

# Poseidon System



# Project Poseidon

**Reference Architecture  
for Integrated Solution**

**Hardware + Software**

**Make customers fully exploit  
the potential of NAND flash**

**SAMSUNG  
NAND**



# Vital Virtues of Disaggregated Storage

## Ultimate Performance with Predictable Latency

- High Bandwidth & Low Latency
- Stable QoS



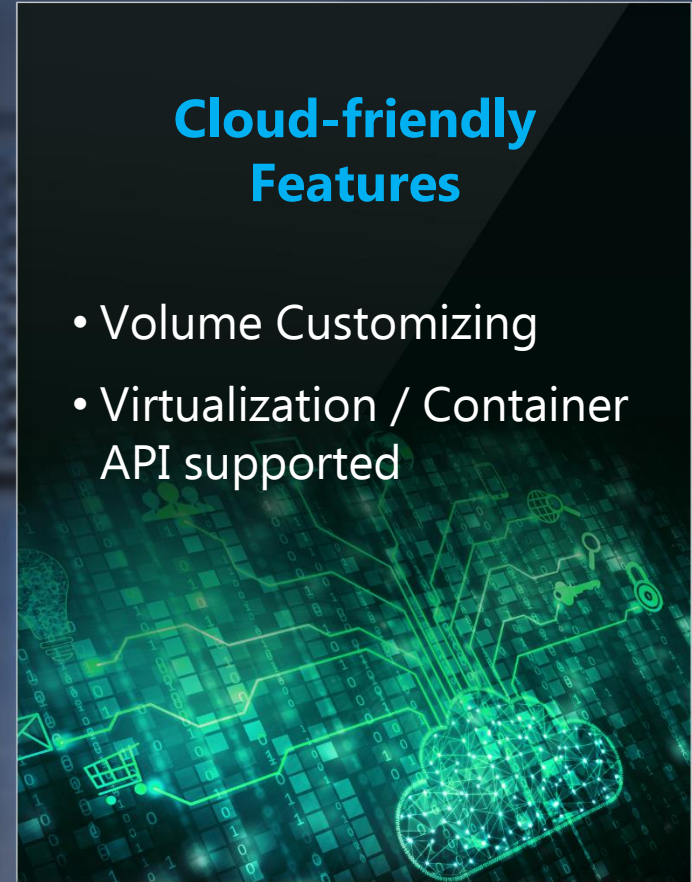
## User-oriented Manageability

- In-band / Out-of-band Management
- More Configuration for NAND Flash

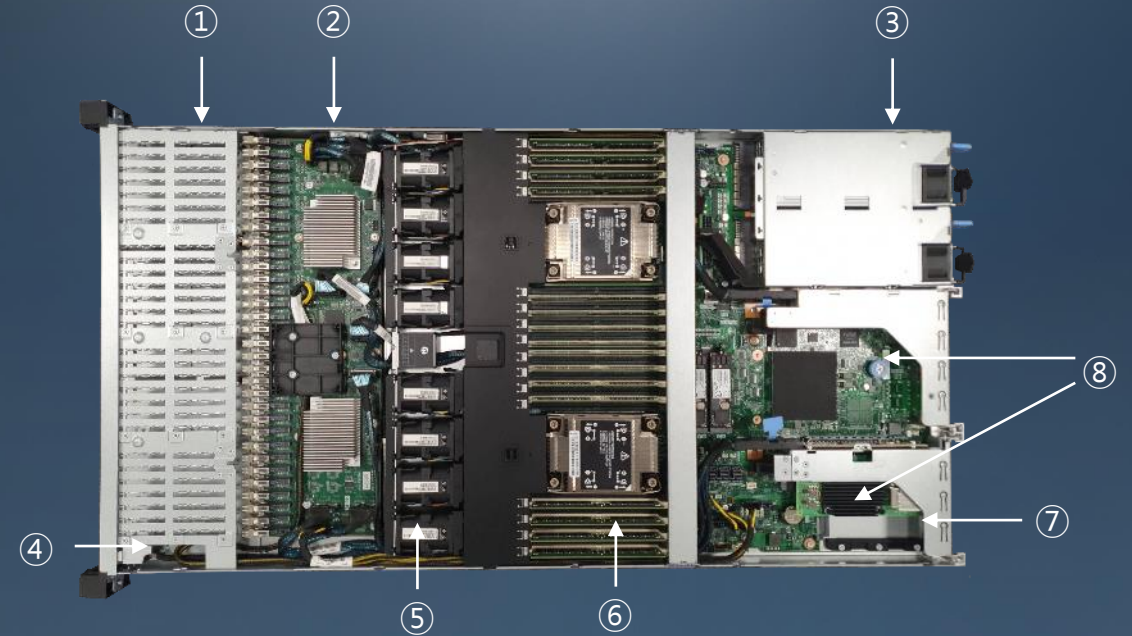


## Cloud-friendly Features

- Volume Customizing
- Virtualization / Container API supported



# Poseidon V1 Server

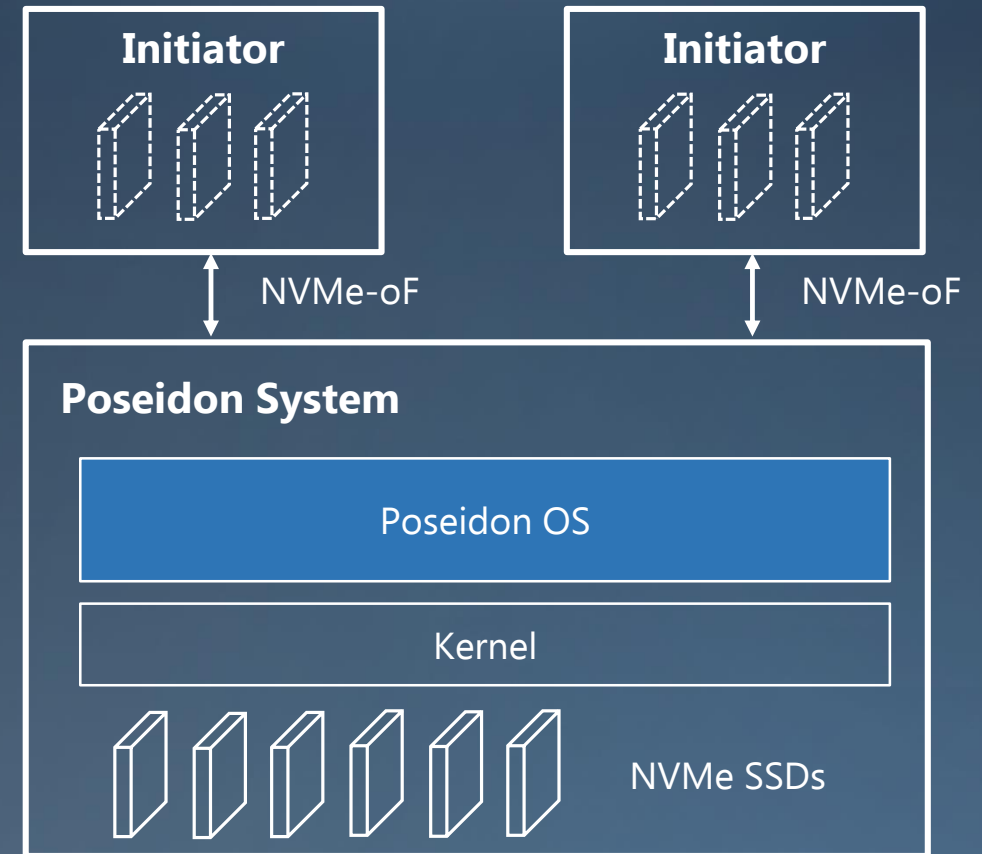


Chassis	EIA standard (19")
Form Factor	1U
Processor	Next Gen x86 Processor
# of Processors	2
Max # of Memory Slots	32
Memory Speed	3,200 MT/s
Network	RDMA / TCP
Network Speed	Up to 100 GbE * 6 port
PCIe Version	PCIe 4.0
Storage	E1.S SSD * 32ea

① PM9A3 E1.S SSD	32ea
② SSD Backplane	1ea
③ Power Supply Unit (PSU)	2ea
④ Front Panel & IO Module	1ea
⑤ System Fan	8ea
⑥ Motherboard	1ea
⑦ OCP Mezzanine NIC	1ea
⑧ PCIe Slot (FHHL Card)	2ea

# Poseidon OS

User-space Storage OS for  
End-to-End integration  
from SSD to Application





# Poseidon OS Features

## Storage Functions

Volume Management  
Performance Throttling  
Provisioning

## Robustness

SW RAID  
Multi-path Connection  
2 Node HA

## Performance Optimization

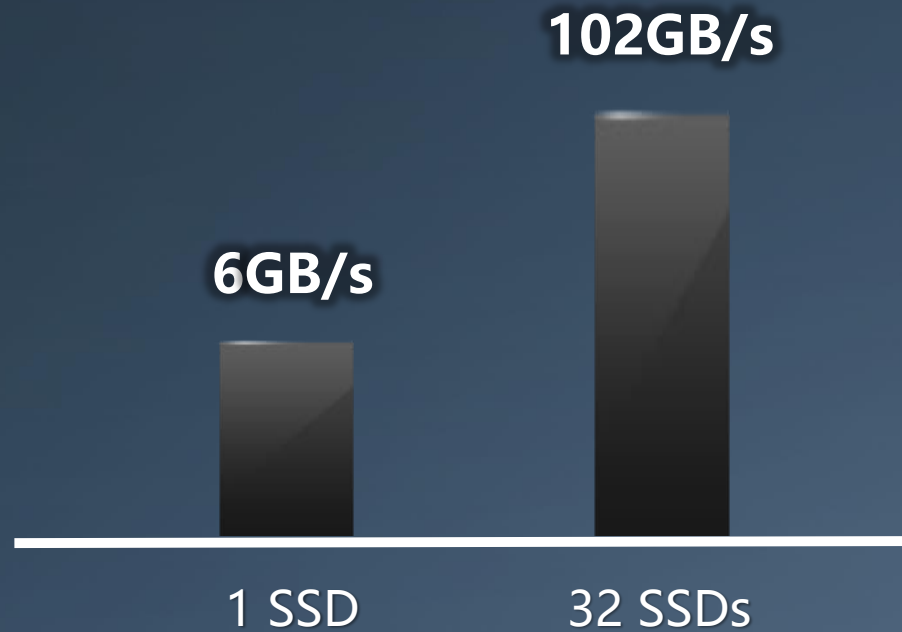
NUMA-aware Capability  
NVMe Friendly IO path  
Dedicated APIs

## Manageability

Performance Profiler  
Development APIs  
Resource Monitoring

# Performance Numbers

## Local IO



## Networked IO (w/ Poseidon OS)

