



# NETFIRE SELECTS ENERGY EFFICIENT SUPERMICRO SERVERS FOR THE NEXT GENERATION OF CLOUD SERVICES

*Cloud Provider Demonstrates Industry Leading Performance On a Wide Range of Workloads*



## INDUSTRY

Cloud Service Provider

### Introduction

NetFire is a full-service cloud provider that offers a wide range of services based on high-performing servers. NetFire builds cloud infrastructure available as a shared cloud provider or that customers own, utilizing best-in-class open-source technologies. They also offer hands-on support and monitor servers on-premises or in the NetFire-hosted cloud. NetFire's cloud infrastructure is designed to deliver unmatched speed and efficiency for real-time computing and instant insights, where data is created at the edge. The combination of NetFire software and hardware makes the solution ideal for various applications, including artificial intelligence and machine learning, the Internet of Things (IoT), high-performance computing (HPC), real-time data analytics, and video streaming and gaming.

NetFire and its customers primarily deploy the Supermicro servers in cloud computing and virtualization, offering managed solutions for running virtualized applications and infrastructure. This includes hosting web servers, databases, software-as-a-service platforms, and data analytics applications.

## Challenge

NetFire needed to acquire more and newer servers due to optimization around performance per watt, which reduces costs in a data center. With more performance per watt, fewer CPUs would be needed for an existing workload. The second reason was more (and faster) cores, allowing NetFire to consolidate the data center rack space and offer services with lower latency and faster responses.

NetFire also needed to consolidate the physical data center space required due to the reduced server count in each rack. NetFire also wanted to simplify its network by reducing the number of required switches, transceivers, and cabling. In addition, NetFire also wanted to reduce the number of racks needed for each of its cloud locations, reducing costs that could be passed on to its customers.

## Solution

In response to the outlined challenges, NetFire embarked on a mission to leverage the best in server technology to meet the ever-evolving demands of the cloud computing landscape. A pivotal decision in this journey was the introduction of ASG-1014S-ACR12N4H servers. These specialized servers enabled NetFire to construct a Ceph-powered cloud storage infrastructure. The primary advantage of the ASG-1014S-ACR12N4H servers was their capability to provide a highly efficient drive density in each node. This meant NetFire could deploy maximum storage capacities without compromising efficiency or performance.

Further, many of NetFire's customers expressed interest in leveraging the Supermicro bare metal hardware, whether hosted on the NetFire cloud or within their data centers. These servers became instrumental in running platforms like OpenStack private clouds, S3 object storage, and, more recently, Microsoft Azure Stack HCI, which is known for its adaptability and seamless integration with Azure services, equipping NetFire clients with a powerful platform tailored for virtualized applications. Most customers on the NetFire public cloud primarily run custom software applications, SQL databases, and web servers. VDI hosting in the NetFire cloud also became a regular offering.

Recognizing the advantages of the AMD EPYC™ 7763 processors, NetFire integrated them into the Supermicro Ultra servers, making them the ideal CPU choice for both their public and private cloud customers. Their high clock speeds, large L3 cache, and impressive 64-core count made them suitable for diverse workloads, from software-defined storage solutions like Ceph and Microsoft Storage Spaces Direct to running robust SQL databases.

NetFire's decision to opt for AMD processors was rooted in their superior cost-effectiveness, performance capabilities, and energy efficiency. This choice resulted in tangible benefits in the form of reduced server, rack, and overall data center costs. As a testament to this commitment, NetFire procured several Supermicro Ultra servers equipped with dual AMD EPYC 7763 processors.

## CHALLENGES

- Reduce Server Footprint
- Reduce Costs Through More Efficient Servers
- Maintain and Improve SLAs

## SOLUTION

### Supermicro Ultra Servers

- 1U Flexible Servers with AMD EPYC processors

### Supermicro Hyper Servers

- 2U Maximum Scalability Servers

### Supermicro Storage Servers

- High Density NVMe Storage Systems

## BENEFITS

- Increased Performance with low power use
- Reduction in Costs
- Public Cloud or On-Premises Cloud

Compute:

AS-2015HS-TNR - Hyper Series with AMD EPYC™  
9634 processors



AS-1124US-TNRP - Ultra Series w/AMD EPYC™ 7763  
processors

Storage:

The total storage capacity, surpassing 10 Petabytes, spans a variety of systems from Broadcom hardware RAID setups to Ceph clusters and Storage Spaces Direct. Notable storage hardware solutions include:

SSG-640P-E1CR36H – 4U, Up to 36 storage devices per system for Enterprise storage.

ASG-2015S-E1CR24L – Compact 2U system with up to 24 storage devices

ASG-1014S-ACR12N4H – 1U system with up to 12 storage devices

## Benefits

NetFire chose AMD processors because they enable significant cost savings, better performance, and better power efficiency than competitive offerings.

Faster cores allowed NetFire to reduce the number of core-based software licenses required for software such as Microsoft SQL Server, Windows Server, and Azure Stack HCI. Many types of software are billed per core basis, so offering their clients faster cores allowed NetFire to reduce the number of cores customers needed to acquire, reducing costs for them.

The NetFire systems consistently outperform other cloud providers on a range of standard benchmarks. Whether single-core, multi-core, or storage benchmarks, NetFire consistently performed better than major cloud providers. The performance per dollar, or perf/\$, is significantly better than other cloud providers when running these benchmarks. Learn more at <https://netfire.com/supermicro>.

Supermicro systems are more modular than competitors and have allowed NetFire to grow to where they are today because NetFire has continuously upgraded our systems without needing to replace them immediately. This enabled the cost savings required to scale efficiently and to service more customers.

"NetFire can respond to a wide range of customer requirements using our Supermicro AMD based servers. We can offer customers a range of implementation environments, from using our public cloud to on-premises clouds. The performance per watt of AMD CPUs, in different Supermicro servers, helps customers to reduce costs while maintaining high performance responses, supporting increased workloads when required."

- Bart Matusiak, President and Founder at NetFire

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## SUPERMICRO

Supermicro is a global leader in high performance, green computing server technology and innovation. We provide our global customers with application-optimized servers and workstations customized with blade, storage, and GPU solutions. Our products offer proven reliability, superior design, and one of the industry's broadest array of product configurations, to fit all computational need.

For more information, visit [www.supermicro.com](http://www.supermicro.com)

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## NETFIRE

NetFire is dedicated to disrupting the cloud industry with bespoke, cost-effective solutions for businesses facing significant cloud requirements and expenses. Our commitment goes beyond business; we're deeply invested in education, teaching cloud technologies in over 40 U.S. schools to empower young tech innovators. We also ensure business continuity through 24/7 expert support and advanced hardware management, making us a dependable partner for your organization.

For more information, please visit:  
[www.netfire.com/supermicro](http://www.netfire.com/supermicro)