Eco-Friendly Solutions at Nfina

ECO-FRIENDLY SOLUTIONS

The whole world appears to be searching for new ways to be "green" all the time — electric cars, paper straws, recyclable grocery bags, etc. The hybrid cloud, IT environment is without exception.

Currently in the US, 2% of electricity is consumed by Data Centers.[1] Aston University estimates that worldwide servers are currently consuming 1.5% of the world's electricity yearly.[2] Data Storage capacity in 2019 was 45ZB and is forecast to increase to 175ZB in 2025.[2] With Data Storage growth, it's safe to say that the percentage of energy required by IT infrastructures is only going to increase. The warning to businesses moving forward to create an eco-friendlier environment is to focus on efficiency in energy utilization in IT strategies and data storage.

Technology advancements in Hyperconverged Infrastructure (HCI) and the emergence of Hybrid Cloud solutions are playing important roles in helping organizations alter their IT environment into an eco-friendly powerhouse.

HYBRID CLOUD SOLUTIONS

CYBER SECURE SERVERS

DATA STORAGE

PCs & THIN CLIENTS

BACKUP & RAPID DR

nfina
HYBRID ■ CLOUD SOLUTIONS

Why Go Green?

The reality is this — data centers in the United States, and across the globe are facing a climate crisis. Businesses are sprinting to cool down their servers as energy costs and temperatures rise. According to the World Meteorological Organization (WMO), there is currently a 93% chance that one year between now and 2026 will be the hottest ever recorded.[3]

Climate change will have profound effects on all man-made architecture — which includes data centers that keep our world's unified understanding up and running.

Implementing Nfina's Hyperconverged solutions into your IT environment is an excellent step in the right direction in establishing more energy efficiency in your company's data center — we dive into it below.

Cost-Effectiveness

Nfina's Hyperconverged solutions are more efficient and can aid in energy reduction. Nfina's Hyperconverged solutions provide energy efficiency by using high-density, lower-power VMs, enabling our customers to scale their digital transformations in an upward fashion. This optimizes space, reduces power consumption, and lowers cooling and maintenance costs.

According to IDC, close to half of tallied customers noticed a 47% drop in costs of data center energy and cooling fees because of having a hyperconverged infrastructure.[4]

A hyperconverged infrastructure has low up-front costs, making it easier to manage capital expenses and avoid over provisioning. Additionally, because HCI systems are virtual, they can be managed by any IT personnel familiar with the VMs, helping to lower overall operational costs.

Reduced Carbon Impact

Hyperconverged infrastructures includes compute virtualization and dispersed storage that replaces the standard physical and digital environments — creating a substantial impact on diminishing carbon emissions. IDC states that the more densely digitalized the storage, compute, and networking architecture layers in data centers, the lower the carbon emissions will be.[4]

Efficiency

Other than saving energy costs as much as possible, revamping energy efficiency is also a top priority for data centers. With a hyperconverged infrastructure implemented, the footprint in your data center will significantly decrease.

Independent servers, storage arrays, and storage networks can be restored with a singular hyperconverged solution, to establishing a nimble data center that effortlessly scales with your company. Hyperconverged infrastructure makes management of resources much simpler — authorizing you to manage every feature of your infrastructure from one location, all while simplifying complexity by separating compatibility issues between various distributors.

New Edge-Optimized Technology

New Edge-Optimized technology is best for businesses with a fixed-size infrastructure. Nfina's Edge-Optimized architecture lays out the most cost-effective option when considering up-front costs. Figure 1 below illustrates how Nfina's Edge-Optimized technology only requires two nodes to provide redundancy via 4-way mirroring.

If your business needs grow and you find additional storage is required, with Nfina's Edge-Optimized architecture storage can be added to an existing node or placed below that node with the addition of a JBOD. Competitors scale out architecture solutions start with a minimum of three nodes plus require a storage switch that increases power consumption. If there's a need to expand with traditional HCI, an additional node is required, thus requiring even more power and creating added heat.

With this type of hyperconverged technology in place, operational costs such as cooling will be substantially less — making it one of the most energy-efficient storage options for your company.
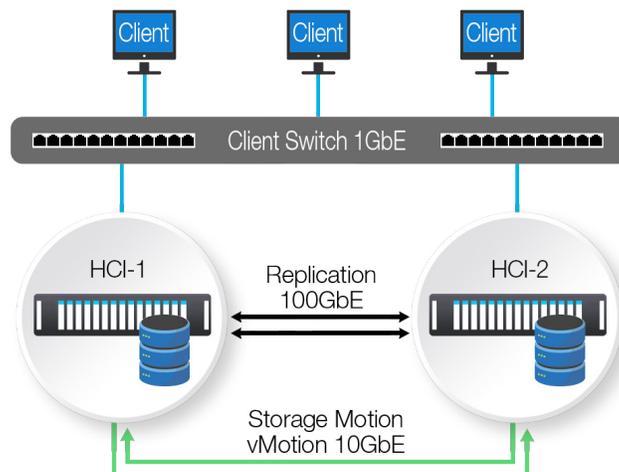

Figure 1

3rd Gen Intel® Xeon® Scalable Processors

The 3rd Gen Intel® Xeon® Scalable Processor is another eco-friendly solution we offer at Nfina Technologies. This solution allows for up to 40 cores while 2nd Gen Intel® Processors only supported a maximum of 28 cores. With more cores, more VMs can be run which can reduce the amount of hardware.

Since less hardware is needed with the 3rd Gen Intel® Processors, there will be less power consumption and lower heat production, reducing overall cooling costs.

Conclusion

A primary purpose of Nfina's Hybrid Cloud and Hyperconverged solutions has always been centered on simplifying an organization's architecture and lowering cost. At Nfina, our Eco-Friendly Solutions make it easy for our customers to achieve a lower carbon footprint and play a positive role in bringing about a sustainable future. We design technologies and products to help people understand their impact and actions better.

Nfina's Hybrid Cloud and Hyperconverged solutions provide energy efficiency by using high-density, lower-power VMs enabling our customers to scale their digital transformations sustainably by optimizing space, reducing power consumption, and lowering cooling and maintenance costs. Nfina is taking a leadership role in doing what it takes to tackle climate change.

Nfina has been carbon neutral for our operations since opening in 2012.

Sources

[1]   Energy.gov https://www.energy.gov/eere/buildings/data-centers-and-servers

[2]   Daily Mail https://www.dailymail.co.uk/sciencetech/article-11562833/Scientist-warn-global-data-storage-crisis-2025.html

[3]   World Meteorological Organization (WMO) https://www.wired.com/story/data-centers-climate-change/

[4]   IDC https://www.smartx.com/blog/2021/10/how-can-hci-reduce-carbon-impact-of-data-centers/

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