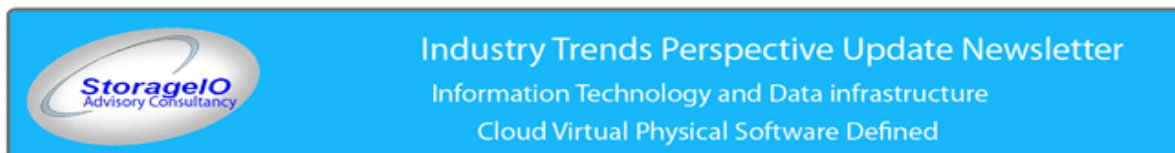


# June 2018 Server StorageIO Data Infrastructure Update Newsletter



## Volume 18, Issue 6 (June 2018)

Hello and welcome to the June 2018 [Server StorageIO Data Infrastructure Update Newsletter](#).

In case you missed it, the May 2018 Server StorageIO [Data Infrastructure](#) Update Newsletter can be viewed here ([HTML](#) and [PDF](#)).

In this issue buzzword topics include AI, All Flash, HPC, Lustre, Multi Cloud, NVMe, NVMeoF, SAS, and SSD among others:

- [Data Infrastructure Industry Activity](#)
- [News Commentary and Tips](#)
- [Server StorageIO blog posts](#)
- [Recommended Reading](#)
- [Various Events and Webinars](#)
- [Industry Resources and Links](#)

Enjoy this edition of the Server StorageIO Data Infrastructure update newsletter.

Cheers GS

## Data Infrastructure and IT Industry Activity Trends

June [data infrastructure](#), server, storage, I/O network, hardware, software, cloud, converged, and container as well as data protection industry activity includes among others:

Check out what's new at [Amazon Web Services \(AWS\) here](#), as well as [Microsoft Azure here](#), [Google Cloud Compute here](#), [IBM Softlayer here](#), and [OVH here](#). CTERA [announced](#) new cloud storage gateways (HC Series) for enterprise environments that include all flash SSD options, capacity up to 96TB (raw), Petabyte scale tiering to public and private cloud, 10 Gbe Ethernet connectivity, virtual machine deployment, along with high availability configuration.

Cray [announced](#) enhancements to its Lustre (parallel file system) based ClusterStor storage system for high performance compute (HPC) along with it previously acquired from Seagate (Who had acquired it as part of the Xyratex acquisition). New enhancements for ClusterStor include all flash SSD solution that will integrate and work with our existing [hard disk drive \(HDD\)](#) based systems.

In related Lustre based activity, [DataDirect Network \(DDN\) has acquired from Intel, their Lustre File system capability](#). Intel acquired its Lustre capabilities via its [purchase of Whamcloud](#) back in 2012, and in 2017 announced that it was getting out of the Lustre business ([here](#) and [here](#)). DDN also [announced](#) new storage solutions for enabling HPC environment workloads along with Artificial Intelligence (AI) centric applications.

HPE which held its Discover event [announced](#) a \$4 Billion USD investment over four years pertaining to development of edge technologies and services including software defined WAN (SD-WAN) and security among others.

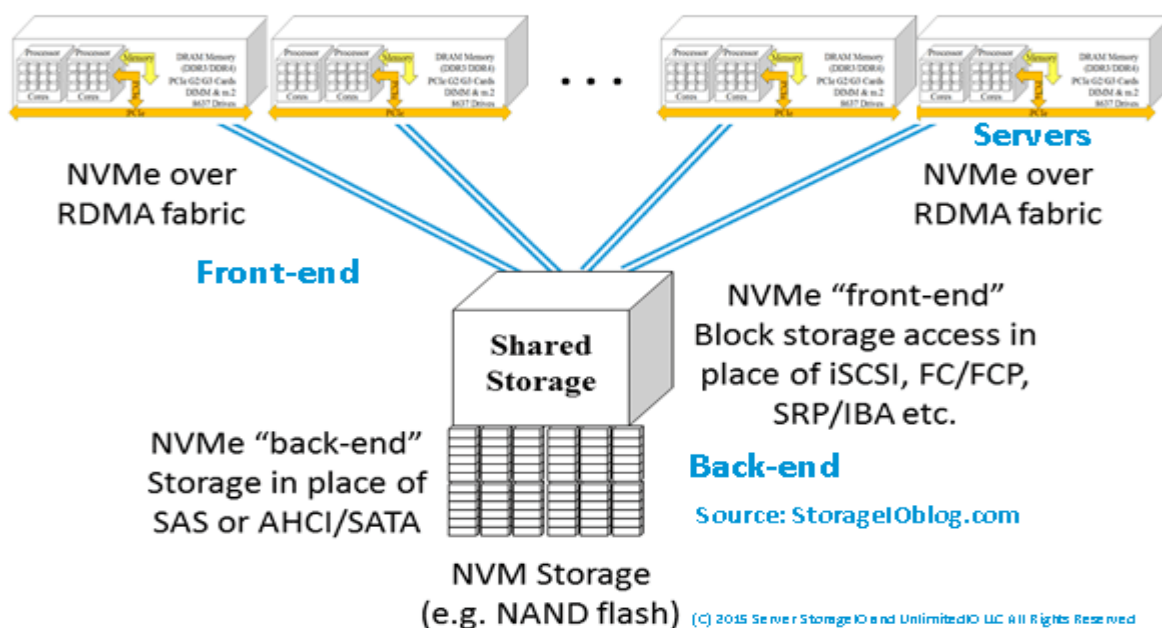
Microsoft held its first [virtual Windows Server Summit](#) in June that outlined current and future plans for the operating system along with its hybrid cloud future.

[Penguin computing](#) has announced the [Accelion](#) solution for accessing geographically dispersed data enabling faster file transfer or other data movement functions.

[SwiftStack](#) has added multi cloud features (enhanced search, universal access, policy management, automation, data migration) and making them available via [lspace open source project](#). lspace enables a single object namespace across different object storage locations including integration with OpenStack Swift.

Vexata [announced](#) a new version of its Vexata operating system (VX-OS) for its storage solution including [NVMe over Fabric](#) (NVMe-oF) support.

Speaking of [NVMe](#) and fabrics, the Fibre Channel Industry Association (FCIA) [announced](#) that the International Committee on Information Technology Standards (INCITS) has published T11 technical committee developed Fibre Channel over NVMe (FC-NVMe) standard.



Various NVMe front-end including NVMeoF along with NVMe back-end devices ([U.2](#), [M.2](#), [AiC](#))

Keep in mind that there are many different facets to NVMe including direct attached (M.2, U.2/8639, PCIe AiC) along with fabrics. Likewise, there are various fabric options for the NVMe protocol including over Fibre Channel (FC-NVMe), along with other NVMe over Fabrics including RDMA over Converged Ethernet (RoCE) as well as IP based among others. NVMe can be used as a [front-end](#) on storage systems supporting server attachment (e.g. competes with Fibre Channel, iSCSI, SAS among others).

Another variation of NVMe is as a [back-end](#) for attachment of drives or other NVMe based devices in storage systems, as well as servers. There is also end to end NVMe (e.g. both front-end and back-end) options. Keep context in mind when you hear or talk about NVMe and in particular, NVMe over fabrics, learn more about NVMe at <https://thenvmeplace.com>.

Toshiba [announced](#) new RM5 series of high capacity SAS SSDs for replacement of SATA devices in servers. The RM5 series being added to the [Toshiba portfolio](#) combine capacity and economics traditional associated with SATA SSDs along with performance as well as connectivity of SAS.

Check out other industry news, comments, trends perspectives [here](#).



## Server StorageIO Commentary in the news, tips and articles

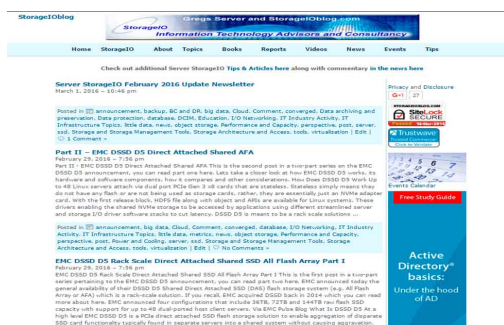
Recent Server StorageIO industry trends perspectives commentary in the news.

Via SearchStorage: Comments The storage administrator skills you need to keep up today

Via SearchStorage: Comments Managing storage for IoT data at the enterprise edge

Via SearchCloudComputing: Comments Hybrid cloud deployment demands a change in security mindset

View more Server, Storage and I/O trends and perspectives comments [here](#).



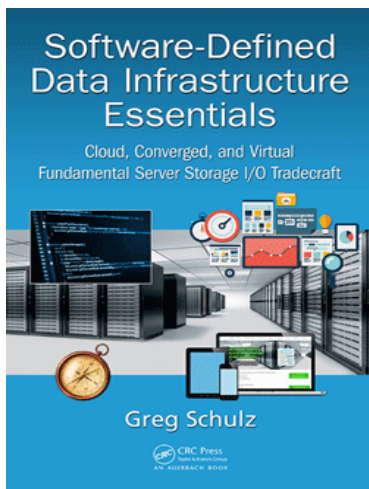
## Server StorageIOblog Data Infrastructure Posts

Recent and popular Server StorageIOblog posts include:

- [Announcing Windows Server Summit Virtual Online Event](#)
- [May 2018 Server StorageIO Data Infrastructure Update Newsletter](#)
- [Solving Application Server Storage I/O Performance Bottlenecks Webinar](#)
- [Have you heard about the new CLOUD Act data regulation?](#)
- [Data Protection Recovery Life Post World Backup Day Pre GDPR](#)
- [Microsoft Windows Server 2019 Insiders Preview](#)
- [Which Enterprise HDD for Content Server Platform](#)
- [Server Storage I/O Benchmark Performance Resource Tools](#)
- [Introducing Windows Subsystem for Linux WSL Overview](#)
- [Data Infrastructure Primer Overview \(Its Whats Inside The Data Center\)](#)
- [If NVMe is the answer, what are the questions?](#)

View other recent as well as past [StorageIOblog posts here](#)

## Server StorageIO Recommended Reading (Watching and Listening) List



In addition to my own [books](#) including [Software Defined Data Infrastructure Essentials](#) (CRC Press 2017) available at [Amazon.com \(check out special sale price\)](#), the following are Server StorageIO data infrastructure [recommended reading](#), watching and listening list items. The Server StorageIO data infrastructure [recommended reading](#) list includes various IT, Data Infrastructure and related topics including [Intel Recommended Reading List](#) (IRRL) for developers is a good resource to check out. Speaking of my books, Didier Van Hoyer (@WorkingHardInIt) has a [good review over on his site](#) you can view [here](#), also check out the rest of his great content while there.

Watch for more items to be added to the [recommended reading list book shelf](#) soon.



## Events and Activities

Recent and upcoming event activities.

July 25, 2018 - [Webinar](#) - Data Protect & Storage

June 27, 2018 - [Webinar](#) - App Server Performance

June 26, 2018 - [Webinar](#) - Cloud App Optimize

May 29, 2018 - [Webinar](#) - Microsoft Windows as a Service

April 24, 2018 - [Webinar](#) - AWS and on-site, on-premise hybrid data protection

See more webinars and activities on the [Server StorageIO Events page here](#).

## Data Infrastructure Server StorageIO Industry Resources and Links

Various useful links and resources:

Data Infrastructure [Recommend Reading](#) and watching list  
[Microsoft TechNet](#) - Various Microsoft related from Azure to Docker to Windows  
[storageio.com/links](#) - Various industry links (over 1,000 with more to be added soon)  
[objectstoragecenter.com](#) - Cloud and object storage topics, tips and news items  
[OpenStack.org](#) - Various OpenStack related items  
[storageio.com/downloads](#) - Various presentations and other download material  
[storageio.com/protect](#) - Various data protection items and topics  
[thenvmeplace.com](#) - Focus on NVMe trends and technologies  
[thessdplace.com](#) - NVM and Solid State Disk topics, tips and techniques  
[storageio.com/converge](#) - Various CI, HCI and related SDS topics  
[storageio.com/performance](#) - Various server, storage and I/O benchmark and tools  
[VMware Technical Network](#) - Various VMware related items

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## What this all means and wrap-up

Data Infrastructures are what exists inside physical data centers as well as spanning cloud, converged, hyper-converged, virtual, serverless and other software defined as well as legacy environments. NVMe continues to gain in industry adoption as well as customer deployment. Cloud adoption also continues along with multi-cloud deployments. Enjoy this edition of the Server StorageIO Data Infrastructure update newsletter and watch for more [NVMe](#), cloud, data protection among other topics in future posts, articles, events, and newsletters.

Ok, nuff said, for now.

Gs

Greg Schulz - Microsoft MVP Cloud and Data Center Management, VMware vExpert 2010-2018. Author of [Software Defined Data Infrastructure Essentials](#) (CRC Press), as well as [Cloud and Virtual Data Storage Networking](#) (CRC Press), [The Green and Virtual Data Center](#) (CRC Press), [Resilient Storage Networks](#) (Elsevier) and twitter [@storageio](#). Courteous comments are welcome for consideration. First published on <https://storageioblog.com> any reproduction in whole, in part, with changes to content, without source attribution under title or without permission is forbidden.

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