



**SOFTIRON** +

VERNE GLOBAL

# Wire speed flexibility for bare metal, high performance computing

Verne Global's New HPCaaS Offering  
Utilizes SoftIron's HyperDrive Ceph  
Appliance for Optimized Storage.

## SOLUTION HIGHLIGHTS

Instant provisioning  
of cluster file systems,  
object storage, and block  
storage



Wire speed performance  
with the flexibility of the  
cloud





**When Verne Global contemplated offering a new on-demand high performance computing (HPC) service, they knew they needed a unique and powerful storage platform to support it. The new service, called hpcDIRECT, offers commercial customers the ability to rent supercomputer-style systems to augment their existing high performance and intensive computing projects.**

The challenge was finding the right storage provider that could satisfy hpcDIRECT’s complex requirements. Verne Global, with help from StackHPC, a group of cloud and HPC integration specialists, decided that a bare metal cloud storage platform was the best infrastructure for hpcDIRECT. The storage platform also needed to be highly configurable while delivering outstanding speed and performance. And, lastly, it was a bonus if the solution offered flexible pricing to support fluctuating capacity requirements. To deliver on these challenges, Verne Global turned to SoftIron’s pay-as-you-go HyperDrive Ceph appliance.

Lewis Tucker, Enterprise Solutions Architect at Verne Global, explains, “Everything we do is focused on being the most optimized data center for high performance computing. We serve specific industries, including manufacturing, financial services, technology, and research and science, that use HPC for grid computing, computer-aided-engineering, bio-computational analysis, and more.”

“hpcDIRECT is designed to be a powerful, agile, and efficient high performance computing as a service (HPCaaS) offering. We needed the best, most optimal storage hardware that would work seamlessly with our existing infrastructure. We found it in SoftIron’s HyperDrive Ceph appliance.”

**Solving the Tradeoff between Performance and Flexibility**

Working with StackHPC, SoftIron delivered a flexible storage architecture that supports software-defined, bare metal HPC at wire speed. “Performance is a critical factor for hpcDIRECT, because our systems are executing extremely complex calculations on very large data sets that could be located anywhere in the world,” explains Lewis. “SoftIron’s Ceph appliance provides exceptional performance at wirespeed, which is an absolute necessity for cloud-based high performance computing.”

**Addressing Complex Configuration Requirements**

The SoftIron Ceph appliance’s configurability was a key factor in delivering a successful solution. A bare metal architecture was chosen in order to reduce performance overhead, but it presented a myriad of technical challenges, including the requirement to dynamically reconfigure the infrastructure at any time. StackHPC solved this issue by developing an integration layer that enabled SoftIron’s Ceph appliance to play a central role within the hpcDIRECT service. Driven by the OpenStack API, SoftIron’s Ceph appliance provides instant provisioning of cluster file systems, object storage, and block storage for hpcDIRECT clients.

**Securing Sensitive Data in a Bare Metal Cloud Infrastructure**

Security is an inevitable concern for HPC customers that are processing highly sensitive commercial data in the cloud. Traditional cloud environments support strong isolation in multi-tenant environments, and Verne Global’s new bare

Verne Global delivers advanced data center solutions at industrial scale, allowing high performance and intensive, machine learning applications to operate in an optimized environment.

**REQUIREMENTS AT A GLANCE**

Create a storage infrastructure that supports new HPCaaS service including:

- » Flexible cloud configuration without sacrificing performance
- » Secure, highly configurable infrastructure
- » Affordable pricing

**SOLUTION HIGHLIGHTS**

Highly configurable, bare metal cloud storage platform featuring:

- » Instant provisioning of cluster file systems, object storage, and block storage
- » Wire speed performance with the flexibility of the cloud
- » Rapid provisioning and fully scalable
- » Secure, multi-tenant isolation
- » Flexible pay-as-you-go pricing that supports fluctuating capacity

metal cloud infrastructure needed the same dedicated, secure infrastructure. To solve that challenge, the SoftIron Ceph appliance was configured to segregate different tenants to their own private networks. "SoftIron's Ceph appliance has strong configurability so it can serve multiple networks. That's very important to our clients who require iron-clad security," explains Lewis.

## Reducing Capital Expenses with Pay-as-you-go Pricing

Verne Global advertises hpcDIRECT as a low cost solution with no upfront fees, and as a service provider, their capacity requirements often fluctuate based on customer demand. To that end, they wanted to work with a storage company that offered a similar pricing model, and they found it with SoftIron. "SoftIron's flexible, pay-as-you-go pricing was very attractive to us," says Lewis. "There are no expensive, upfront capital outlays, and pricing is based on the number of terabytes we use. For a service provider like us, the benefits of transparent pricing mean we always know what we'll be paying, and we can categorize it as an operating expense rather than a capital expenditure."

## Learn More

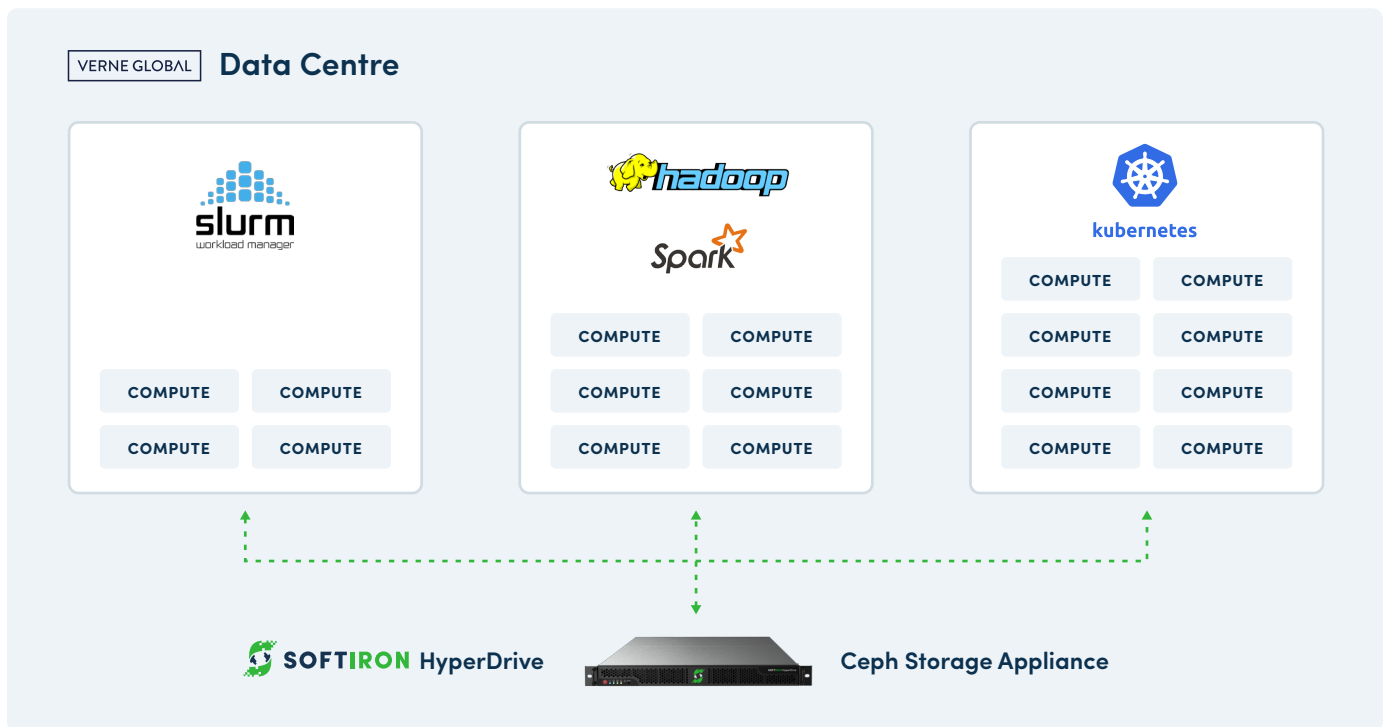
To learn more about how SoftIron's HyperDrive Ceph appliance is redefining software defined storage, visit [softiron.com](http://softiron.com)

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LEWIS TUCKER

Enterprise Solutions Architect  
Verne Global



SoftIron® makes the world's finest solutions for the data center. The company's HyperDrive™ software defined storage portfolio is built on Ceph and runs at wire speed, while HyperCast™ delivers the best density and value for real-time video streaming. SoftIron unlocks greater business value for enterprises by delivering great products without software and hardware lock-in. Learn more at [softiron.com](http://softiron.com).

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