



Industry Trends Perspective Update Newsletter

Information Technology and Data Infrastructure

Cloud Virtual Physical Software Defined

Volume 15, Issue III

Hello and welcome to this March 2015 Server and StorageIO update newsletter. Here in the northern hemisphere at least by the calendar spring is here, weather wise winter continues to linger in some areas. March also means in the US college university sports tournaments with many focused on their [NCAA men's basketball](#) championship brackets.

Besides various college championships, March also has a connection to back up and data protection. Thus this month's newsletter has a focus on [data protection](#), after all [March 31 is World Backup Day](#) which means it should also be [World Restore test day!](#)

Focus on Data Protection

Data protection including backup/restore, business continuance (BC), disaster recovery (DR), business resiliency (BR) and archiving across physical, virtual and cloud environments.

Data Protection Fundamentals

A reminder on the importance of data protection including backup, BC, DR and related technologies is to make sure they are occurring as planned. Also test your copies and remember the 4 [3 2 1](#) rule or guide.

- 4 - Versions (different time intervals)
- 3 - Copies of critical data (including versions)
- 2 - Different media, devices or systems
- 1 - Off-site (cloud or elsewhere)

The above means having at least four (4) different versions from various points in time of your data. Having three (3) copies including various versions protects against one or more copies being corrupt or damaged. Placing those versions and copies on at least two (2) different storage systems, devices or media if something happens.

While it might be common sense, a bad April Fools recovery joke would be finding out all of your copies were on the same device which is damaged. That might seem obvious however sometimes the obvious needs to

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Industry News and Activity

Recent Industry news and activity

EMC sets up [cloudfoundry Dojo](#)
[AWS S3](#), [EBS IOPs](#) and other updates
 New backup/data protection vendor [Rubrik](#)
 Google adds [nearline](#) Cloud Storage
 AWS and Microsoft Cloud [Price battle](#)

View other recent and upcoming [events here](#)

StorageIO Commentary in the news



Recent Server StorageIO commentary and industry trends perspectives about news, activities and announcements.

[Processor](#): Enterprise Backup Solution Tips
[Processor](#): Failed & Old Drives
[EnterpriseStorageForum](#): Disk Buying Guide
[ChannelProNetwork](#): 2015 Tech and SSD
[Processor](#): Detect & Avoid Drive Failures

View more trends comments [here](#)

StorageIO Tips and Articles

So you have a new storage device or system. How will you test or find its performance? Check out this quick-read tip on storage

be stated. Also make sure that at least one (1) of your copies is off-site either on off-line media (tape, disk, ssd, optical) or cloud.

Take a few moments and to verify that your data protection strategy is being implemented and practiced as intended. Also test what is being copied including not only restore the data from cloud, disk, ssd or tape, also make sure you can actually read or use the data being protected. This means make sure that your security credentials including access certificates and decryption occur as expected.

Watch for more news, updates industry trends perspectives commentary, tips, articles and other information at Storageio.com, StorageIOblog.com, various partner venues as well as in future newsletters.

[StorageIOblog posts](#)

[Data Protection Diaries](#)

[Are restores ready for World Backup Day?](#)

In case you forgot or did not know, [World Backup Day is March 31 2015 \(@worldbackupday\)](#) so now is a good time to be ready. The only challenge that I have with the [World Backup Day \(view their site here\)](#) that has gone on for a few years now is that it is a good way to call out the importance of backing up or protecting data.



However it's also time to put more emphasis and focus on being able to make sure those backups or protection copies actually work.

By this I mean doing more than making sure that your data can be read from tape, disk, SSD or cloud service actually going a step further and verifying that restored data can actually be used (read, written, etc).

The problem, issue and challenges are simple, are your applications, systems and data protected as well as can you use those protection copies (e.g. backups, snapshots, replicas or archives) when as well as were needed? [Read more here about World Backup Day](#) and what I'm doing as well as various tips to be ready for

benchmark and testing fundamentals over at [BizTech](#).

Keeping with this months theme of data protection including backup/restore, BC, DR, BR and archiving, here are some more tips. These tips span server storage I/O networking hardware, software, cloud, virtual, performance, data protection applications and related themes including:

- Test your data restores, can you read and actually use the data? Is your data decrypted, proper security certificates applied?
- Remember to back up or protect your security encryption keys, certificates and application settings!
- Revisit what format your data is being saved in including how will you be able to use data saved to the cloud. Will you be able to do a restore to a cloud server or do you need to make sure a copy of your backup tools are on your cloud server instances?

Check out [these resources and links](#) on server storage I/O performance and benchmarking tools. View more [tips and articles here](#)

Various Industry Events

[EMCworld](#) - May 4-6 2015

[Interop](#) - April 29 2015 (Las Vegas)

Presenting [Smart Shopping for Your Storage Strategy](#)

[NAB](#) - April 14-15 2015

SNIA DSI Event - [April 7-9](#)

View other recent and upcoming [events here](#)

Webinars

December 11, 2014 - BrightTalk
[Server & Storage I/O Performance](#)

December 10, 2014 - BrightTalk
[Server & Storage I/O Decision Making](#)

December 9, 2014 - BrightTalk
[Virtual Server and Storage Decision Making](#)

December 3, 2014 - BrightTalk

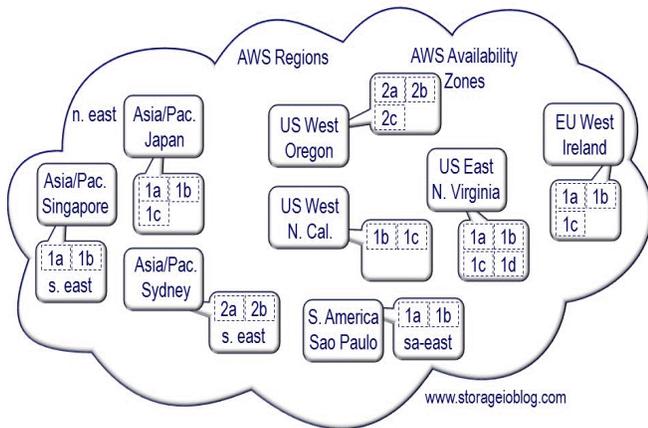
successful recovery and avoid being an April 1st fool ;).

Cloud Conversations

AWS S3 Cross Region Replication

Amazon Web Services (AWS) announced several enhancements including a new Simple Storage Service (S3) cross-region replication of objects from a bucket (e.g. container) in one region to a bucket in another region.

AWS also recently enhanced Elastic Block Storage (EBS) increasing maximum performance and size of Provisioned IOPS (SSD) and General Purpose (SSD) volumes. EBS enhancements included ability to store up to 16 TBytes of data in a single volume and do 20,000 input/output operations per second (IOPS). Read more about EBS and other AWS server, storage I/O enhancements here.



Example of some AWS Regions and AZs

AWS S3 buckets and objects are stored in a specific region designated by the customer or user (AWS S3, EBS, EC2, Glacier, Regions and Availability Zone primer can be found here). The challenge being addressed by AWS with S3 replication is being able to move data (e.g. objects) stored in AWS buckets in one region to another in a safe, secure, timely, automated, cost-effective way.

Continue reading more here about AWS S3 bucket and object replication feature along with related material.

Additional March StorageIOblog posts include:

- [Cloud conversations: If focused on cost you might miss other cloud storage benefits](#) - This post explores the myth that clouds are all about low-cost or cost avoidance and what some of those other benefits can be.

Data Protection Modernization

Videos and Podcasts

StorageIO podcasts are also available via iTunes and at StorageIO.tv

From StorageIO Labs

Research, Reviews and Reports

Datadynamics StorageX



More than a data mover migration tool, StorageX is a tool for adding management and automation around unstructured local and distributed NAS (NFS, CIFS, DFS) file data. Read more here.

View other StorageIO lab review reports here

Recommended Reading List

This is a new section being introduced in this edition of the Server StorageIO update mentioning various books, websites, blogs, articles, tips, tools, videos, podcasts along with other things I have found interesting and want to share with you.

- [Introducing s3motion](#) (via EMCcode e.g. opensource) a tool for copying buckets and objects between public, private and hybrid clouds (e.g. AWS S3, GCS, Microsoft Azure and others) as well as object storage systems. This is a great tool which I have added to my server storage I/O cloud, virtual and physical toolbox. If you are not familiar with EMCcode check it out to learn more...
- [Running Hadoop on Ubuntu Linux \(Series of tutorials\)](#) for those who want to get their hands dirty vs. using one of the All In One (AIO) appliances.
- [Yellow-bricks](#) (Good blog focused on virtualization, VMware and other related themes) by Duncan Epping @duncanyb
- For fun view [PAINE FIELD Blog](#) (see what's new at @Boeing Everett factory)



Resources and Links

Check out these useful links and pages:

- [How to test your HDD, SSD or all flash array \(AFA\) storage fundamentals](#) - This post looks at the basics involved in doing a server or storage I/O performance benchmark of a HDD, SSD or storage system.
- [Collecting Transaction Per Minute from SQL Server and HammerDB](#) - This looks at how a simple SQL script can collect performance statistics (TPMs/TPS) from SQL Server database.

storageio.com/links
objectstoragecenter.com
dataprotectiondiaries.com
storageperformance.us
thessdplace.com
storageio.com/raid
storageio.com/ssd

Enjoy this edition of the Server and StorageIO update newsletter and watch for new tips, articles, StorageIO lab report reviews, blog posts, videos and podcasts along with in the news commentary appearing soon.

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

Cheers gs

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