Quantum®

Increase Retention & Reduce Capacity Requirements for Oracle Backup

Oracle Secure Backup & RMAN using Quantum DXi

With many customers running business-critical applications on Oracle database products, ensuring that data is protected and available is a number one priority for IT departments—many of which are using Oracle RMAN and Oracle Secure Backup.

Tape has been providing reliable backup storage for many years; but with today's demand for full-time data availability, backup to disk has become the preferred method. While disk does a great job in supporting the RTO (Recovery Time Objectives), the capacity of backup data being generated makes plain disk unaffordable as a backup device when trying to meet an organization's RPO (Recovery Point Objectives). Deduplication disk appliances have solved this problem by being able to retain many more recovery points on significantly less capacity than non-deduplicating technology.

It is common that business-critical applications are being managed by the DBAs who are required to maintain this level of data availability, which in many cases have different SLAs than other non-critical data being protected by traditional batch backup products.

Quantum DXi® supports backup images managed by Oracle Secure Backup and Oracle RMAN, which affords the administrators full control of their backup and recovery operations without relying on administrators of other backup products getting involved.

Quantum DXi disk appliances deliver industry-leading capacity optimization by combining in-line deduplication and compression to provide the RTO of disk and the RPO requirements previously met by tape systems. In addition to the DXi providing immediate recovery capabilities, DXi systems perform continuous optimized replication to DR facilities with no additional burden to the Oracle servers.

QUANTUM TECHNICAL FEATURES

Quantum DXi systems all use 4TB disk technology providing higher capacity in a smaller footprint. All usable capacity is licensed using non-disruptive Capacity-on-Demand licensing.

DXi can simultaneously present NAS (NFS/CIFS) or FC-VTL to the backup servers.
- For FC-VTL, DXi is the only deduplication appliance that provides Direct Path-to-Tape, allowing a copy of backup images directly to physical tape without routing data through a server.

ORACLE®

ORACLE ADMINISTRATION

Oracle administrators are in control using Oracle data protection products and Quantum DXi. This powerful combination affords:

- **Business Continuance – RTO**
  Use Oracle protection tools to enable companies to quickly return to business continuance in the event of a disaster.

- **Increased Retention – RPO**
  Control costs by using deduplication to reduce the required storage capacity and network bandwidth for replication facilitating longer retention.

- **Data Security**
  No performance penalty using self-encrypting disk systems that provide AES-256 standard encryption for data at rest. All replicated data is encrypted.

- **Shared Deduplication**
  Share DXi deduplication appliances between Oracle data protection products and traditional batch backup software to realize significant ROI.

- **Simple Intuitive Management**
  Quantum DXi provides a 6-year history through Advanced Reporting, which can also be used for intelligent performance and capacity planning for future requirements.

Security – Military-grade encryption technology:
- Data-at-Rest: Quantum DXi systems can enable encryption for data at rest using SED (Self-Encrypting Drive) Technology, which has no impact on backup performance or usable capacity.
- Data-in-Flight: All replicated content is protected using AES 256-bit encryption technology.

Management
- System-Wide Scheduler: DXi provides administrators a simple system-wide schedule that can dedicate resources to the primary backup window, control when replication occurs, and throttle bandwidth consumption during replication.
- Advanced Reporting: An exclusive DXi feature, which captures and retains a six-year history of capacity and performance in the DXi system. Advanced Reporting can also be used for monitoring individual backup clients and how much capacity they consume.
- Quantum Vision®: Quantum provides centralized management and reporting for all Quantum products (disk and tape) in Vision software. Vision provides analytics and customizable notification for system events.
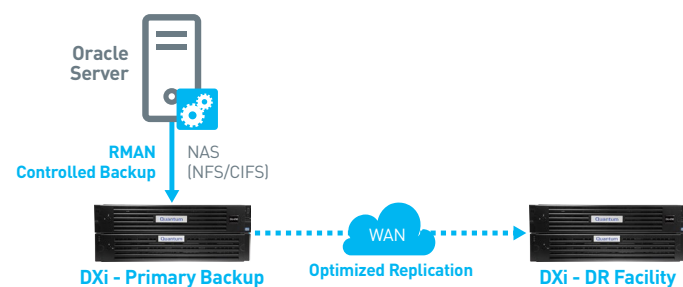
All-Inclusive Pricing: All features are included in the base price of the DXi system, eliminating costly add-on options.
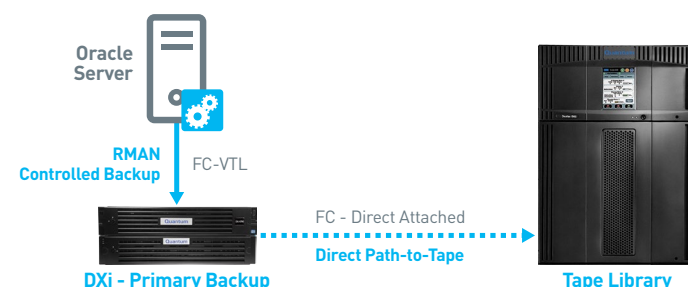
USE CASES

In the use case below, RMAN is writing backup images directly to the DXi, which is presenting a NAS (NFS/CIFS) interface to the server. As the data is being ingested, it is immediately deduplicated and compressed. With having a second DXi located at a DR facility, as soon as any unique data is identified by the deduplication process, it is immediately being transmitted to the remote site.

Assuming RMAN catalogs are being copied to the remote site, if the primary DXi is not available for any reason, it will only take a few minutes to restore the requested images from the remote DXi.

In the use case below, OSB is writing to the DXi, which is presenting the FC-VTL interface. For all images stored in this fashion, the DXi can write backup images to physical without a server handling the data. If a second DXi were to be located in a remote facility, replication can be configured to send all images to the remote site in addition to creating physical tape.

Oracle Server
RMAN Controlled Backup NAS (NFS/CIFS)
DXi – Primary Backup — WAN — **Optimized Replication** — **DXi – DR Facility**

RMAN Backup – Optimized Replication

Oracle Server
RMAN Controlled Backup FC-VTL
DXi – Primary Backup FC - Direct Attached **Direct Path-to-Tape** **Tape Library**

Oracle Secure Backup – Direct Path-to-Tape

SUMMARY

Protecting business-critical applications using Oracle Secure Backup and RMAN has never been easier than it is today using Quantum DXi deduplication disk appliances. Oracle DBAs understand the priorities of maintaining full-time data availability. Quantum DXi reduces RTO, increases RPOs, provides native data encryption, and supports replication to multiple sites to meet DR requirements.

To learn more, please visit us at www.quantum.com/dxi.

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