



# Micron® 9300 MAX SSDs and AMD EPYC 7002 Supercharge Red Hat Ceph Storage

With the release of version 3.3 of Red Hat® Ceph® Storage (RHCS) and the new Micron® 9300 MAX SSD with NVMe™, Ceph has become an easy choice for high performance and scalability — a combination rarely found before now in open-source computing. Micron’s advanced storage products and recent performance increases in Ceph combine to provide a challenge to traditional storage architectures.

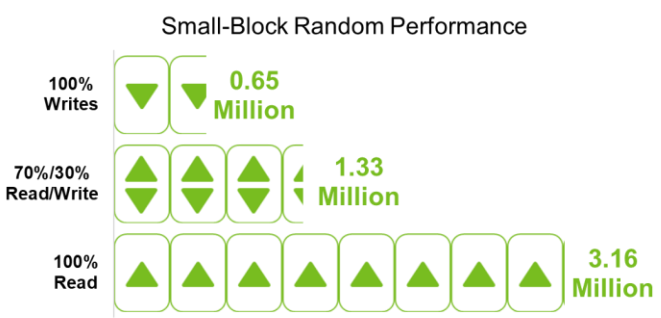
Micron has developed a tuned, scalable, performance-optimized NVMe solution supporting better managed, rapidly growing storage demands. Built using servers based on the AMD® EPYC™ 7002 CPU architecture with Micron’s 9300 MAX NVMe U.2 enterprise SSDs, this solution offers an ultra-performance, ultra-dense, all-flash Ceph storage infrastructure you can count on — today and tomorrow.



Micron’s 9300 family of NVMe TLC SSDs are an outstanding solution when microseconds count. Offering “no-compromise” read and write throughput<sup>2</sup>, the 9300 provides the performance required for advance, high-performance software-defined storage (SDS) solutions like Red Hat Ceph Storage.

### Key Benefits

- Over 3 million read IOPS and over 43 MB/s object performance<sup>1</sup>
- Prescriptive all-flash reference architecture eases deployment
- Scale to petabytes of high-performance flash storage



1- Based on 4KB block and 4MB object data used during testing

2- Offered on 9300 PRO 7.68TB and 15.36TB and 9300 MAX 6.4TB and 12.8TB models. “No compromise” refers to throughput of 3.5 GB/s, at 128KB block size for

## Micron RHCS Reference Architecture

This reference architecture uses the latest AMD EPYC processor architecture, providing the high CPU performance and compatibility required for a performance-optimized Ceph cluster and yields an open, cost-effective SDS platform. This platform is an effective building block for implementing a multi-petabyte OpenStack® cloud infrastructure.

Micron’s RHCS builds this reference architecture using:

**Red Hat Ceph Storage:** Built upon open-source Ceph 12.2, RHCS provides proven software with proven support services critical for enterprise storage solutions.

**Red Hat Enterprise Linux®:** RHEL is a high-performance operating system based on open-source Linux. RHEL provides enterprise-level performance, security, and support designed for enterprise operation.

**Micron Advanced Storage and Memory:** Using Micron’s latest NVMe™ high-performance SSDs and DDR4 memory optimized to balance performance and cost.

## Micron Accelerated Storage Solutions

Micron Accelerated Storage Solutions are engineered for excellence and provide several advantages over “do-it-yourself” deployments:

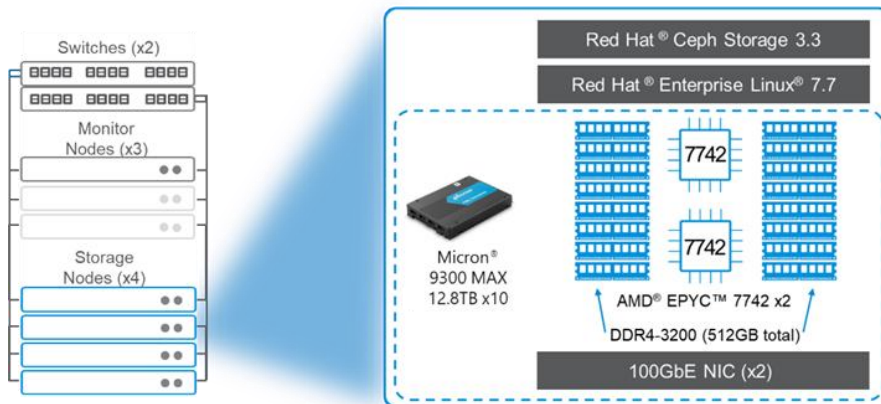
**Optimized:** Micron leverages our deep technical knowledge about advanced NAND and DRAM technology and SSD design to maximize solution performance.

**Trusted:** Micron is a trusted component provider to OEM and cloud providers; you can trust Micron for your solutions.

**Simple:** Micron Accelerated Solutions provide prescriptive guidance with all the information you need to be successful. These solutions focus on the Micron value and performance, allowing you to use the server platform of your choice without compromise to performance

**Excellence:** Micron’s solutions engineers have years of experience across the most important workloads and software demanded by highly successful businesses.

## Solution Overview



## Micron Component Options

### Micron DDR4 RDIMM DRAM

- MTA72ASS8G72PSZ – 64GB
- **MTA36ASF4G72PZ - 32GB**
- MTA36ASF2G72PZ – 16GB

### Micron 9300 PRO SSD

- MTFDHAL3T8TDP-1AT1ZABYY – 3.8TB
- MTFDHAL7T6TDP-1AT1ZABYY – 7.68TB
- MTFDHAL15T3TDP-1AT1ZABYY – 15.4TB

### Micron 9300 MAX SSD

- MTFDHAL3T2TDR-1AT1ZABYY – 3.2TB
- MTFDHAL6T4TDR-1AT1ZABYY – 6.4TB
- **MTFDHAL12T8TDR-1AT1ZABYY – 12.8TB\***

\*Green items above specifically used in this reference architecture.

## Learn More



Learn about all [Micron Accelerated Ceph Solutions](#).

Learn more about [Red Hat Ceph Storage](#).

Learn more about [Ceph](#).

## micron.com

This solution brief is published by Micron and has been authorized, by Red Hat. Products are warranted only to meet Micron’s production data sheet specifications. Products, programs and specifications are subject to change without notice. Dates are estimates only.  
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