ELIOVP INCREASES COMPUTING AND STORAGE POWER WITH SUPERMICRO SERVERS FOR BLOCKCHAIN APPLICATIONS

ELIOVP Increases Performance by up to 35% and Capacity with State-Of-The-Art Servers as Demand Explodes

INDUSTRY

Blockchain Management

CHALLENGES

- Meet Increasing Customer Demand
- Provide Servers and Storage Optimized for Blockchain Workloads

SOLUTION

Supermicro A+ Servers

AS -1124US-TNRP

- 4 Servers per system
- Dual AMD EPYC 7543 CPUs
- 2TB Memory/Node

AS -4124GS-TNR

- 4 Servers per system
- Dual AMD EPYC 7313 CPUs
- 2TB Memory/Node

Introduction

Eliovp provides extremely fast cloud-based servers to a range of customers who demand the highest performing CPUs, GPUs, and storage technology for blockchain workloads. With business growing significantly, Eliovp constantly evaluates the latest technologies to deliver its customers the fastest and most reliable services. Eliovp offers customers a range of solutions that can be purchased and installed in the customer's data center or a colocation facility, depending on the requirements. In addition, Eliovp is an expert in blockchain technology and has the expertise to modify the operating system and other tools to get the most out of Supermicro A+ servers with AMD EPYC™ processors.

Challenges

Eliovp was experiencing an increased demand for its services, including file storage, rendering performance, and computational performance. In addition to meeting

performance requirements for specific deployments, the need for efficient compute (power optimization) as well as cost and reliability of the infrastructure became very important due to the scale of deployments. Eliovp recognized that standard servers need optimization to perform as required for blockchain calculations which are becoming critical in many industries. With each new generation of CPUs from AMD, a deep understanding of the internal capabilities of these CPUs is needed, and the expertise to take advantage of new instructions, memory layout, and the associated GPU technologies.

Solution

After careful consideration, for one of Eliovp's projects, Eliovp selected Supermicro A+ servers with the AMD EPYC™ 7543 and AMD EPYC™ 7313 CPUs. These computational servers also contain the AMD Instinct MI series of GPUs. These systems are designed to support up to 32 DIMMs to deliver high capacity and cost savings based on the demanding requirements. In addition, Eliovp also acquired storage systems.

The compute servers that Eliovp depends on are based on workload requirements. The AS -1124US-TNRP is used mainly for PoRep SDR encoding (SHA2-256 hashing of layers). The most critical feature of the AMD EPYC 7543 was the high core count, SHA-NI instruction set, and increased processor speed.

Eliovp uses the Supermicro AS -4124GS-TNR servers in this project for a vast amount of multitasking, such as Merkle tree generation using the Poseidon hashing algorithm, which contains dual AMD EPYC 7313 CPUs and 8 GPUs per server. These systems are used for the creation of SNARKS, which utilizes the AMD Instinct GPUs.

Figure 1 - Supermicro A+ Ultra Server

ELIOVP

"Speeding up Machines and Accelerating People"

Eliovp is a fast growing young company based out of Belgium.

Our aim is to maximize each component's performance while reducing its carbon footprint by lowering its power consumption at t he same time.

For more information, visit https://eliovp.com

BENEFITS

Faster and More Complex Simulations

Lower Energy Usage

Figure 2 - AMD Based GPU Server with AMD Instinct GPUs

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 https://www.supermicro.com

Benefits

Once installed, Eliovp saw an immediate improvement in the responsiveness, the throughput of the CPU servers, and power savings due to the optimized configurations. Blockchain calculations ran up to 35 % faster than their previous generations of servers. In addition, by working with Supermicro, Eliovp could acquire and tune the systems faster than ever before. Customers benefit from this close partnership by being competitive and joining the vast majority of new blockchain-related projects in less time, which increases profitability and lowers costs.

"Our relationship with Supermicro and AMD is extraordinary. We are extremely pleased with the responsiveness of both companies whenever an issue arises. The servers' performance is amazing, which increases our business, and reduces costs. By working with Supermicro, we can get new generations of servers with AMD technology earlier in our development cycle, enabling us to bring our products to market faster."

- Elio Van Puyvelde, CEO of Eliovp