Abstract

For the mid-size Enterprise ranging from 500-5000 employees, AppAssure announces the launch of Replay 3.1, the cost effective and purpose-built protection solution for SQL Server. Based upon Virtual Shadow Copy (VSS), a Microsoft technology, it takes snapshots of the server's drives at 15 min intervals stores them on a LiveReplay Server allowing you so much flexibility with the restore process. You can restore to a new server, to a virtual server, restore a drive, mount a drive locally so you can copy files, etc. Recovery takes just under a minute and including remote desktop to the server. Once the service is restarted, a DBA is up and running with only 10 minutes of lost time.

An Outline of the Steps with Replay:

1. Remote Desktop to your Replay Server
2. Start Replay GUI and locate the protected server you want
3. Select a Recovery Point and Mount Volume containing master
4. Open Windows Explorer and go to mounted volume, copy the master MDF and LDF to your SQL Server
5. Re-Start your SQL Server

Lightning Fast Backups

Replay provides the fastest backups available on the market today. This reduces the overhead on the server and increases DBA productivity.

To test and validate the speed of backup with Replay, two servers were required. The SQL Server was a Dual Xeon Quad processor with 16 gig of RAM 2* 120 gig SATA II drives in RAID 1 for OS and Apps and 8 Raptor SATA II drives in RAID 0 Config for data and log for a

total space of 2.4 TB. The Replay Server was a Single Xeon Dual Core with 8 gig it has 2 SATA drives RAID 1 for OS and Applications and 8 SATA drives of 500 gig each in RAID.

Time to Backup over the course of 24 hours

Backup Type	Minutes
Native without Compression (pre SQL 2008)	399.7
Native with Compression (SQL 2008)	125.5
LiteSpeed Compression Level 1	117.6
Replay	30.1

For Replay, the time to backup in a 24 hour period included the first snapshot with 15 minute snapshots of just the data and log drive. For all others, time include base image, 3 * 6hrly differentials, and 15 min transaction log backups.

Finding: Replay was by far the fastest. Four times faster than LiteSpeed, our closest competitor. And nearly 14 times faster than the standard native backup solution.

Unprecedented De-Duplication and Compression

Tests showed that Replay provides the most compressed files available on the market today. This reduces the storage costs and tape media costs significantly. Companies looking for cost savings in storage and tape should see this as a reason for considering the product.

Space required for Backups

Backup Type	GBs
Native No Compression	2133.8
Native with Compression	622.6
LiteSpeed Compression Level 1	602.3
Replay	293.8

Finding: Replay was by far the most compressed. Half the size of LiteSpeed, our closest competitor. And nearly 10 times smaller than the standard native backup solution.

Compression and Virtual Protection Mean Cost Savings

In these times where companies are trying to reduce infrastructure costs and postpone the purchase of new equipment, we as DBAs need to start looking into newer technologies to resolve our protection needs. We need to be more eco-friendly by using less electricity and having a smaller foot print on the environment. One way I have found is using AppAssure's Replay for Disaster Recovery. It has the ability to restore from its backup images either to a Virtual Machine or to new hardware in minutes. It also has the unique ability to continuously restore to a Virtual Machine that can be powered on when required.

SQL Bloke's Perspective

EMA sees the launch of AppAssure's Replay 3.1 as a game changer for SQL backup and recovery best practices. The most obvious reason is that this is the fastest and most compressed solution on the market today. The second is that at the time of this launch, economic conditions are very difficult and an inexpensive data and application protection option is just what busy and overworked SQL DBAs need. The feature rich abilities of Replay3.1 provide greater protection and ease of use, making mid-size enterprise applications more robust, reliable, and easier to recover and test. For the protection, ease of deployment and use, and built in feature set, AppAssure's Replay 3.0 is a solution every SQL Server DBA should take a serious look at.

About the SQL Bloke

Bryan Oliver has over 20 years of industry experience, 11 of which were spent working primarily with SQL Server. Bryan is a SQL Server Expert focusing on performance tuning, back and restore best practices and general SQL Server issues. Bryan's position allows him to work with some of the largest and most recognizable SQL database environments in the world. He is also a valued speaker at conferences such as SQL PASS and SQL Server Summit. Born and raised in Australia, Bryan graduated from RMIT University in Melbourne and was an early adopter of SQL Server. Previously Bryan was a Vice President of R&D at Quest Software where he worked with a number of solutions, including LiteSpeed for SQL Server. Prior to joining Quest, Bryan was the vice president of research and development for Imceda Software.