



Commvault – out of the box (of backup)

Peter Maes – SE BeLux

Commvault and Realdolmen

Long-term partnership since 2015

Realdolmen/Gfi is the only Market Builder partner for Commvault in Belgium:

- Highest number of certified people
- Highest tier of certification

We have 2 frame agreements together:

- SMALS
- Stad Brugge

CASP partner

- Provide 1st line support

Active together in R-cloud



Commvault® – What you know



Top rated backup and recovery solution:

- One of the most trusted names in backup and recovery
- “Single pane of glass” for all data under protection
- Simplified pricing and packaging



Almost any source:

- Physical, virtual, cloud, and hybrid
- Databases, applications, file systems, and more
- Endpoints, mailboxes, SaaS applications

Small scale to hyperscale to webscale:



- Start at your size, and scale easily when you need
- One solution, almost any landscape configuration

Storage hardware	OS, endpoint, Apps & DBs	Virtual Machines	Large files & big data	SaaS & cloud-native

A LEADER IN THE FORRESTER WAVE™: DATA RESILIENCY SOLUTIONS Q3 2019

- Top-Ranked in Current Offering.
- Highest Scores in the Data Sources and Manageability criteria, and among the highest scores in the Backup Optimizations criterion.
- Highest Score Possible in the Security, Scalability, and Corporate Strategy criteria.

Disclaimer:

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FORRESTER RESEARCH

THE FORRESTER WAVE™

Data Resiliency Solutions

Q3 2019



*A gray bubble indicates a nonparticipating vendor.

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Gartner's MQ



Shifting smart ops into your daily routine

Overview dashboard

Environment

APPLIANCE 12 BLOCKS 36 NODES WEEK-2	SERVERS 567 WEEK+2	VMs 610 WEEK+2	LAPTOP 2,478 WEEK+2	USERS 6,050 WEEK-2
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Need attention

6 SERVERS	2 INFRASTRUCTURES	8 JOBS
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SLA

RPO 97% WEEK-1%	RTO 96% WEEK+2%
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Last 24 hour jobs

256 RUNNING	7,376 SUCCESSFUL DAY +2.2 WEEK -3.3	194 FAILED DAY +2 WEEK -2	515 EVENTS
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System health

10 CRITICAL	11 WARNING
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Usage Monitor

Current capacity usage

BACKUP USING 205.33TB/300.00TB You have enough capacity	ARCHIVE USING 193.25TB/250.00TB You have enough capacity
--	---

Disk space

DISK LIBRARY	TOTAL SPACE	USED SPACE	DATE TO BE FULL
CVIT - US-TF - SDS - Gluster	500 TB	50 TB	Nov 12, 2018
CVIT - US-TF - LAPTOP - MA17	200 TB	20 TB	May 07, 2019
CVIT - Build - Repl - Hyd	100 TB	50 TB	Dec 30, 2018
CVIT - US-TF - SAPPHIRE - ...	700 TB	600 TB	Dec 10, 2019
CVIT - CHI-DR - SDS - Gluster	300 TB	20 TB	Aug 15, 2021

Storage - data retention

1.15PB 0-30 DAYS	738.58TB 30-90 DAYS	1.84PB 90-365 DAYS	129.83TB 1 YR & ABOVE
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Storage - usage

DISK LIBRARY 933.36TB DAY +3 WEEK -2	SPACE REDUCTION 90.25% DAY +1% WEEK -2%
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Callouts:

- Coverage & Trends
- SLA Key Performance
- Usage Monitor
- Critical Resources
- Daily Operational Performance
- Focus Attention
- Health check
- Data Retention

- Overview
- Appliance / Storage
- Orchestration
- Workloads

Plans and Open-API radically improve the user experience

Use-Case Experiences

Actions

- SLA-driven
- Role-based
- Use-case oriented
- Self-service focused
- REST API for easy integration

Seamless Plug-in Embedded CV **actions**

Set the Plan

- Configure source, SLA RPO/RTO, retention, scheduling, security
- Offers simplified on-boarding and show-back/cost of operations

Protect the Data

- Auto-discover workloads (no-miss), app-aware, replication policies (snap/backup)
- Embedded instrumentation of SLA metrics

Orchestrated Process

- Extend options for VM recovery & conversion, migration to/across clouds, live sync replication and DR failover/ failback,
- At VM or application groups

Deliver the Outcome

- Simplified and secure self-service experience
- Operations/ recovery role-based view/use-case controls with governance and security audit

Objectives-Driven Operations

Simplified

KPI Metrics

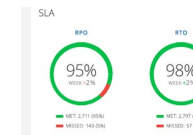
- Rapid deployment of workload solutions – role-based, use-cases
- Empower self-service

Seamless

COMMVAULT
vRealize Operations 6 (vROps)
serviceNOW
RED HAT CLOUDFORMS

- Cloud plug-ins for vRealize vRA, RedHat CloudForms and ServiceNow

Embedded Intelligence



- Real-time, smart analytics and objective-oriented visualization

Cloud data protection projects can be progressive

Reduce costs and storage footprint while consolidating content



Archiving

- Cost effective solution for eDiscovery/compliance
- Eliminate content-specific point solutions
- Redeploy storage resources for higher value services

Reduce costs and risks with better air gap than tape



Backup and recovery storage target

- Modernize tape with a more flexible (and cheaper) solution
- Utilize “warm” and “cold” storage when more expensive “hot” is not required
- Benefit from larger economies of scale than you can achieve on your own

Reduce risk, simplify operations, and protect ROBOs



Cloud-based backup and recovery

- Unify backup and recovery across sites and Remote Offices/Branch Offices (ROBOs)
- Simplify your data management landscape to get a true “single pane of glass”
- Scale up as you need without large step-wise investments

Take Disaster Recovery readiness to the next level

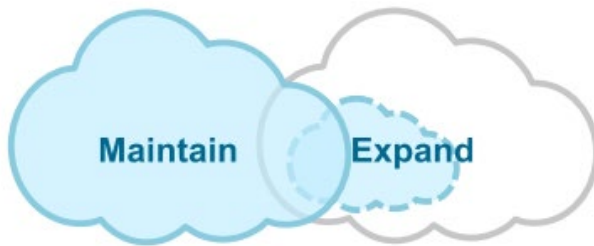


Disaster Recovery failover/failback

- Automate and schedule Disaster Recovery operations to reduce risk while increasing productivity
- Implement “full-site Disaster Recovery” without investing in a full landscape
- Take advantage of new “failover/failback” options too difficult to do with your own resources

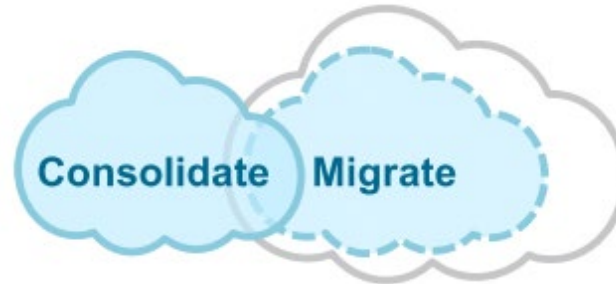
Cloud-based Disaster Recovery can lead to other options

Increase the value of your investment: use your data for more purposes



Automated orchestration enables you to take advantage of cloud **at your pace**

Critical to have a “single view” across your combined landscapes



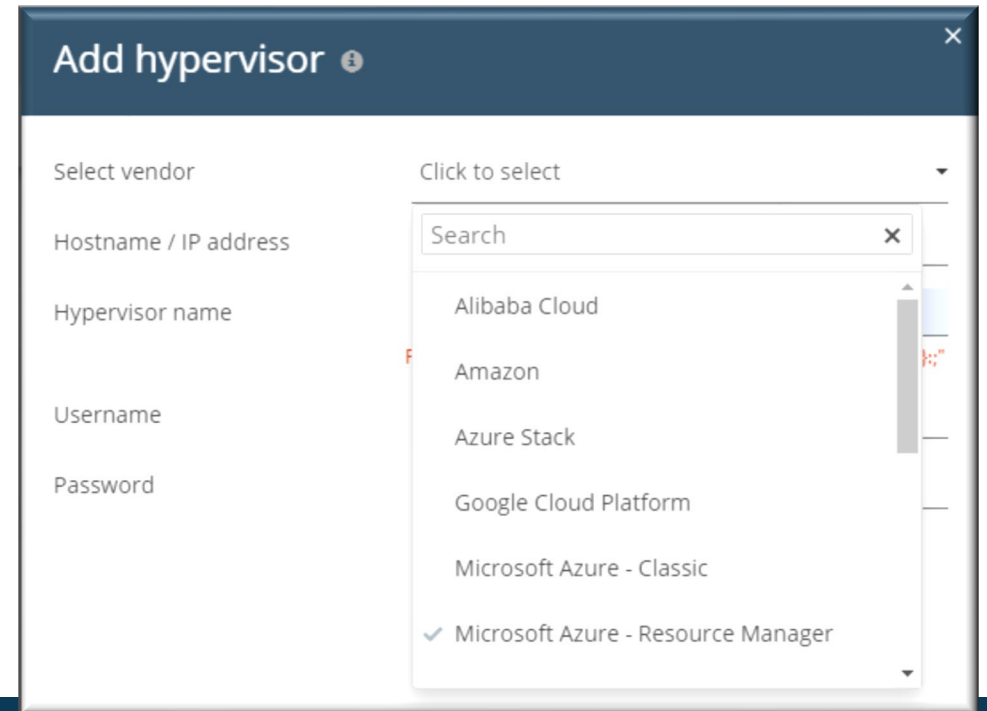
- Migration doesn't have to be a bad word!
- Commvault backup technologies like archiving, IntelliSnap technology, and Live Sync **reduce the risk, time, and cost** required to start taking advantage of cloud



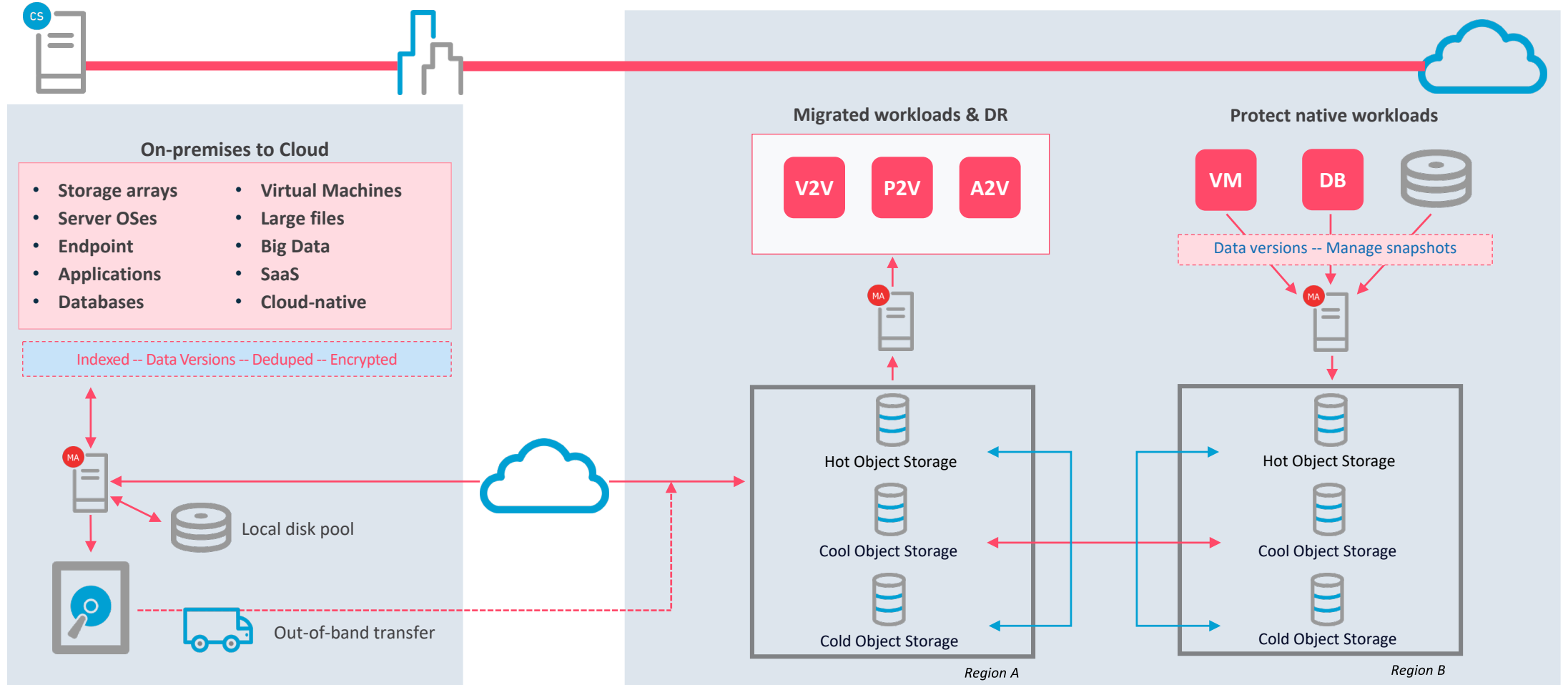
- True utopia is the ability to move back/forth
- As on-premises/cloud lines blur, multiple interfaces, several point solutions, and “scripting glue” become your **limiting factors**

How does the Commvault® Virtual Server Agent help?

- Hypervisor-level access and discovery across a wide range of hypervisors
- Native integration using standard toolsets and hypervisor API calls, to discover what to protect:
 - Which hosts make-up the hypervisor
 - What storage is associated
 - Which guests exist
 - How are guests configured



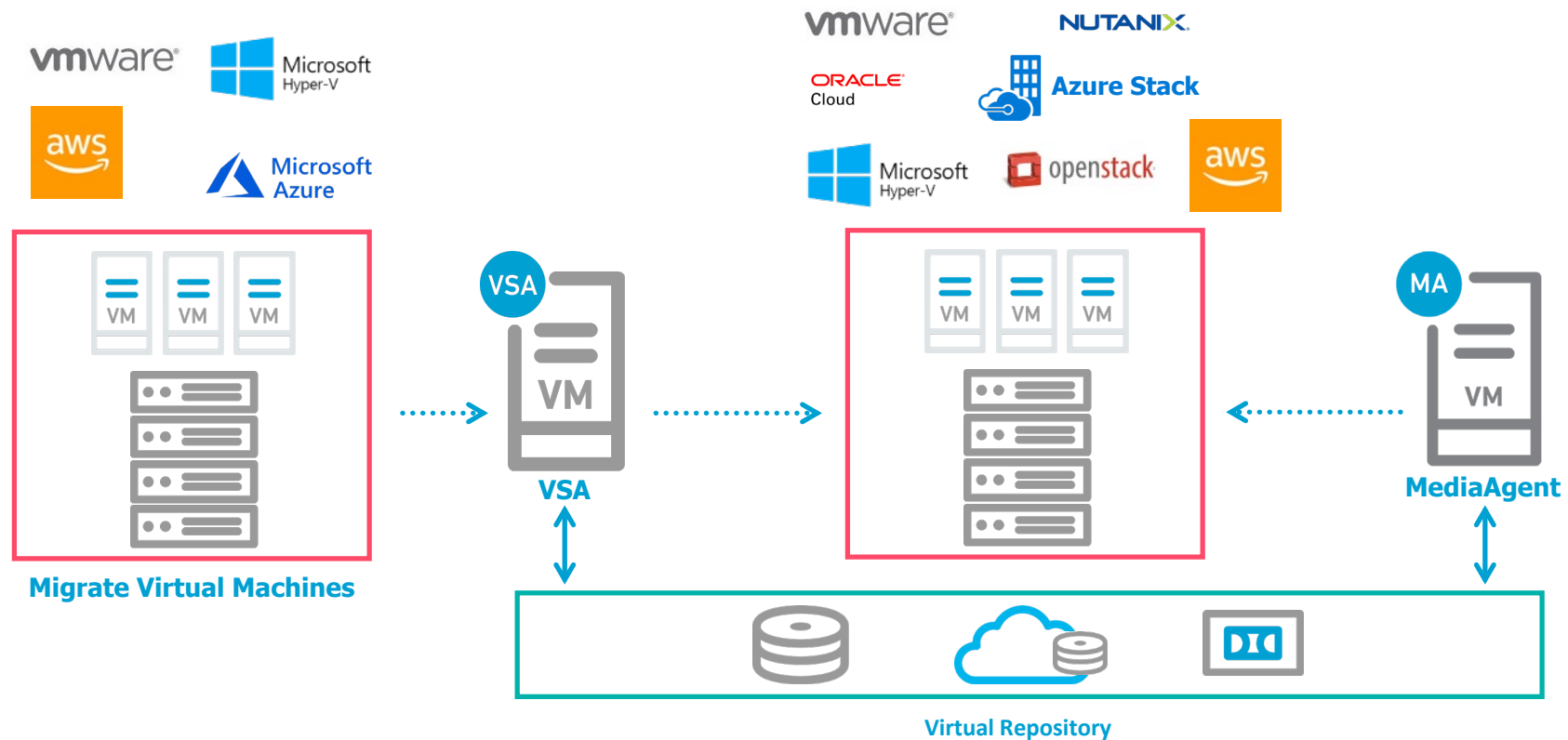
Putting it all together with your Commvault[®] implementation



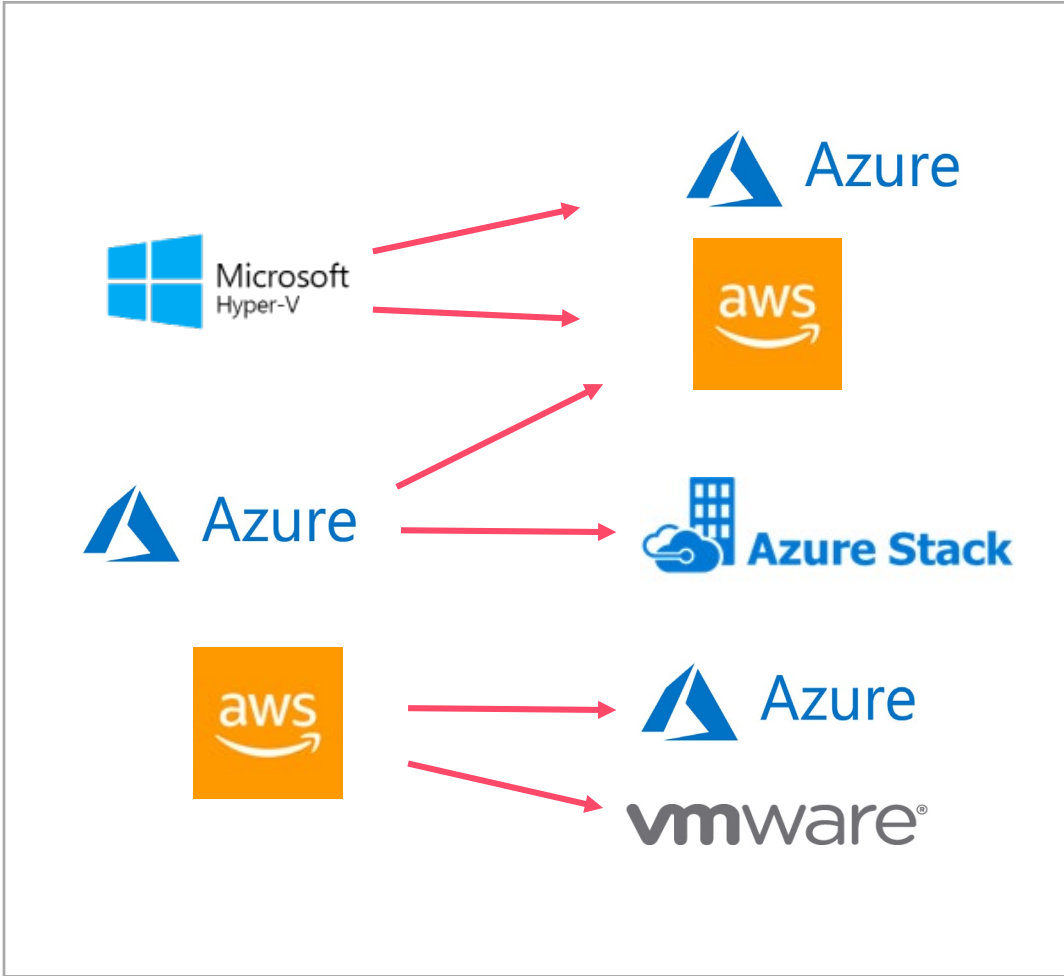
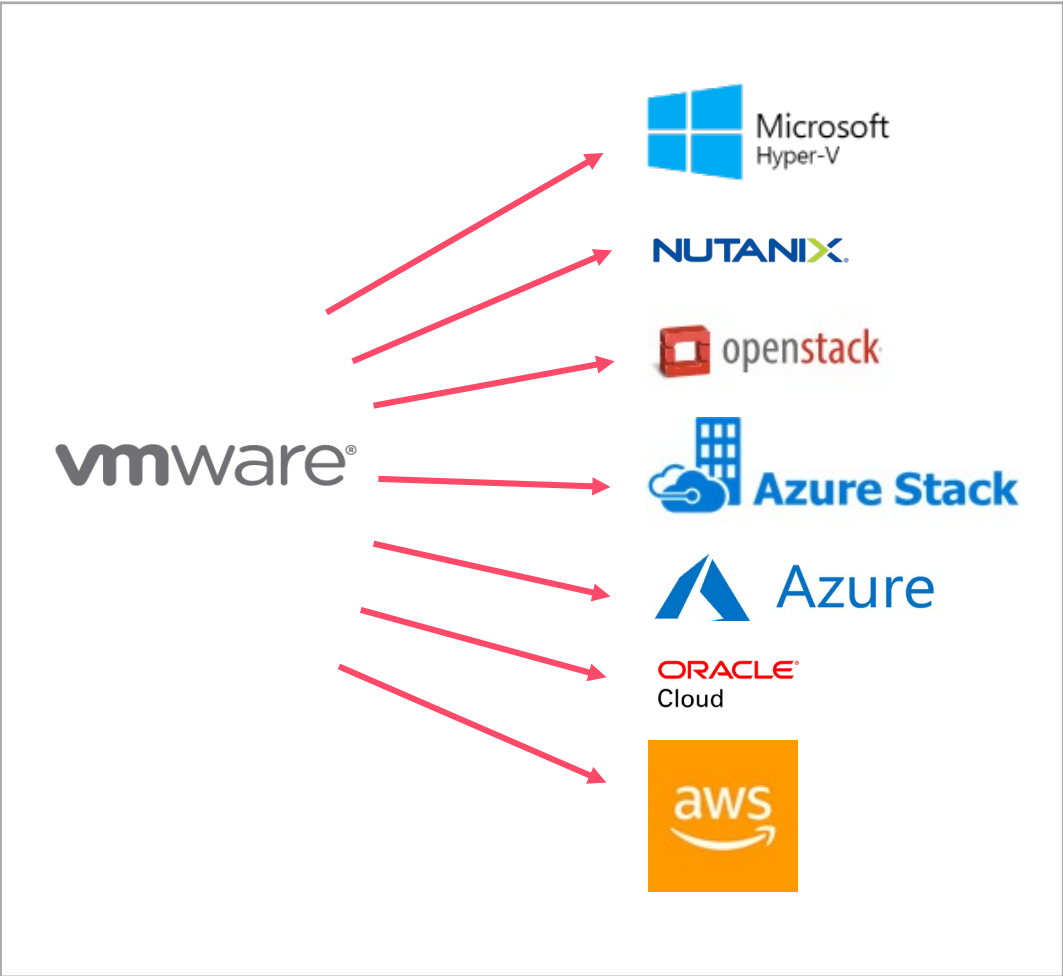
Easily migrate VMs to a different hypervisor or cloud provider

Simplified conversion of VM from one hypervisor to another

- Leverages existing VM backups to migrate to a different hypervisor or cloud provider
- Simplifies the migration process to new technology



Flexible transformation between hypervisors and the cloud



Cloud PaaS Protection

AWS

MSSQL

Oracle

MySQL

PostgreSQL

Aurora

MariaDB

DynamoDB

Redshift

Azure

- MSSQL

- MySQL

- PostgreSQL

- *MariaDB*

Google

- MySQL

- PostgreSQL

Alibaba

- MySQL

- PostgreSQL

Oracle

- Oracle

* Note: Items in italics are scheduled for release in the next two service packs

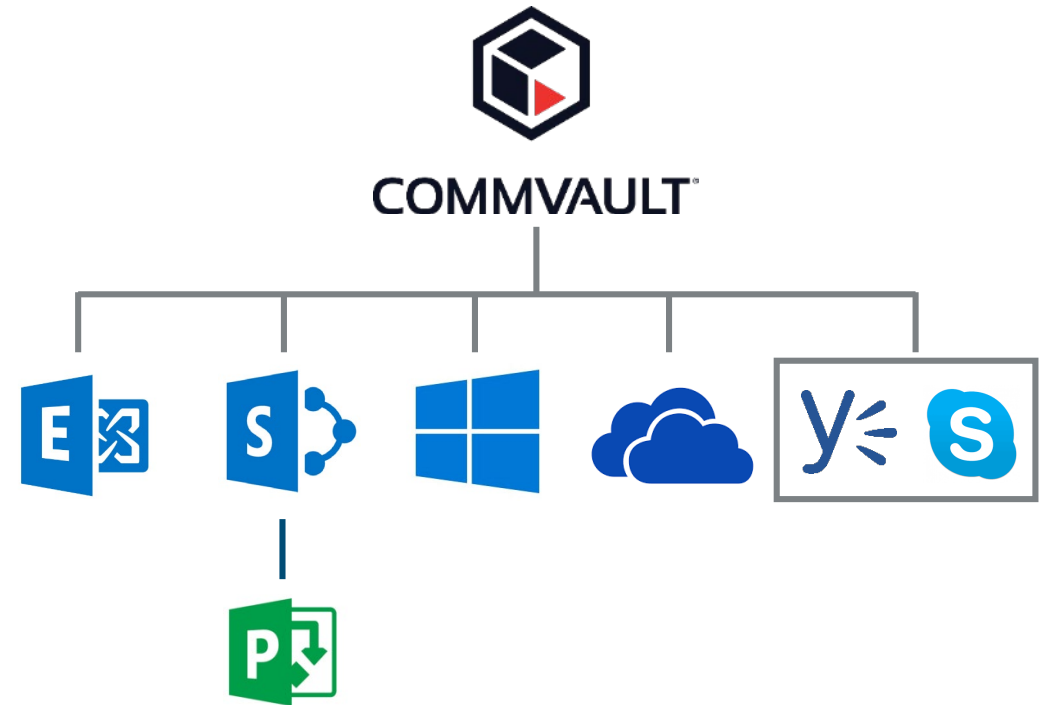
What Microsoft Office 365 data does Commvault protect?

Commvault Complete™ Backup & Recovery

Protect Office 365 data

Store backup copy outside of Office 365

Recover data from accidental or intentional deletion, corruption, or malicious attacks



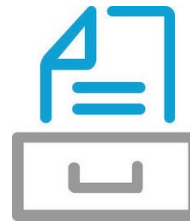
*Globanet Merge1™ technology required for Yammer™ and Skype™

Protect, enhance and complete, your Microsoft 365 and Office 365 investment with the Commvault® Data Platform



Protect

- Protect data from deletion, corruption and attack
- Recover on-demand back into Office 365, on-premises or anywhere else
- Empower end users with self-service



Migrate

- Ensure data protection before during and after migrating
- Accelerate migrations by reducing the amount of data to be moved with integrated archiving
- Mobilize data based on business needs

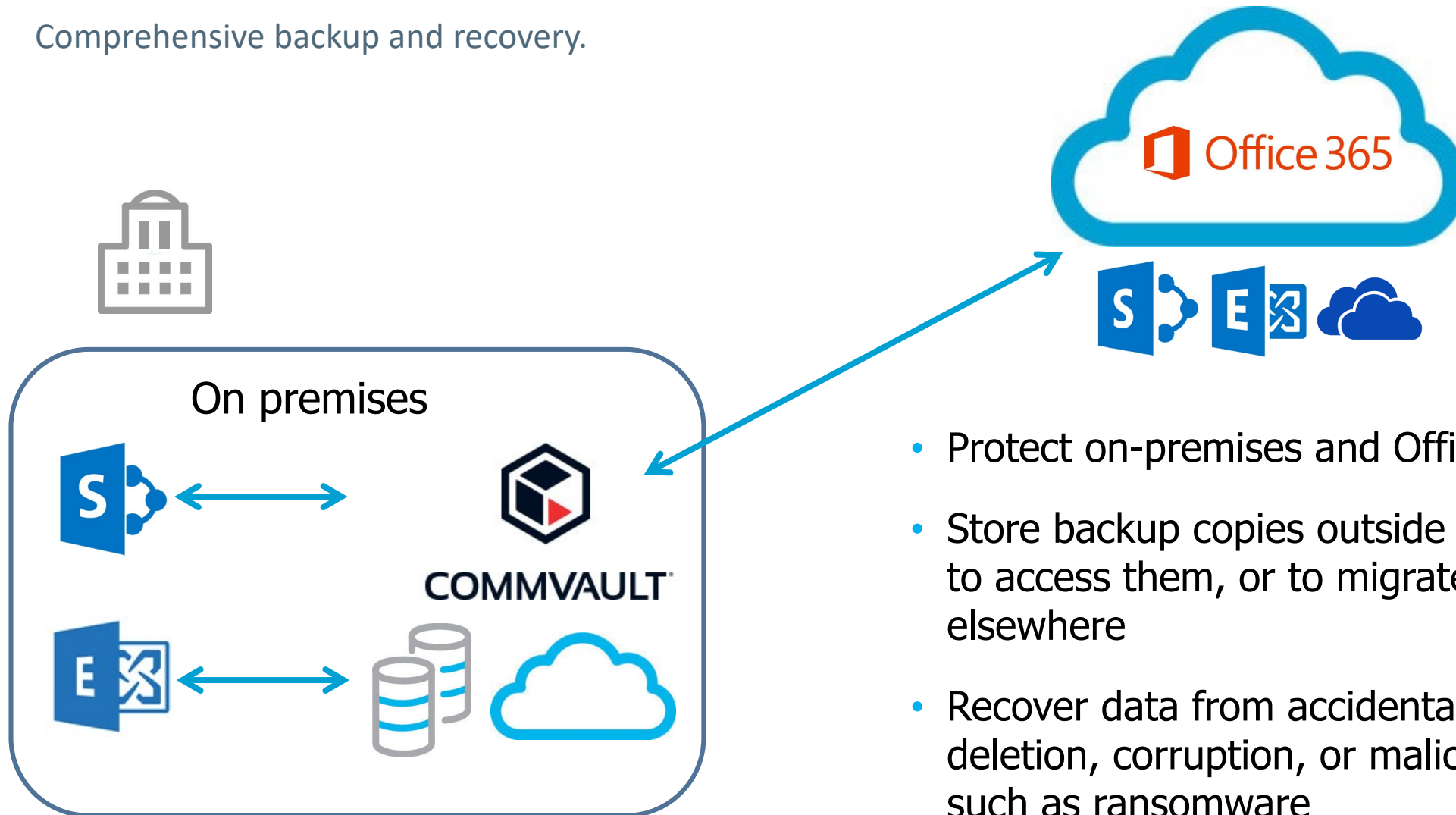


Comply

- Keep secure backups of data, away from the production copy
- Perform eDiscovery search across all data, not just what's in Office 365
- Search across massive data sets in seconds, instead of minutes or hours

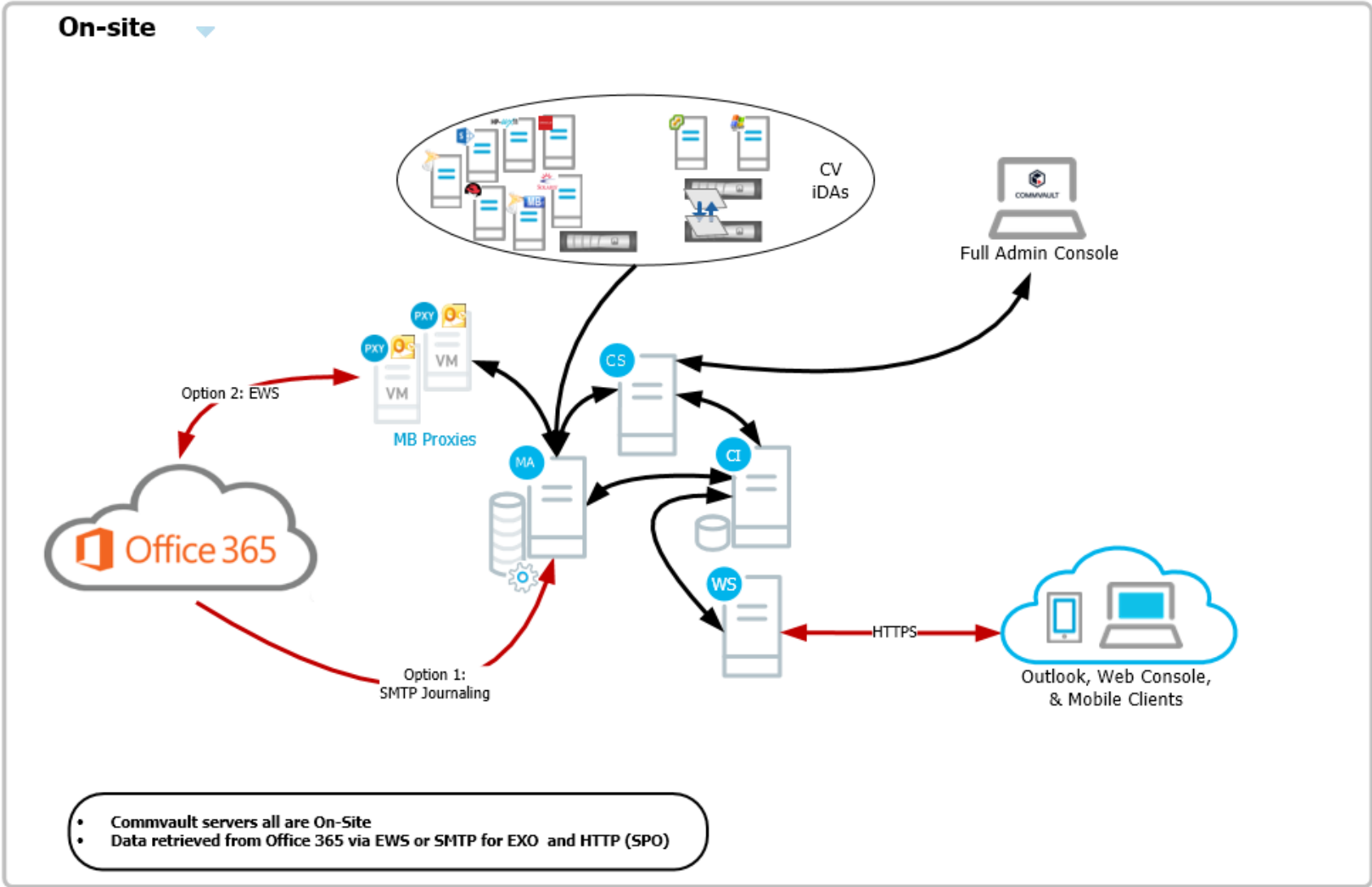
Data protection for Office 365

Comprehensive backup and recovery.

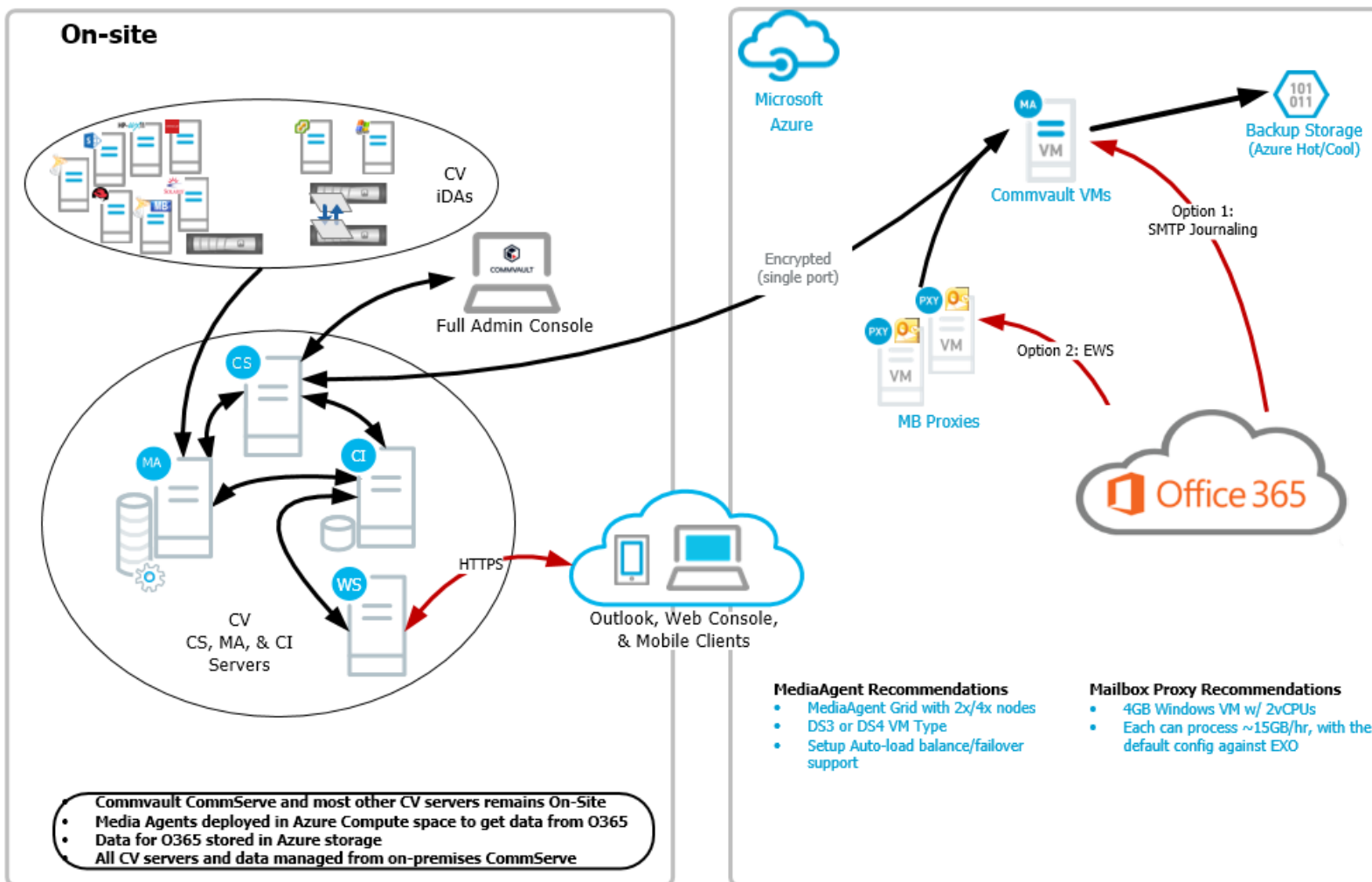


- Protect on-premises and Office 365 assets
- Store backup copies outside of Office 365, to access them, or to migrate them elsewhere
- Recover data from accidental or intentional deletion, corruption, or malicious attacks such as ransomware

DEPLOYMENT OPTIONS: ON-SITE ONLY



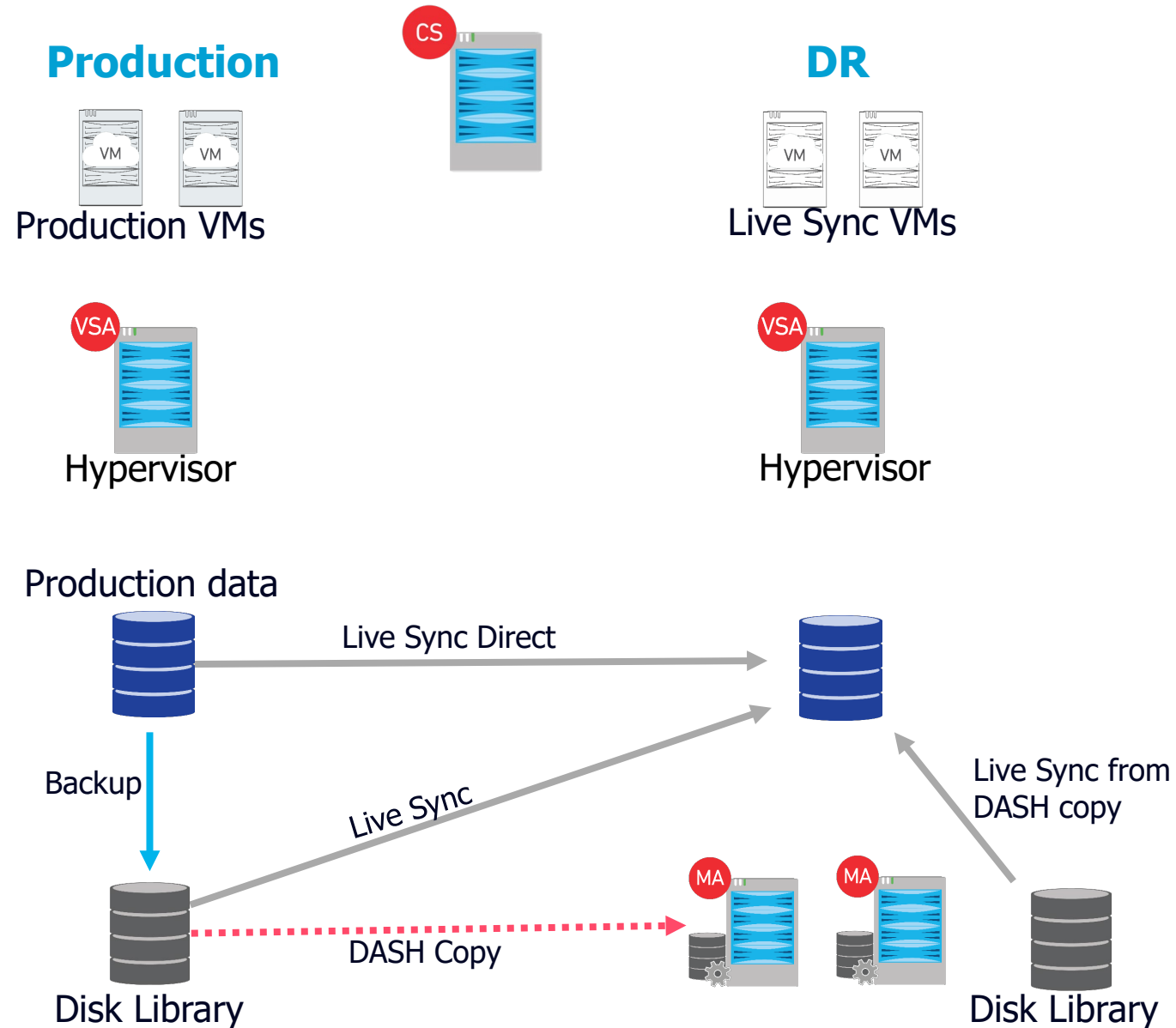
DEPLOYMENT OPTIONS: HYBRID W/ AZURE



Live sync and Live Sync direct

Live Sync / Live Sync Direct

- Replication of production VM to DR site
- Can be initiated after each backup or at a scheduled time

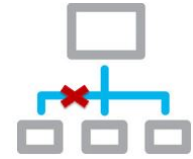


Live Sync

DR Orchestration

- Enable Live Sync
- Disable Live Sync
- Mark for Full Sync
- Go To Schedule
- Properties
- Failover >
 - Test Boot VM
 - Planned Failover
 - Unplanned Failover

Test Boot



1 Unplug



2 Power On



3 Verify



4 Shutdown

Planned Failover



1 Shutdown



2 Backup



3 Sync



4 Power On

Unplanned Failover



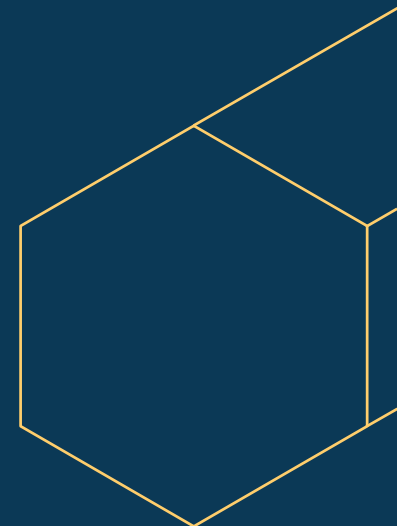
1 Sync



2 Power On



So, lets talk about Activating Data



Commvault Universal Dynamic Index



High-Level

Global location number: S674H

Port of origin: Shanghai, China

Port of destination: New York, New York

Weight: 12,342 lbs

DATA

Insight

Global location number: S674H

Port of origin: Shanghai, China

Port of destination: New York, New York

Weight: 12,342 lbs

Contents: 432 parcels

Global trade Item number: GK145L8

Category: Consumer goods

Manufacturer: ABC Garment Co.,LTD

Fabrication location: Fujian, China

Fabrication date: July 9, 2017

Shipping date: September 14, 2017

Details: Retail garment, women's jeans

Fit: Regular, Slim, Plus

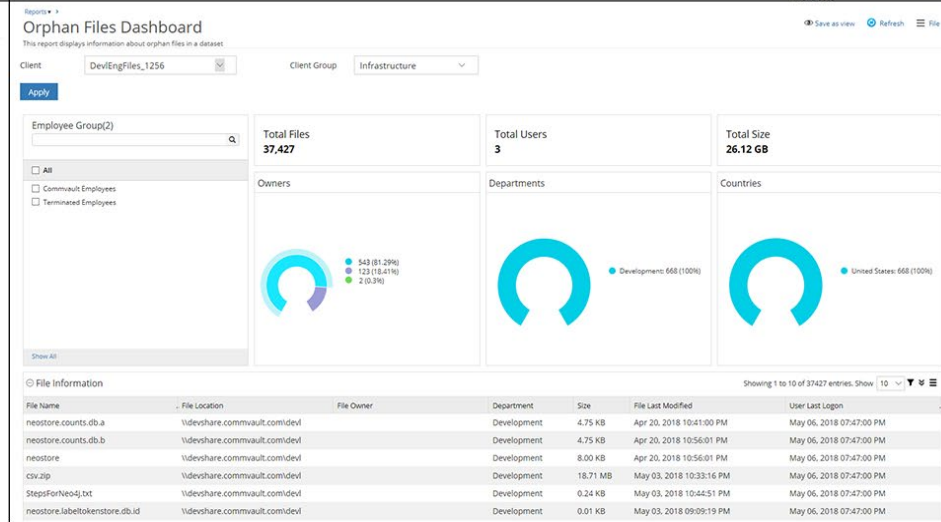
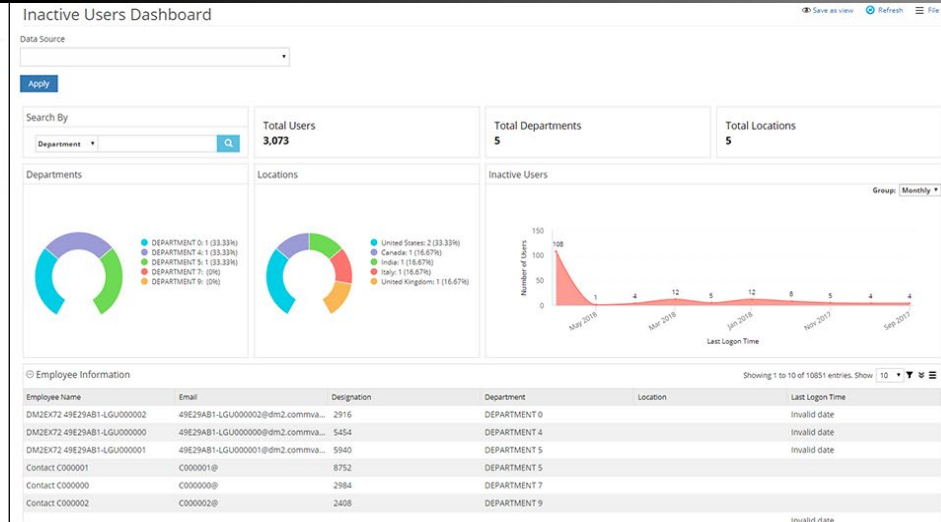
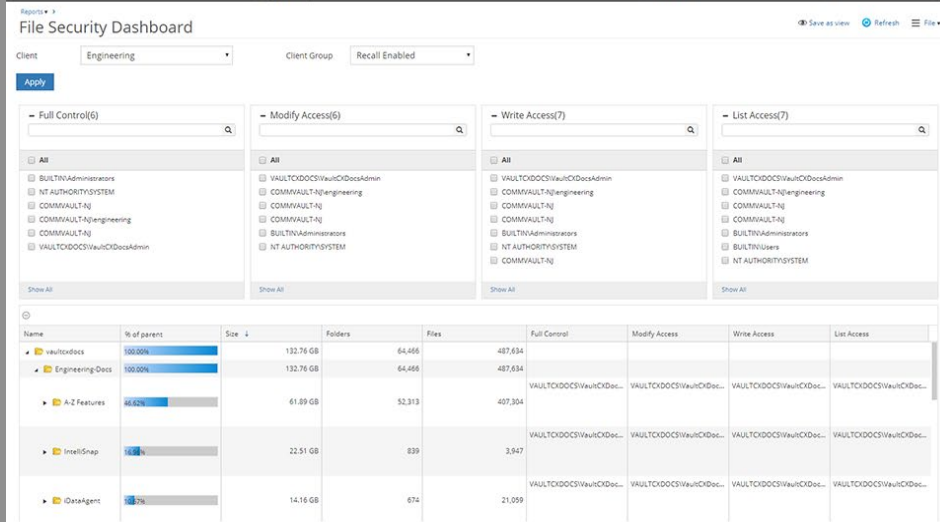
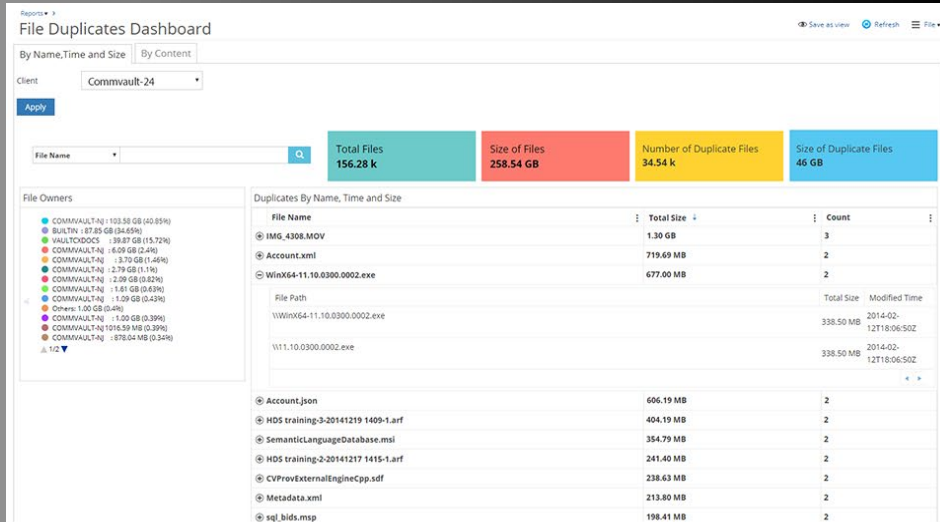
Gender: Women's

Color: Black, Blue

Amount: 24,325

Sizes: 24/25, 26/27, 28/29, 30/31, 32/33,34/35

Profile Data to Improve Resource Utilization



How many copies of my data?

Who has access to the data?

Who should be cleaned out of our records?

Does the data still have an owner?

Decide where to store and secure data while adhering to governance needs

My Applications



My Data
Backup, restore and sync your data



CommCell Dashboard
Overview of your data infrastructure environment



Reports
View, create, share reports



Download Center
Download your software



Virtual Machines
Manage your virtual machines



Events Organizer
Organize events and surveys



Forms
Perform tasks



Monitoring
Monitor and manage hardware, system events, and more in real time



Manage Databases
Clone and query MSSQL databases



Storage Replication
Replication of data between two files



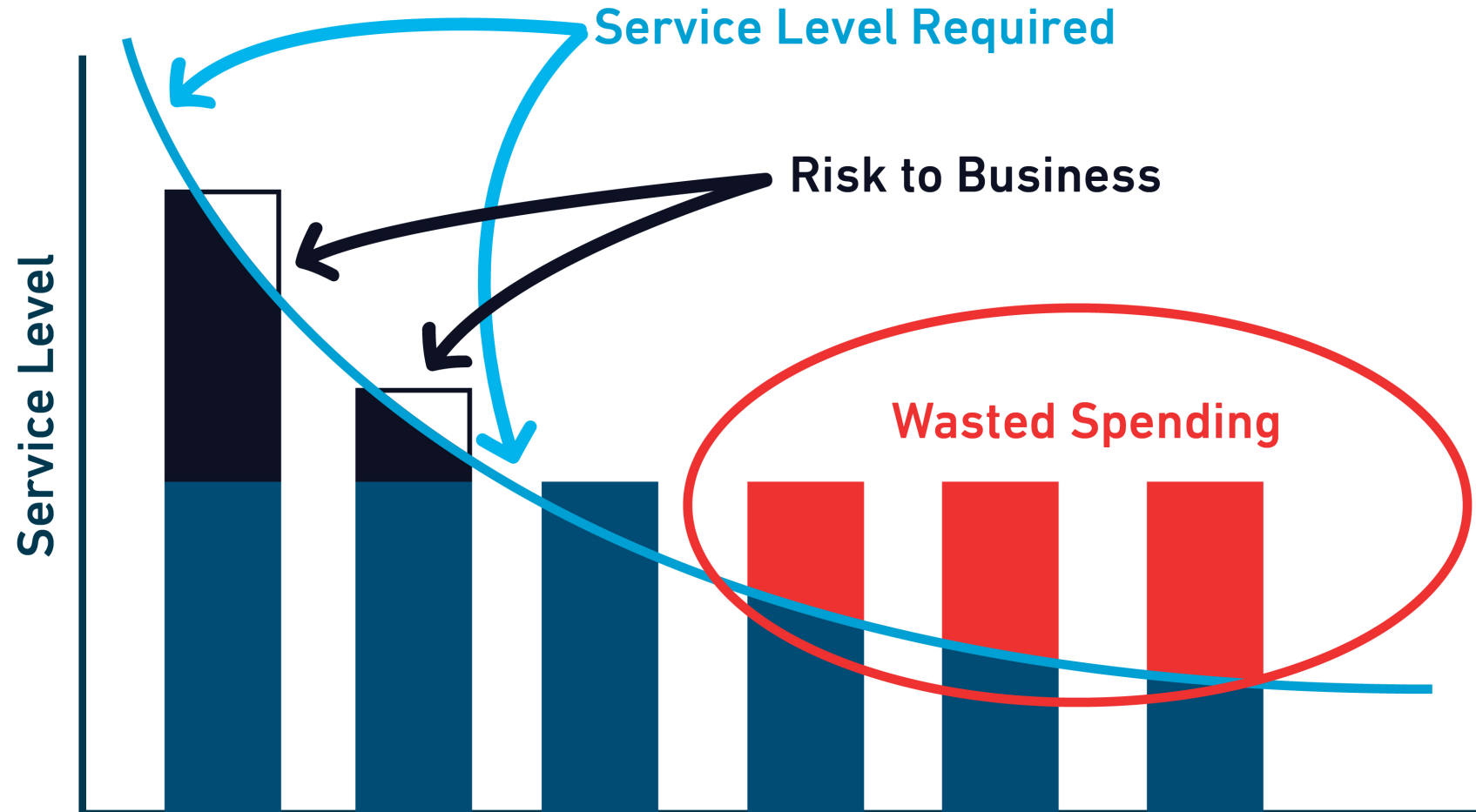
Analytics
Intelligent data exploration, discovery and visualization



Apps
Build your own apps

► Is there a link between IT and business?

Does the service level provided meet the service level delivered?



► The Next step: Classify, clean-up and sanitize

An opportunity for cost and risk reduction

Data and content analytics: primary outcomes

- Lower runaway cost and increase efficiency
- Legacy information clean-up
- System retirement and upgrades

Migration to cloud

- Mitigate corporate risk
- Compliance
- Sensitive data (PII/PCI/PHI) remediation

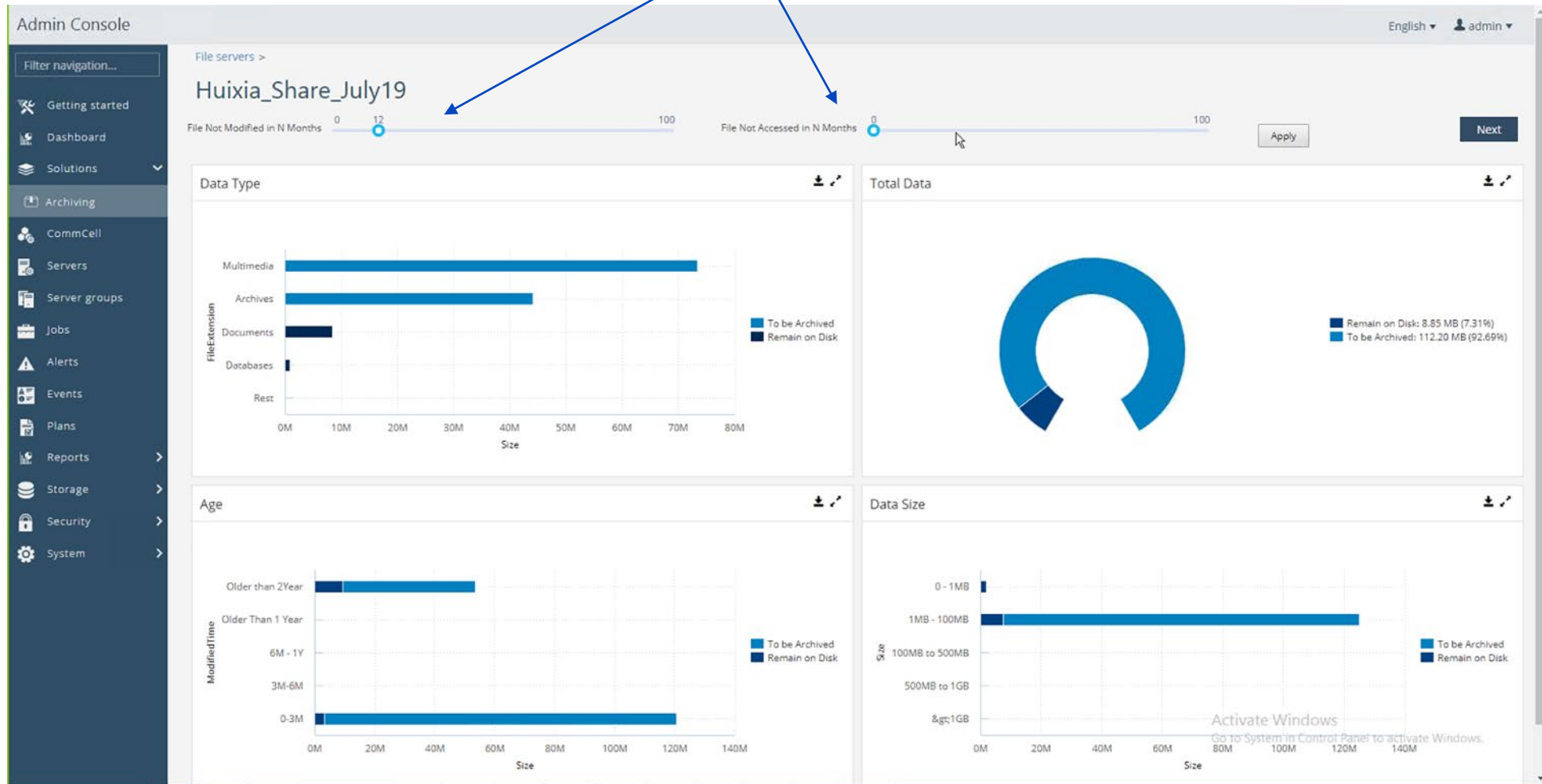
Record and content retention

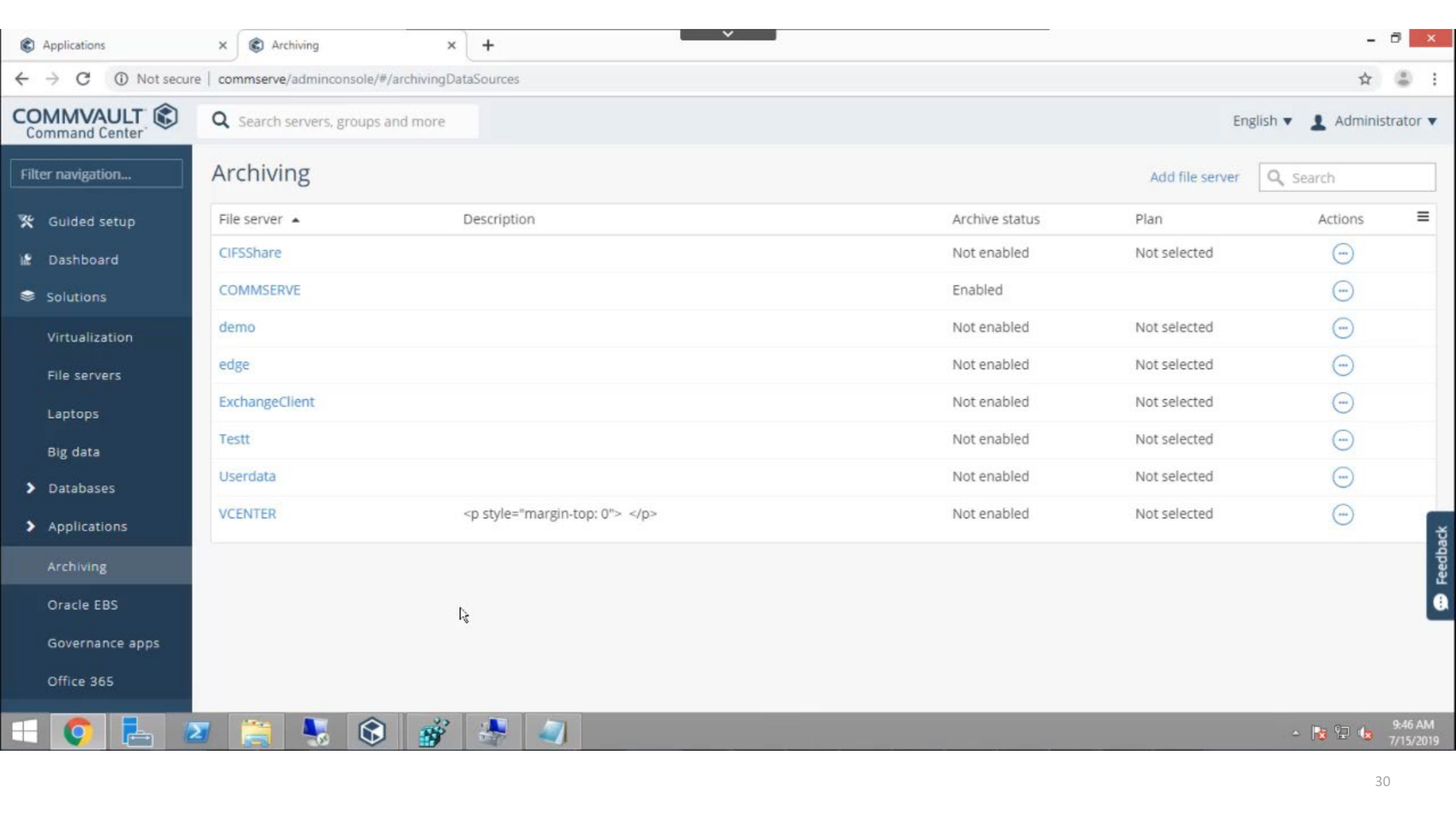


► Storage optimization – Take action

Modified and/or accessed date

Let's keep our storage clean by setting an Archive policy





Archiving

Add file server

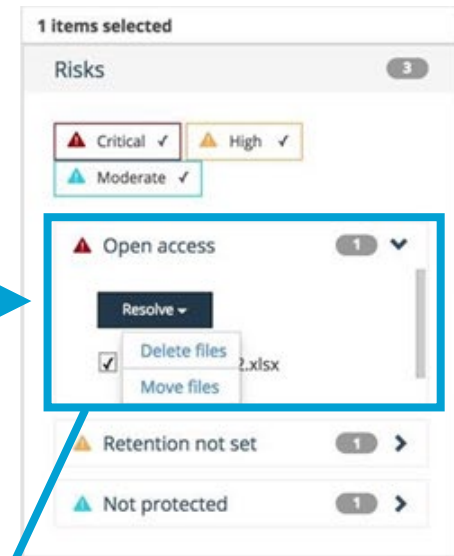
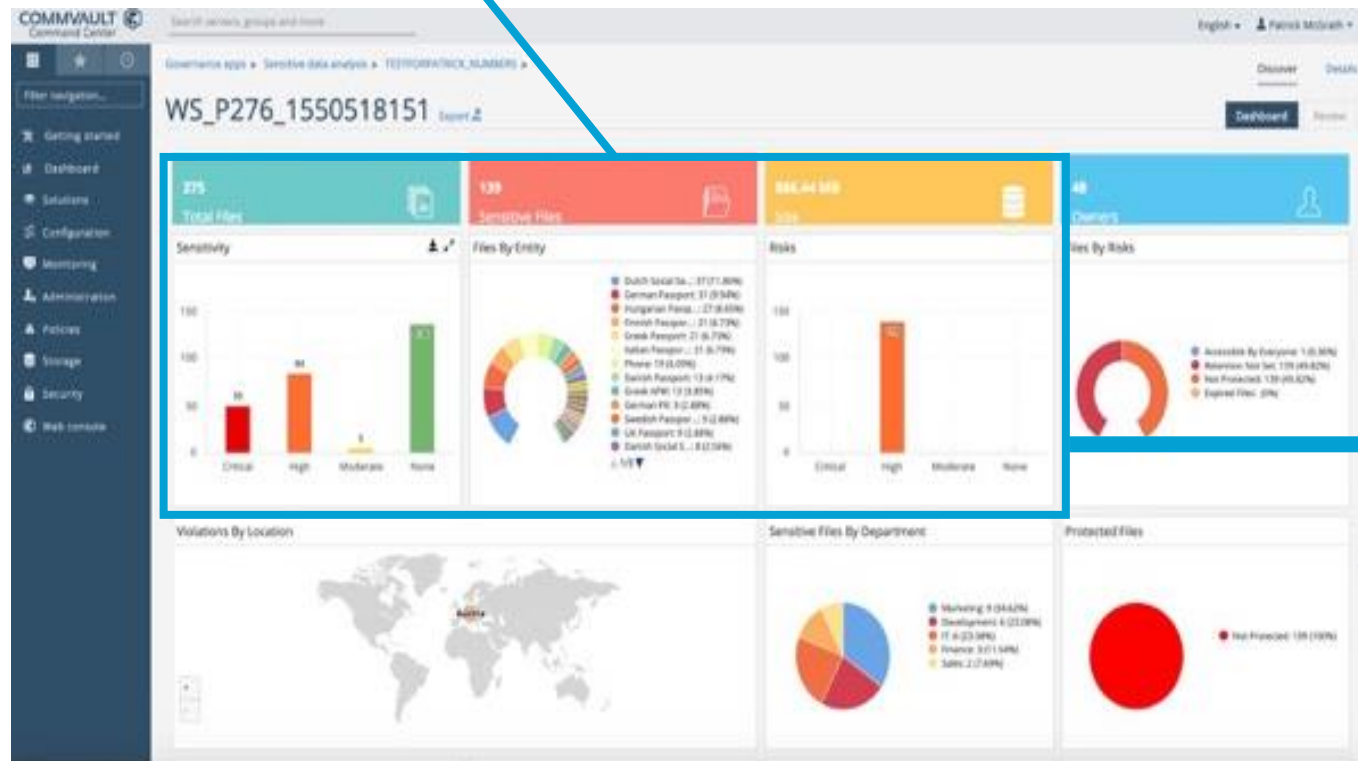
File server	Description	Archive status	Plan	Actions
CIFSShare		Not enabled	Not selected	⋮
COMMSERVE		Enabled		⋮
demo		Not enabled	Not selected	⋮
edge		Not enabled	Not selected	⋮
ExchangeClient		Not enabled	Not selected	⋮
Testt		Not enabled	Not selected	⋮
Userdata		Not enabled	Not selected	⋮
VCENTER	<p style="margin-top: 0"> </p>	Not enabled	Not selected	⋮

Feedback

► Immediately Identify High Risk Data & Act on It

Minimize risk by identifying sensitive data before it's a problem

Discover sensitive or personal data



Take action to minimize sensitive data risk



Project details | Applications | Overview Dashboard

localhost/adminconsole/#/overviewDashboard

English | Administrator

29 | 5 | 2 | 8

SERVICES | INFRASTRUCTURE MACHINES | JOBS

Filter navigation...

- Guided setup
- Dashboard
- Solutions
- Configuration
- Monitoring
- Reports
- Administration
- Storage
- Security
- Developer tools
- Web console

SLA

18%

MET: 3
MISSED: 13

[How to improve SLA](#)

Jobs in the last 24 hours

- 7 RUNNING
- 94 SUCCESS
DAY + 63
WEEK + 94
- 40 FAILED
DAY + 28
WEEK + 40
- 31 EVENTS

Health

- 6 CRITICAL
- 3 WARNING

Current capacity

BACKUP

USING 0.08 TB/2000 TB
You will run out of licensed capacity in Invalid date. Invalid date

ARCHIVE

USING 0.01 TB/2000 TB
You have enough capacity.

Disk space

DISK LIBRARY	TOTAL SPACE	USED SPACE	DATE TO BE FULL
Disk Library	150 GB	115.41 GB	Nov 14, 2019
Disk Library -...	80 GB	34.85 GB	Jun 08, 2020
Disk Library 2	80 GB	2.15 GB	Jul 25, 2028
disk3	80 GB	2.15 GB	Not Applicable

Top 5 largest servers

CLIENT	APPLICATION SIZE
EXCHANGE	26.49 GB
vmlinux	21.5 GB
vmwmsql	19.4 GB
vmwmsqlHV	18.49 GB
Template_VMWinSQL	12.12 GB

Storage

DISK LIBRARY
60 GB

SPACE SAVINGS
69.5%

Feedback

Windows taskbar: 5:33 AM 8/9/2019

► Access Management

Minimize risk by identifying access

- Who has Access?
- Filters per Machine
- Filters per user
- Update user permissions
- Audit trail

The screenshot displays the Commvault Command Center interface. The top navigation bar includes the logo, a search bar, and the user name 'Michael Leonard'. The left sidebar contains navigation options like 'Guided setup', 'Dashboard', 'Solutions', 'Configuration', 'Monitoring', 'Reports', 'Administration', 'Storage', 'Security', 'Developer tools', 'Web console', and 'My apps'. The main content area is titled 'Entitlement management' and shows a tree view of a file system path 'E: > Workfiles > randqn_gmdir'. A table on the right shows the permissions for this directory, including 'Full control' for BUILTINAdministrators and 'Read' for CREATOR OWNER. A 'Review changes' button is visible at the bottom right.

COMMVAULT Command Center

Search servers, groups and more

English Michael Leonard

Governance apps / Entitlement management

gdprma x Apply Filters

E: > Workfiles > randqn_gmdir

Permissions Activity

Name	Permission	
BUILTINAdministrators	Full control	+
CREATOR OWNER	Read	-
Permissions for CREATOR OWNER		
Full control	<input type="checkbox"/>	<input type="checkbox"/>
Modify	<input type="checkbox"/>	<input type="checkbox"/>
Read & execute	<input type="checkbox"/>	<input type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Write	<input type="checkbox"/>	<input type="checkbox"/>
NT AUTHORITY\SYSTEM	Full control	+
BUILTINUsers	Read & execute	+

Add new user

Review changes

Find Data and Respond to Requests

- Collect and index relevant fields from applications and files
- Use search for text, open text fields or structured fields
- Federate multiple sources in a single view
- Return fields that provide context

The screenshot displays a search interface with the following components:

- Search Bar:** Contains the query "credit card policy".
- Search Engine:** Shows "DefaultSearchServerEngine (2649)" selected.
- Client:** Lists "All", "dpr2013-13spapp (1876)", and "DPR2013-MBXPXY01 (773)".
- File Type:** Lists "All", "pdf (1754)", "tmp (773)", "docx (105)", and "pptx (11)".
- From:** Lists "All", "Discover Card (218)", "Enron Announcements/Corp/Enron", "emailconfirm@180096hotel.com@", and "Schmidt Ann M. (54)".
- Search Results Table:** Columns include Title, Location, Size, and Modified Date. Results include "Corporate Credit Card Ag..." and "Concur Expense (XMS) C...".
- Document Preview:** Shows the PDF "Corporate Credit Card Agreement - US.pdf" with the Commvault logo and text: "Commvault is pleased to inform you that you are eligible to participate in our Corporate Credit Card Agreement with American Express. It represents trust in you and your empowerment as a responsible employee and protect company assets." and "Upon receipt of the Commvault Corporate Card, I, _____, agree to comply with the terms and conditions of this Agreement, the Commvault expense reimbursement policy (attached), the corporate credit card guidelines (attached), and the terms and conditions provided by American Express."

Search <<

Search

Search Engine ▲

- Engine1 (204)
- Enron (826)
- Journal Index (0)
- Mailbox Index (0)

Client ▲

- All
- EX (199)
- MA (5)

▼

File Type ▲

- All
- tmp (199)
- pdf (3)
- docx (2)

From ▲

- All
- [blurred]
- [blurred]
- [blurred]

Show [Files / Emails](#) [Download](#) [Export To](#) [Add To](#)

[Advanced Search](#) [Summary](#) [Save Query](#) [Search Within Results](#) [Full View](#) >>

<input type="checkbox"/>	Title	Location	Size	Modified Date
<input checked="" type="checkbox"/>	2017 ICD_C25-9_Code_PancreaticCan...	C:\tmp\IndexData	15 KB	1/9/2017 3:52 PM
<input type="checkbox"/>	Incretin based drugs and the risk of p...	C:\tmp\IndexData	110 KB	1/9/2017 3:52 PM
<input type="checkbox"/>	FAKE_SSN_DOC.pdf	E:\tmp\entities	88 KB	1/9/2017 3:49 PM
<input type="checkbox"/>	RE: TR - V10 - [blurred]	Archived from PST\TR	2 MB	12/3/2013 4:47 PM
<input type="checkbox"/>	RE: TR - V10 - [blurred]	Archived from PST\TR	1 MB	11/4/2013 2:36 AM
<input type="checkbox"/>	RE: TR - V10 - [blurred]	Archived from PST\TR	1 MB	10/29/2013 5:52 AM

Displaying 1 - 50 of 204 [Updated at 9:55 AM, 0 minute(s) ago] | 1 2 3 4 5 | ▶

2017 ICD_C25-9_Code_PancreaticCancer.docx

File Path [C:\tmp\IndexData](#)
Client Name [MA](#)

[Highlight Off](#)

Search



[Advanced Search](#)

Application initialized

► Summary

An opportunity to lower cost, increase efficiency and mitigate corporate risk

- Decision making is made easier when full context about the data is understood
- Context is metadata, and content and can be from multiple sources
- Visualization helps build stakeholder buy-in
- User role based visual applications can be built for ongoing management of cost and risk



Cost



Risk



On premises



Virtual



Endpoint



Hyperconverged



Private cloud



Hybrid cloud



Public cloud A



SaaS

Commvault | 
Data Platform

Backup



Disaster Recovery



Dev/Test



Archive



Compliance



eDiscovery



Migration



Analytics



Thank
you.