

reduxio

Reduxio Tech Note
Dell AppAssure v5

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Reduxio Systems, Inc.
111 Pine Avenue
South San Francisco, CA, 94080
United States
www.reduxio.com

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Overview

Introduction

Dell AppAssure™ is advanced data protection that unifies backup, replication and recovery in one, easy-to-use software solution. Using AppAssure it is possible to keep up to back up applications up to 288 times a day for near continuous access to data after an incident.

This tech note describes testing performed with Dell AppAssure and the Reduxio HX550 storage system.

Use Cases

AppAssure Protection for Reduxio

Dell AppAssure can be used to protect Reduxio volumes. Reduxio BackDating™ will provide out-of-the-box VM and application recovery to any second, and AppAssure will complement this recovery with up to 288 recovery points per day from an external repository.

Reduxio as AppAssure Repository Storage

Reduxio volumes can be configured as AppAssure repository destinations. The Reduxio system provides high throughput for the AppAssure application. However, since the Dell AppAssure data set is deduped and compressed, no space savings are expected in this setup.

Solution Architecture

Hardware Configuration

The following hardware components were used in the testing:

No.	Hardware component	Description
1	Reduxio HX550 storage system	Reduxio HX550 dual-controller, 256GB RAM, 8x 800GB MLC SSDs, 16x 1TB 7.2k RPM SATA disks
1	VMware ESXi server	Dell R620, dual-socket Intel Xeon E5-2650 v2 @ 2.60GHz (total 32 virtual cores), 256GB RAM
1	Mellanox 10GbE switch	Interconnect between ESXi hosts and Reduxio HX550
1	Apple MacBook Pro 15"	Administration host

Software Configuration

The following software components were used in the testing:

No.	Software component	Description
1	VMware vSphere 6.0U1	ESXi hypervisor - 2 for virtual servers, 1 for infrastructure and management VMs.

2	Windows Server 2012 R2	Running on the AppAssure server and the agent.
1	Dell AppAssure v5.4.3.106	Dell enterprise data protection application.

Best Practices

Network Configuration

It is recommended to configure the Dell AppAssure with 10 gigabit connectivity or multiple 1 gigabit ports, to enable high throughput baseline and snapshot updates, as well as restore tasks.

To enforce the use of 10 gigabit, when adding a machine to protect, use the host name or IP address that refers to the relevant high performance network adapter or teaming group on that machine.

Repository Configuration

The following AppAssure repository configuration options are recommended when using Reduxio volumes as AppAssure repository.

AppAssure Setting	Explanation	Reduxio Best Practice
Concurrent Operations	Define the number of concurrent requests you want the repository to support. By default the value is 64.	Leave at default.
Bytes per Sector	Specify the number of bytes you want each sector to include. The default value is 512.	Recommended to configure 4K for Reduxio volumes. Confirm that the Reduxio volume is also configured as with block size 4K.
Average Bytes per Record	Specify the average number of bytes per record. The default value is 8192.	Leave at default.

Increase Parallelism

To reach the highest throughput for snapshot and restore tasks, it is recommended to run as many concurrent snapshot/restore tasks as possible.

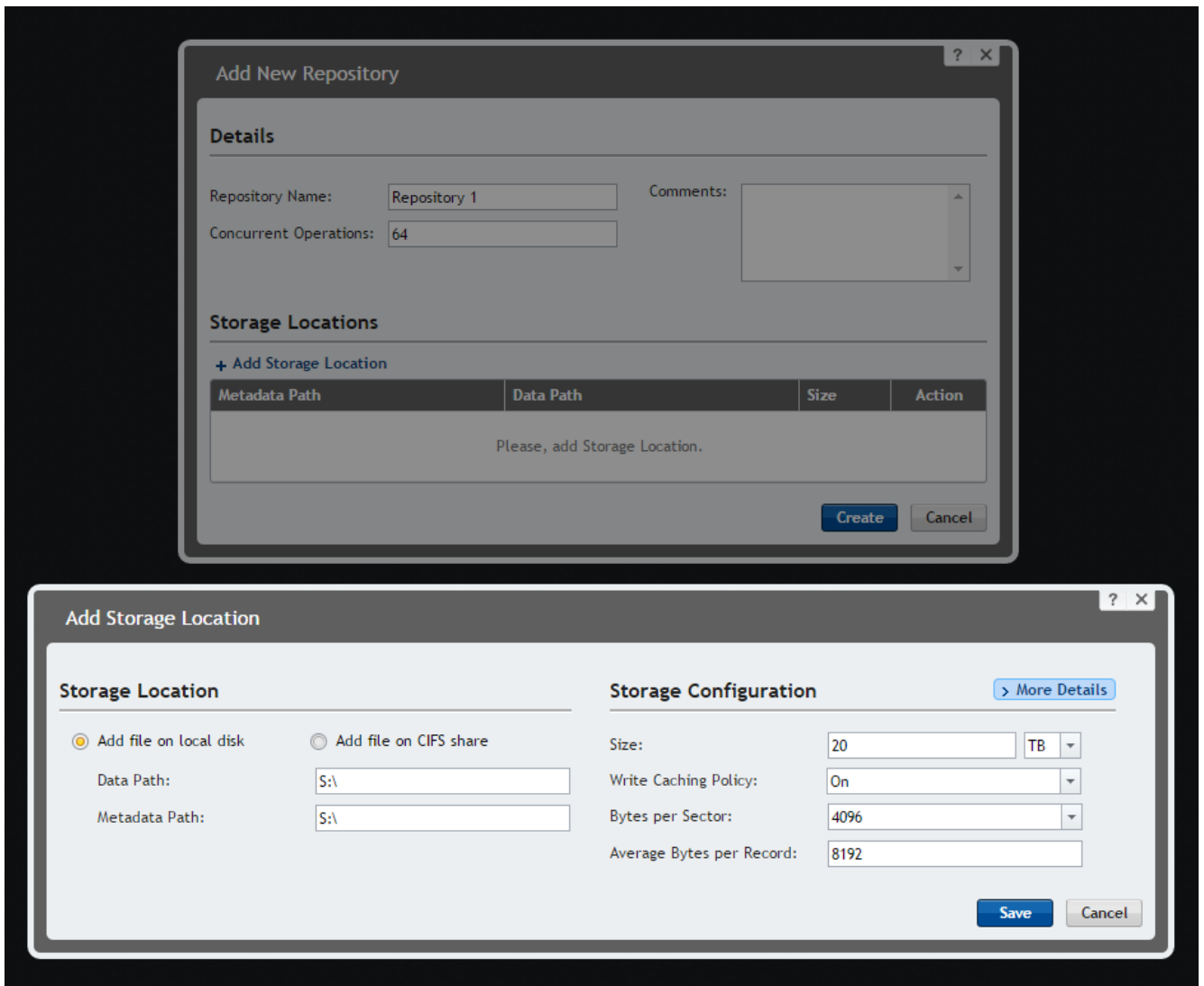


Figure 1 - AppAssure repository recommended settings

Conclusion

Reduxio storage systems can be integrated with Dell AppAssure either as backup sources or as high performance repository. It provides high throughput for snapshot and restore tasks. Reduxio BackDating is complemented by the external protection provided by AppAssure.

References

Reduxio Documentation

- *Reduxio Administration Guide*

Dell Documentation

- [Dell AppAssure website](#)