**SQL Database Snapshots**

**What is a database snapshot?**

A database snapshot provides a read-only, static view of a source database as it existed at snapshot creation

* Snapshots are dependent on the source database
* Snapshots must be on the same server instance as the database
* If the source database becomes corrupt or unavailable for any reason, all snapshots also become unavailable
* Database snapshots operate at the data-page level, which means that as each page of data is updated in the source database, it copies the original page from the source database to the snapshot
* This process is called a copy-on-write operation
* The snapshot stores the original page, preserving the data records as they existed when the snapshot was created
* Subsequent updates to records in a modified page **do not** affect the contents of the snapshot
* The copied original pages are stored in a sparse file
* Initially, a sparse file has not yet been allocated disk space for user data
* As more and more pages are updated in the source database, the size of the file grows

**What is the purpose of the Database Snapshot?**

* Snapshots can be used for reporting purposes – read-only db
* In the event of a user error on a source database (delete table), you can revert the source database to the state it was in when the snapshot was created
* If a deletion of a table occurs, then you can restore that point in time of data from the snapshot, rather than doing a full database backup followed by all transactional backups

|  |
| --- |
| * **Important** |
| **Because database snapshots are not redundant storage, they do not protect against disk errors or other types of corruption. Taking regular backups and testing your restore plan are essential to protect a database. Snapshots are not a substitute for a backup!!!!** |