

## SnapValidator™ Software for Oracle®

Safeguard against data corruption for enterprises running an Oracle Database

### Key Features

- **END-TO-END DATA PROTECTION**  
Provides additional data checking from server to storage devices
- **MODULAR ACCESSIBILITY**  
Extends enterprise-class checksum capabilities to modular storage
- **CROSS-PROTOCOL SUPPORT**  
Supports SAN (FCP and iSCSI) and NAS (NFS) protocols
- **HIGHLY INTEGRATED**  
Supports the Oracle Hardware-Assisted Resilient Data (HARD) initiative

### The Challenge: The Risk of Data Corruption Is Inherent in Data Transfers

Organizations of any size that rely heavily on the integrity of Oracle data need a guaranteed safeguard against data corruption. Because database servers and storage devices reside at opposite ends of the I/O path, each data block transfer passes through a series of logical layers involving hardware and software from multiple vendors. Other factors, such as application anomalies and human error, present additional risk. As a result, data corruption can occur at any stage of the process, even with the protection inherent in the most robust storage systems. The impact of these corruptions can cause considerable disruption to business continuity, which can be time-consuming and costly to resolve.

### The Solution: End-to-End Data Validation

Network Appliance™ SnapValidator software provides the highest possible level of protection for Oracle data. It detects and prevents potential corruptions of Oracle data before they happen. By adding intelligence and database awareness to modular storage systems—across SAN/iSAN and NAS protocols—NetApp extends the advantages of checksum functionality to a greater variety of organizations.

NetApp SnapValidator is tightly integrated with the Oracle Database architecture and complies with the Oracle HARD initiative. When initiating data transfers, the Oracle system assigns a unique value to each write request based on the sum of the data and sends the data set down the I/O path to the NetApp storage system. Upon receipt, NetApp SnapValidator calculates the sum of the data and compares it to the Oracle value. If these values match, the system writes the information to disk and reports a successful write. If the identifiers do not match, the system prevents the data corruption and produces an alert that offers options for resolving the problem immediately to prevent further problems. You gain the assurance that every bit of data is written with 100% reliability, and you avoid the cost of unplanned disruption and downtime associated with resolving data corruptions.

### Increased Data Reliability

NetApp SnapValidator leverages the added data protection built into Oracle Database systems and ensures the availability of business-critical data—with full support for the Oracle HARD initiative. This gives you the added peace of mind that comes with the highest possible levels of data integrity across all protocols.

### Reduced Risk

By providing end-to-end checksum functionality, NetApp SnapValidator reduces the risk inherent in the data transfer process. This gives you the assurance that data corruptions and errors can be detected and prevented before they propagate in the system and incur liability.

### SOFTWARE

Network Appliance software solutions are optimized specifically for the job, are easy to use and administer, and deliver the lowest TCO and maximum ROI.

### Improved Operational Efficiency and Avoided Costs

NetApp SnapValidator helps prevent unplanned downtime resulting from data corruption. This means savings in the form of avoided costs, and you can spend more time on activities that contribute to the further success of the enterprise.

### Unleash the Power of Information

See how NetApp SnapValidator technology provides even greater protection for your Oracle data. Simply visit [www.netapp.com](http://www.netapp.com) or call (800) 443-4537 and let us show you what "The evolution of storage™" can mean for your organization.

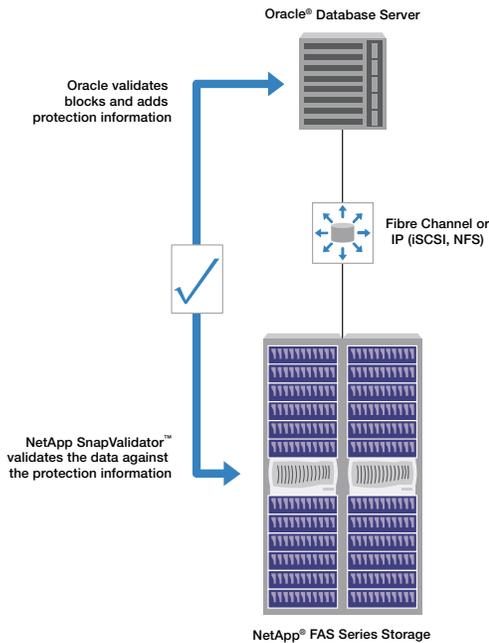


Figure 1) End-to-end Oracle data validation with NetApp SnapValidator.

NetApp SnapValidator supports the Oracle HARD initiative and provides the highest levels of data integrity available.



**Network Appliance, Inc.**  
495 East Java Drive  
Sunnyvale, CA 94089  
[www.netapp.com](http://www.netapp.com)

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