



## IBM System Storage N series with SnapManager for Oracle



and with minimal impact; restores need to happen rapidly, database cloning for testing and development should be non-disruptive; and full database recovery, if necessary, needs to be done in minutes, not hours or days.

### **The solution: IBM System Storage N series with SnapManager for Oracle**

IBM System Storage™ N series with SnapManager® for Oracle is a comprehensive data management solution designed to help you streamline storage management while simplifying configuration, backup, and restore operations for Oracle databases. Deployed in combination with N series storage systems, SnapManager supports tight integration with Oracle Database to automate critical tasks such as backup, restore, database recovery, and cloning. SnapManager management of the underlying data layout simplifies routine data management tasks—allowing administrators to focus more effort on value-added tasks. Environments using real application clusters (RAC) and automatic storage management (ASM) are fully supported.

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### Highlights

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- **Automated Oracle data management**
- **Efficient, disk-based backup**
- **Rapid restore and recovery capabilities**
- **Flexible database cloning**

### **The challenge: Optimizing availability and data protection**

Today's enterprise is data driven. Business-critical Oracle databases must be operational around the clock to facilitate decision making and business processes. However, it is increasingly difficult to provide high availability and protect valuable data assets when data continues to grow rapidly and demands on databases continue to rise.

To succeed, storage administrators need tools that help them optimize efficiency. Backups must occur regularly

### **Support for fast, reliable backups**

IBM System Storage N series with SnapManager for Oracle supports fast, reliable, disk-based backup.

SnapManager builds on the capabilities of Snapshot™ technology to create backups that are designed to take place in seconds to avoid degradation of database performance.

SnapManager is designed to automatically identify the backup data set and put the database in hot backup mode while a Snapshot copy is created to support consistency. Administrators can either perform backup verification immediately or defer verification until later. Because backups are quick and non-disruptive, they can be performed at regular intervals throughout the day, which supports a high level of data protection. Regular backups can help administrators be sure that restores, when necessary, occur quickly while avoiding disruption to ongoing operations.

### **Support for rapid recovery**

A nightmare for any database administrator is a failure that necessitates a full database recovery. SnapManager for Oracle helps administrators avoid the pain and uncertainty of the recovery process. When a restore is necessary,

SnapManager allows administrators to easily specify the level of granularity from a full database to a subset of table spaces or data files. Backups can be registered with Oracle Recovery Manager (RMAN) to facilitate the recovery of data at even finer granularity.

Using the SnapRestore® capability, administrators can restore a failed database quickly by reverting to a saved Snapshot copy, without having to move data. Once the database has been restored to a saved Snapshot copy, it is only necessary to replay intervening transaction logs to bring the database up-to-date. If backups are created frequently with SnapManager, then log playback is usually minimized. Once transaction logs are replayed, the database is back in production. The entire recovery can be accomplished in minutes instead of the hours or days that might otherwise be necessary.

### **Support for simple, flexible database cloning**

An onerous task faced by database administrators is creating database clones for development, testing, etc. First, enough free storage must be located to accommodate the clone. Then, a time-consuming consistent copy of the database must be created, which can adversely impact production.

SnapManager for Oracle is designed to avoid these problems with its fast and highly space-efficient cloning process. Using the FlexClone™ capability of Data ONTAP®, clones created with SnapManager can share existing storage with the primary copy of the database. Additional disk space is consumed only as changes are made to the clone. This space efficiency means that clones can be created quickly, when they are needed, with little additional storage space and very little administrator time.

### **Solution Components**

Server side requirements:

- *Oracle Database*
- *SnapDrive® for UNIX®*
- *NFS, iSCSI, or FCP*

For additional operating system and platform support, refer to the “Oracle with N series Interoperability Matrix” located at the following Web site:  
[ftp://service.boulder.ibm.com/storage/nas/nseries/oracle\\_nseries\\_interop.pdf](ftp://service.boulder.ibm.com/storage/nas/nseries/oracle_nseries_interop.pdf)

Storage system requirements:

- *SnapRestore*
- *Data ONTAP*
- *FlexClone*



## For more information

Contact your IBM representative or IBM Business Partner or visit:

[ibm.com/storage/nas](http://ibm.com/storage/nas)



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