**Proof of concept for using NetApp Snapshot backup technology for the Concordance Evolution (CNEV) product/content.**

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**Problem statement:**

Use NetApp snapshot backup technology to take regular backups of the CNEV MS SQL databases, Vivisimo search engine index/content files and static files on the NAS storage.

**Test environment:**

Used 2 test machines HL3219SPRTEST01andHL3219SPRTEST02 in the MTS environment for the POC testing.

HL3219SPRTEST01 machine configuration:

1. Windows 2008 server R2 64 bit
2. MS SQL server 2008 R2 hosting CNEV test database
3. NetApp snap drive
4. NetApp SnapManager for SQL (SMSQL)
5. NetApp Snapcreator agent

HL3219SPRTEST02 machine configuration:

1. Windows 2008 server R2 64 bit
2. Vivisimo search engine
3. NetApp snap drive
4. NetApp Snapcreator agent

**NetApp system/component diagram**

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**NetApp snapshot backup solution summary:**

* A windows schedule service will run the NetApp snapshot backup script.
* The NetApp snapshot backup script uses the NetApp snapshot creator agent that orchestrates with the central NetApp server.
* The NetApp snapshot backup script can run from any box that has NetApp snapshot creator agent installed with the necessary NetApp snapshot creator configuration files for MS SQL, Vivisimo and NAS files.
* The NetApp snapshot creator agent will utilize the NetApp SnapManger for SQL to take the hot database backups without bringing the database offline or without detaching it. The snapshot creator agent will use a config file to pass the necessary parameters and switches to SMSQL to bring the database in quiesce mode before the SQL database backup.
* The NetApp snapshot creator agent will utilize a snapshot creator config file to run a powershell script as part of a quiesce command to bring the Vivisimo search engine in to quiesce mode before it takes the snapshot of the Vivisimo index files and the content.
* The NetApp snapshot creator agent will utilize a snapshot creator config file for taking the snapshot of the static files in the NAS folder.

**NetApp snapshot backup solution:**

1. A separate configuration file , one each for MS SQL backup, Vivisimo search engine and NAS files is created that is utilized by the NetApp snapshot creator agent.
2. A windows script file is created that will hold the NetApp snapshot create commands for MS SQL database, Vivisimo search engine and the NAS files.

The script will contain the following 3 commands:

#For MSSQL

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-SQL\_Backup\_CNEV --action snap --policy hourly

#For Velocity (Vivisimo)

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-Velocity\_Backup\_CNEV --action snap --policy hourly

#For NAS

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-NAS\_Backup\_CNEV --action snap --policy hourly

1. The snapcreator command for For MSSQL

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-SQL\_Backup\_CNEV --action snap --policy hourly

The parameter –profile HL3219-SQL\_Backup\_CNEV points to the folder

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0\configs\HL3219-SQL\_Backup\_CNEV that contains the config file HL3219-SQL\_Backup\_CNEV.conf

The config file specifies all the necessary parameters like SQL instances, database names and other switches needed by the SMSQL to bring the MSSQL server in to the quiesce mode and take a hot backup without bringing the database offline or detaching the database.

1. The snapcreator command for Velocity (Vivisimo)

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-Velocity\_Backup\_CNEV --action snap --policy hourly

The parameter –profile HL3219-Velocity\_Backup\_CNEV points to the folder

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0\configs\HL3219-Velocity\_Backup\_CNEV that contains the config file HL3219-Velocity\_Backup\_CNEV.conf

The config file specifies all the necessary parameters required to create the snapshot including the quiesce/unquiesce command that points to the powershell script that brings the Velocity search engine in to quiesce/unquiesce mode by making all the collections in to read-only/edit-mode mode.

1. The snapcreator command for NAS

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0>snapcreator.exe --profile HL3219-NAS\_Backup\_CNEV --action snap --policy hourly

The parameter –profile HL3219-NAS\_Backup\_CNEV points to the folder

C:\Program Files\Netapp\NetApp\_Snap\_Creator\_Framework\scAgent3.4.0\configs\HL3219-NAS\_Backup\_CNEV that contains the config file HL3219-NAS\_Backup\_CNEV.conf

The config file specifies all the necessary parameters required to create the snapshot for the NAS drive/folder files.