhibits linear scaling of performance as the cluster size increases—and the latency at scale is unmatched.



*Utilizing 2 cores and 2 SSDs on r3.8xlarge, 10GB RAM

MIXED WORKLOADS

Across 1 AZ

BENCHMARK TEST	IOPS	BANDWIDTH (GB/SEC)	LATENCY (MILLISECONDS)
100% 4K read	252,712		0.82
100% 1M read		3.1	
Mixed 4K & 1M read	111,353	2.6	2.3
100% 4K write	57,064		1.1
100% 1M write		1.4	
Mixed 4K & 1M write	33,805	0.7	3.8

Across 4 AZ

BENCHMARK TEST	IOPS	BANDWIDTH (GB/SEC)	LATENCY (MILLISECONDS)
100% 4K read	161,680		1.3
100% 1M read		2.8	
Mixed 4K & 1M read	106,444	1.9	1.8
100% 4K write	37,040		1.7
100% 1M write		1.3	
Mixed 4K & 1M write	19,652	0.6	3.3

*Test Environment - 8 R3.8xlarge cluster, 1 AZ, utilizing 2 cores, 2 local SSD drives & 10GB of RAM on each instance

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