



RestoreManager/DataAnalyzer





About us

Leading Provider of Data Protection and Data Management solutions



Quick Facts

World class support organization:
95% Customer satisfaction



20+ year history protecting data for
the world's largest organizations



Transparent pricing and
great value



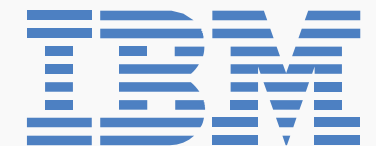
End-to-end support 24/7
commitment



1000+ global customers



TECHNOLOGY PROVIDER TO :



Deloitte.



CONAIR



McKesson





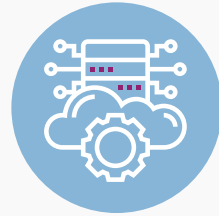
Product Offering



Storage Snapshot
Management



Application-aware
automation of storage array
snapshots, replication and
clone copy processes.
Technology OEM'd by IBM as
Spectrum Copy Data
Management.



All Purpose
Backup



An efficient and flexible all-
purpose data protection
solution supporting disk,
tape and cloud.



Open Hypervisor
& Container Backup



Data protection for open
virtualization platforms such
as RHV/oVirt, Nutanix Acrop-
olis, Citrix XenServer, Oracle
VM and KVM, among others.



End-Point SaaS



A data protection and file
sharing solution for the
mobile workforce, focused
on desktops, laptops and
mobile devices, and
cloud-based data such as
Office 365 and Box.



NetApp File
Protection



CryptoSpike
Ransomware detection and
recovery



RestoreManager
File index, search, restore and
Analytics



RestoreManager

What?

Restore Manager is a scalable NetApp File Catalog with high performance file indexing, search and restore capabilities for NetApp file environments

Why?

- ❑ Easily locate and recover files on NetApp storage
- ❑ Support user restore requests, legal search, compliance audits, etc
- ❑ Manage Snapshot, SnapVault and SnapMirror schedules and retention times
- ❑ Restore one or more files to original or alternate location
- ❑ Highly scalable solution
- ❑ Uses ONTAP SnapDiff protocol





NetApp-Centric Solutions



Three NetApp NAS Tools



CryptoSpike

Ransomware detection
and access transparency



RestoreManager

File Catalog, Search
and Restore



DataAnalyzer

File Data Analytics

Licensed per array at very affordable price-points

NetApp: Ransomware detection and protection



CryptoSpike

01

Real-time detection of ransomware on NetApp file systems

Stops spread of infection with automatic user blocking

02**03**

One-button restore of affected files from NetApp snapshots

Access transparency file access auditing (who touched what files)

04

NetApp: Ransomware detection and protection



Blacklist

- ❑ Blocks known ransomware signatures and file types.
- ❑ Updated automatically.
- ❑ Filters can also be added manually.



Whitelist

- ❑ Blocks all files EXCEPT allowed file list.
- ❑ Good security but limits types of files.
- ❑ Effective when applied at a granular level (e.g. an accounting folder allows only Excel files).



Learner Module

- ❑ Monitors user behavior on file system to detect day-one threats.
- ❑ Detects unusual behavior (e.g. too many files changed in a period of time) and cuts off user access.

NetApp: File Catalog, Search and Restore



RestoreManager

01 Centralized file catalog for NetApp file systems

Simple file search with multiple search criteria

02

03 One-click file restore from snapshots

Highly scalable solution

04



Finding a File Needle in a Data Haystack

Locating Files Can Be Almost Impossible

- ❑ Billions of files to search
- ❑ Multiple file locations and copies (Primary Snapshot, SnapVault, SnapMirror, AltaVault, Element OS)
- ❑ Multiple file versions

But Sometimes You Just Have To Find Them

- ❑ Critical file recovery
- ❑ Legal search
- ❑ Compliance / regulatory requirements





RestoreManager is the Solution

01

RestoreManager provides a central file index across the complete NetApp file environment

02

Indexes Snapshot, SnapVault, SnapMirror plus AltaVault backup destinations

04

One-click restore for files

03

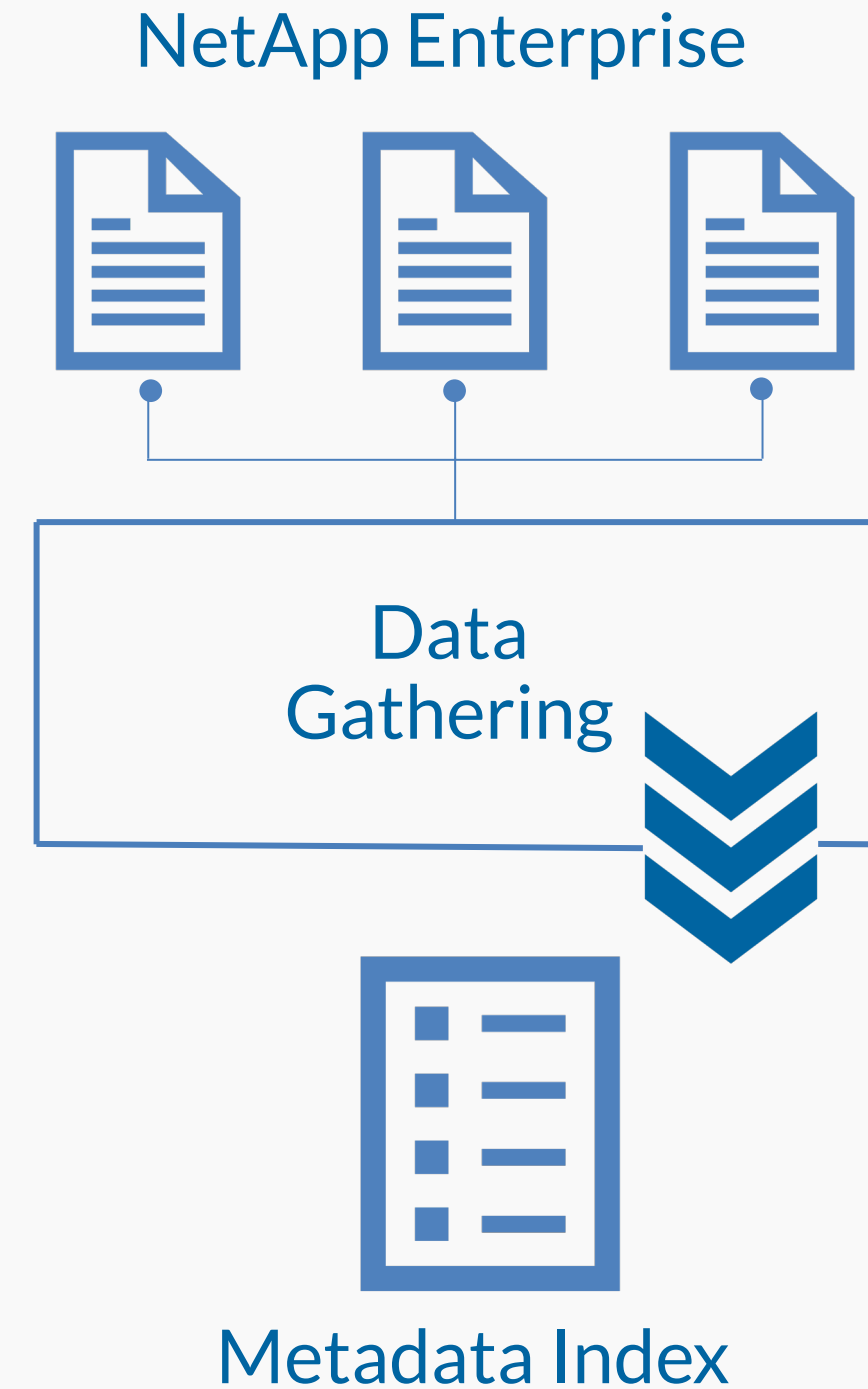
Multiple search criteria to find files quickly





How RestoreManager Works?

- ❑ RestoreManager gathers file metadata using the NetApp SnapDiff protocol
- ❑ Data is indexed and searchable via an Elastic Search Database
- ❑ Search at any level: enterprise, cluster, SVM, volumes, folders, etc.
- ❑ Multiple search filters can be applied
 - ❑ Filter by file name, parts of file name or file path, with wildcards permitted
 - ❑ Filter by file type
 - ❑ Filter by deletion period or creation period
 - ❑ Filter by file size parameters



Other Features



One-click Restore

- ❑ Select one or more files from Search screen and click to restore
- ❑ Select version of file from existing snapshots
- ❑ Restore to original location or to alternate location



Scalable Architecture Easy to Deploy

- ❑ Uses ElasticSearch search engine for speed and scale
- ❑ Simple .OVA file deployment



Selective Indexing

- ❑ Index only the systems you want to index
- ❑ E.g. index only SnapVault destination volumes which have longer file retention

NetApp: File Data Analytics



DataAnalyzer

01

Detailed analysis of file data for full understanding of NetApp file environment

File type, age, size, last access, etc.

02

03

Determines file ownership for auditing and chargeback

Helps uncover wasted storage resources

04



Can You Easily Answer These Questions?

- ❑ How many files do you have?
- ❑ What types of files are using up the most storage space?
- ❑ What percent of your files haven't been accessed in a year? Or five years? Or ten?

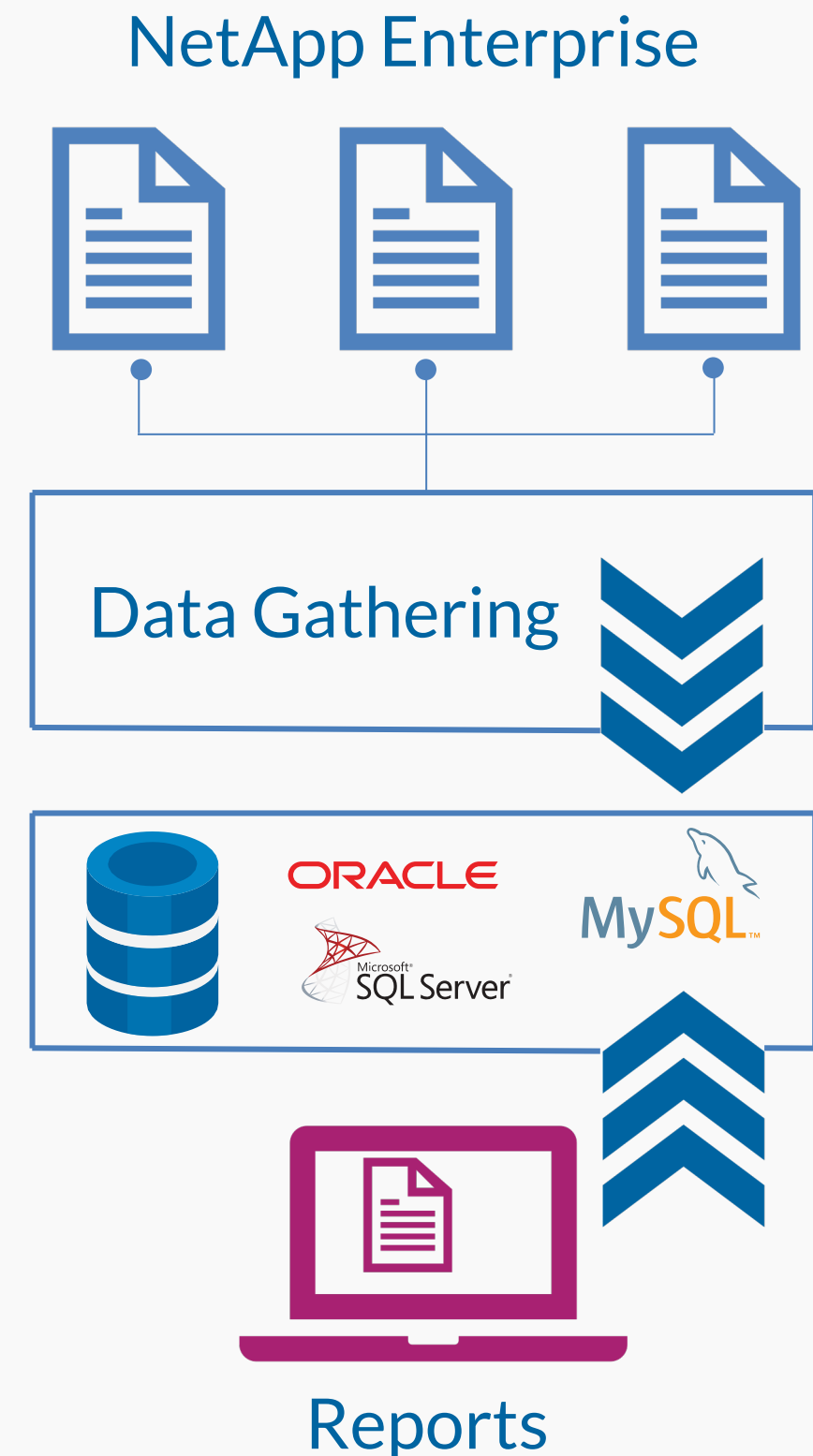
But Knowing the Answers is Valuable!

- ✓ Recover large amounts of storage space (some users have recovered as much as 80%!)
- ✓ Identify "bad citizens" storing too much old or unwanted data



How DataAnalyzer Works?

- ❑ DataAnalyzer gathers file metadata across the NetApp file environment
- ❑ Data is stored in a database (MS SQL, Oracle, mySQL)
- ❑ Reports are visualized in Excel for easy data manipulation and sharing
- ❑ High-performance: up to 10 million files per hour, per volume
- ❑ Full scan required only upon first installation





DataAnalyzer Reports

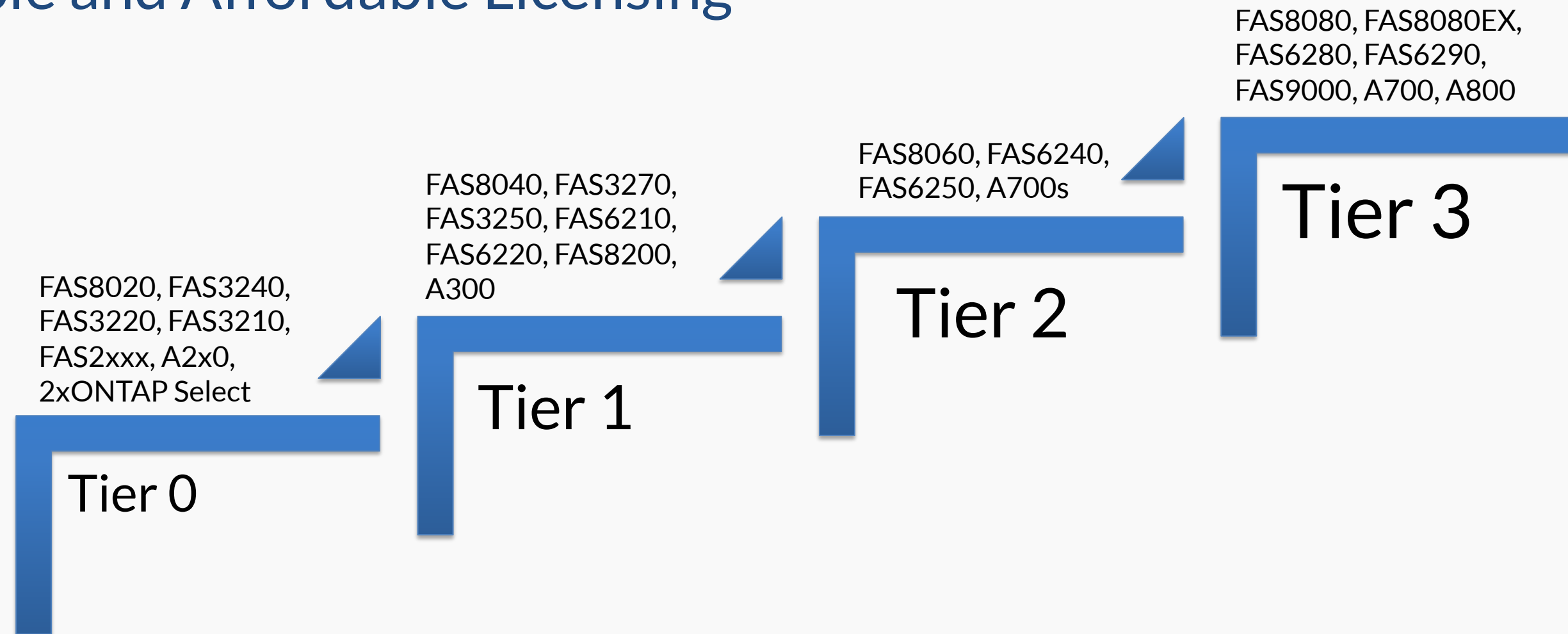
Gain critical insights into files

- ❑ Number of files and total storage space used based on file type
- ❑ Age of file data
- ❑ Identify stale files that haven't been accessed over a defined time period
- ❑ Identify unused or under-used storage and VMDKs
- ❑ Report storage consumption by users and groups for audit and chargeback





Simple and Affordable Licensing



- ✓ Licensing is per-controller node (e.g. dual node HA pair is two licenses)
- ✓ Licensing is tiered by NetApp system size (see tiers at left)
- ✓ No additional charge for number of files, amount of disk capacity, etc.
- ✓ License is subscription-based, priced per month, with minimum one-year purchase
- ✓ All nodes in a cluster must be licensed, even if they are not using NAS protocols

Thank You!

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Q&A

