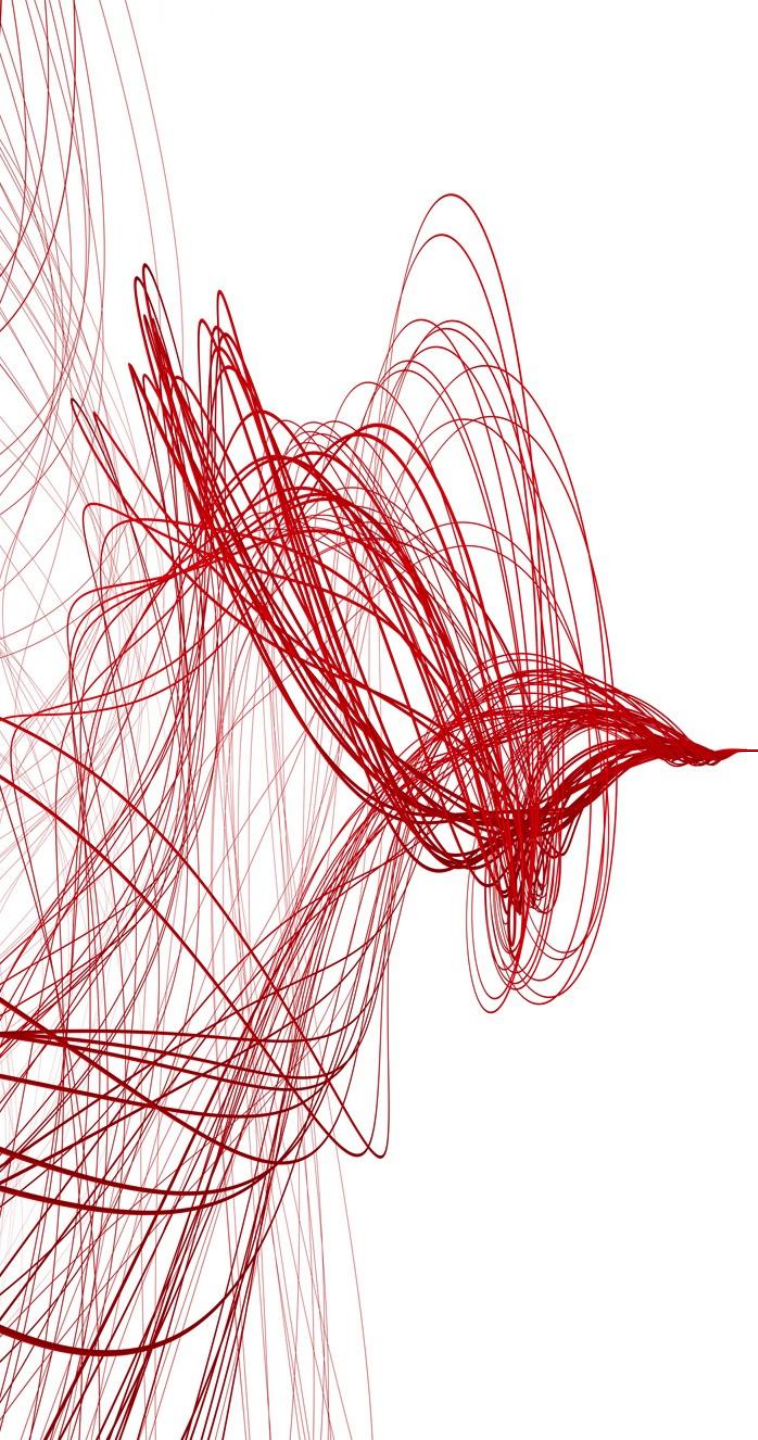


Availability Protection and Insights

Paris Kaskas

Technology Solutions Manager

VERITAS™

The truth in information.

Agenda

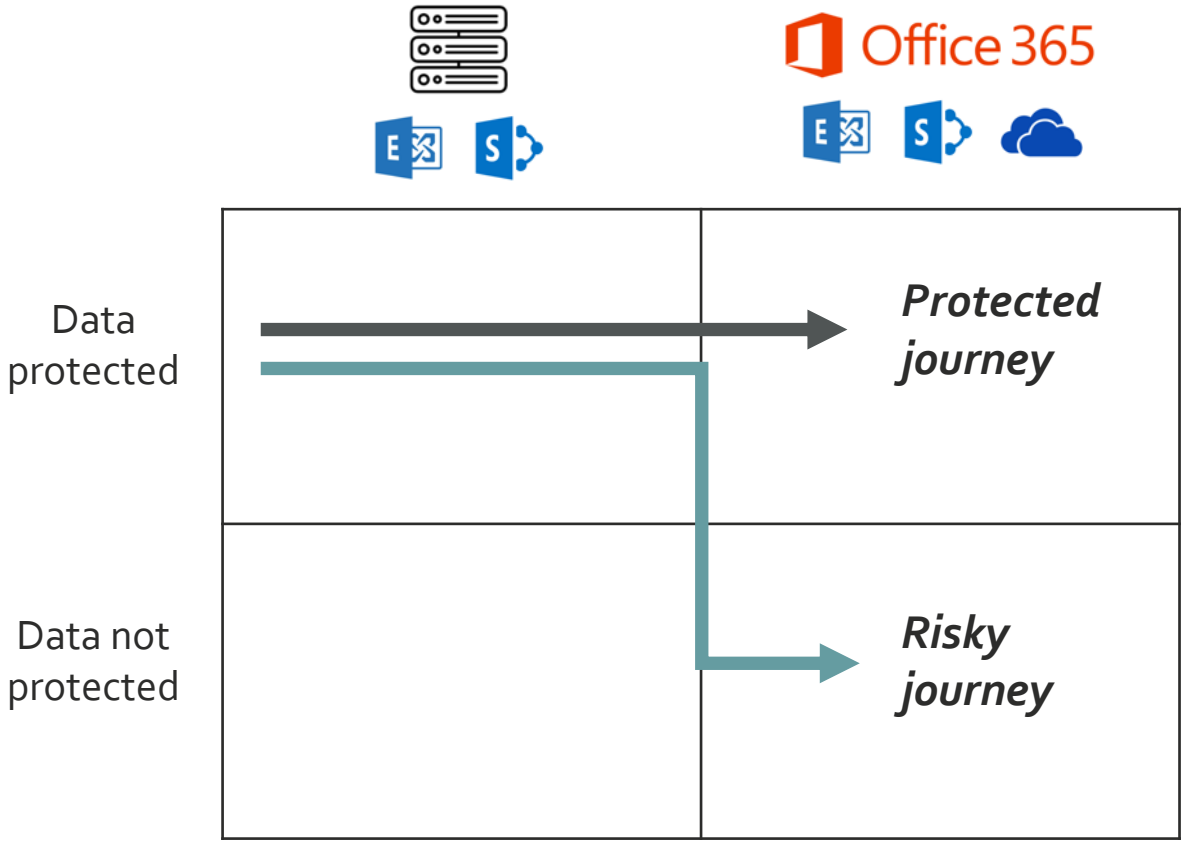
- SaaS Backup for O365
- Purpose Build Backup Appliance
- Business Continuity with Resiliency Platform
- IT Analytics with Chargeback and Capacity Planning

Office 365 Backup

VERITAS™

The truth in information.

2 types of data protection journeys are happening with the move to Office 365



Why are customers taking a risky journey with Office 365?

1. Belief that data protection is included
2. Belief that native data protection capabilities are good enough

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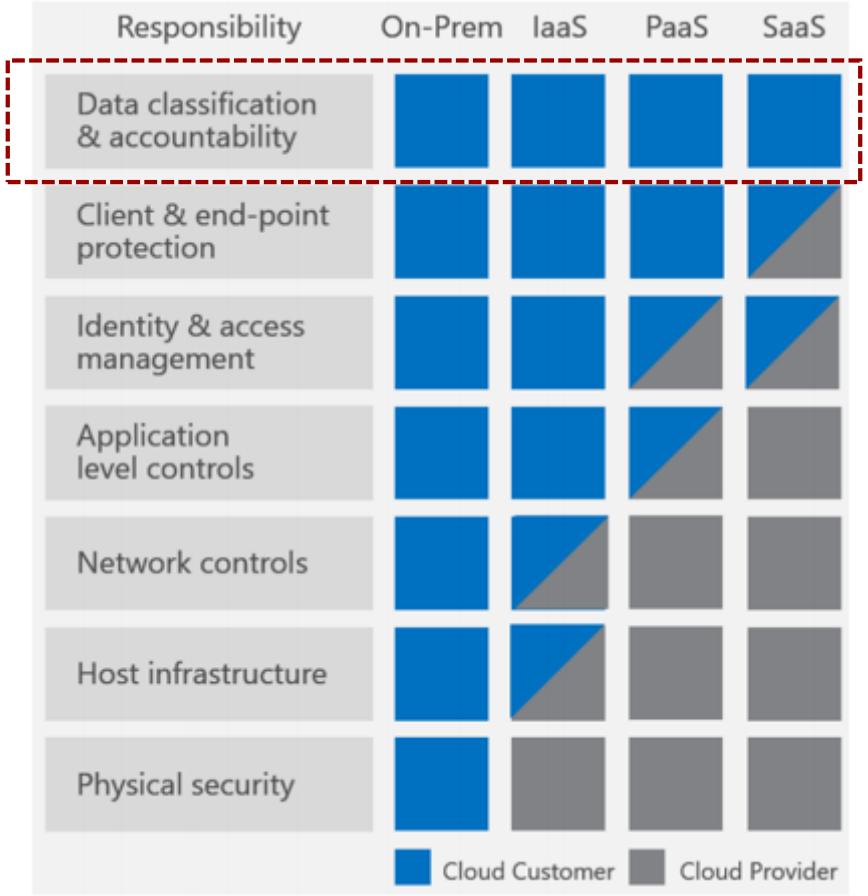
Microsoft states YOU are responsible for your data

Section 1d of the Microsoft Online Subscription Agreement

You are solely responsible for the content of all Customer Data…Microsoft does not and will not assume any obligations with respect to Customer Data…

Source: https://portal.office.com/Commerce/Mosa.aspx



Source: https://blogs.msdn.microsoft.com/azuresecurity/2016/04/18/what-does-shared-responsibility-in-the-cloud-mean/

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Office 365 native data protection is limited and relying on it comes with risk

1 Doesn't make a second copy

- Doesn't achieve 3-2-1 backup strategy
- Doesn't protect from ransomware

2 Doesn't keep deleted data for long

- 14 days retention default for Exchange
- 93 days retention default for OneDrive and SharePoint
- Possibility of permanently deleted data earlier than default periods

3 Litigation Hold is not a practical backup

- Designed to preserve data for eDisc purposes
- 20 minute complicated process to restore files
- Creates liabilities and increases costs

4 Restores are limited

- No point-in-time restores for Exchange
- Only up to 30 days and no granular recovery for for OneDrive/SharePoint
- Difficult to find deleted data in site collection recycle bin

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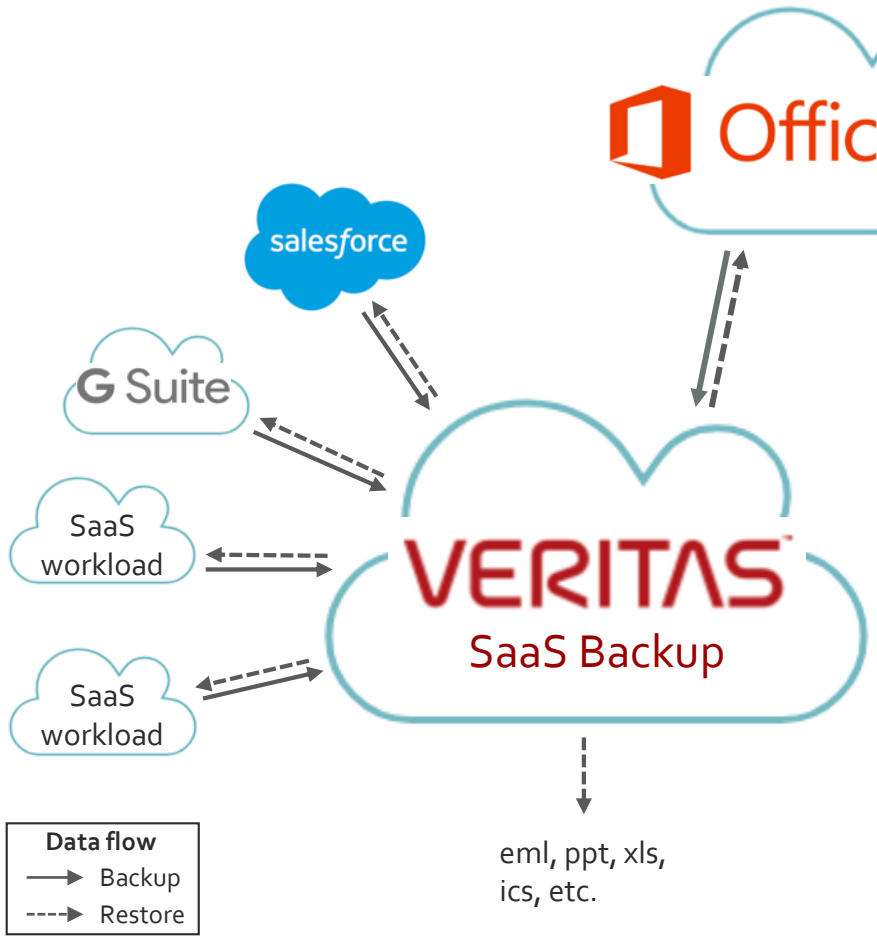
VERITAS SaaS Backup

Comprehensive Office 365 data protection and more



Exchange Online: Email, Calendar, Contacts, Tasks, Notes, In-place archive, Public Folder

OneDrive for Business: Full account, Folders, Files

SharePoint Online: Site Collections, Subsites, Lists, Folders, Files, Permissions, Columns, Content Types, Document Libraries

Groups & Teams: Conversations, Calendar, Files, Notebook, Planner, Modern Team Sites, Channels (wiki and chat)

Comprehensive, quick and simple backup

Setup: 2 minute setup, 3 step process

Backup: Automatic backups, up to 6 times a day

Restore: Multiple restore options, seconds to restore

Other features: nothing to install/deploy, automatic upgrades, role-based access control, set retention according to retention policy, email alerts

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SaaS Backup offerings

Hosted service
No hardware purchase required or software to install

Unlimited Storage
Save on storage costs

Unlimited retention
Retain data beyond SaaS vendor data retention limits

Per user, subscription based
Aligns to SaaS application vendors

Office 365 Backup

- Emails
- Calendar
- Contacts
- Tasks
- Shared mailbox
- In-place archive
- OneDrive
- SharePoint
- Groups & Teams
- Public folders

G-Suite Backup

- Emails
- Calendar
- Tasks
- Google drive
- Team drive
- Sites
- Docs

Salesforce Backup

- Accounts
- Contacts
- Leads
- Opportunities
- Activities
- Notes
- Cases
- Campaigns
- Customer fields on the above

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Purpose Build Backup Appliance

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Veritas NetBackup Appliances
Customer and Analyst Validation

Gartner®

14x

MQ Leader

30,000+

Customers

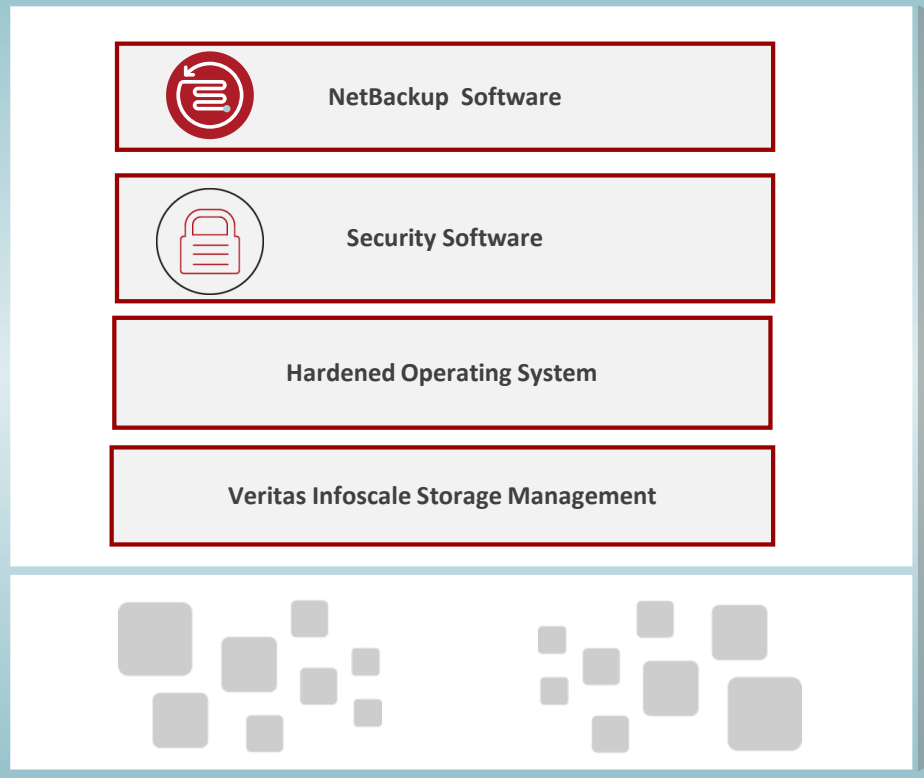
IDC

#1

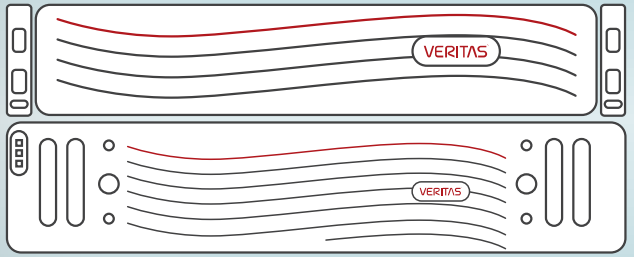
Market Share

The Value of Veritas Appliances: Optimized Integration

NetBackup Appliance Software Stack



Optimized Hardware Infrastructure



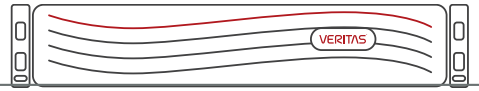
NetBackup Integrated Appliances

NetBackup Appliances

Veritas Flex Appliances

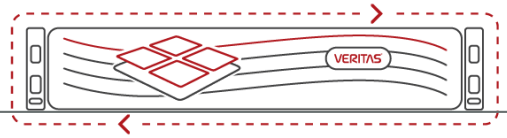
Consolidate at the core and protect at the edge

Veritas NetBackup Appliances



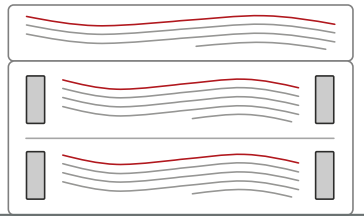
Optimized performance, fully featured NetBackup

NetBackup Virtual Appliances



Appliance ease of use for virtual environments

NetBackup Access LTR Appliances

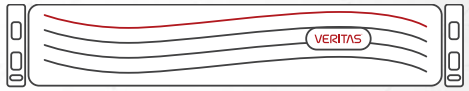


Cost effective, scalable long term retention

Protection for the Small and Medium Enterprise

- Cost Effective Integrated NetBackup Solutions
- Multiple capacity and performance options for diverse use cases

NetBackup 5240 Appliance



Scalable usable capacity from 27 to 294 TB

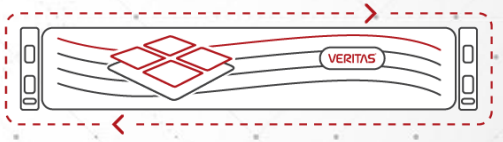
Throughput for multiple demanding workloads

Flex 5150 Appliance

Up to 14TBs

Compact 1U form-factor

NetBackup Virtual Appliances



Scalable capacity to 250TB

Versatile configuration options

Enterprise Data Protection at the Edge

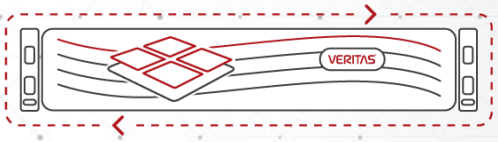
- Complete Integrated NetBackup System
- Efficiently replicate to the Central Data Center and the Cloud
- Easily support with limited IT resources

Flex 5150 Appliance

Cost Effective, Compact 1U form-factor

Easy deployment and upgrades with Flex Platform

NetBackup Virtual Appliance for Remote Office



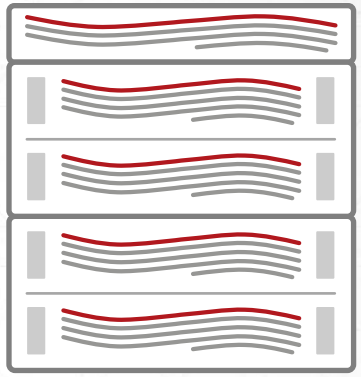
Leverage existing virtual environments

Quickly download and deploy in remote locations

Long-Term Retention

- Complete Integrated NetBackup System
- Efficiently replicate to the Central Data Center and the Cloud
- Easily support with limited IT resources

Access 3340 Appliance



Near-primary storage performance at the cost of tape and cloud

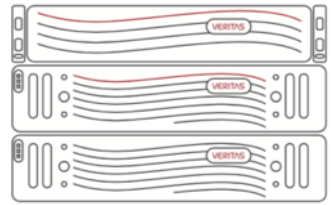
Complete integration with NetBackup for ease of use storage efficiency

Reduce RPO/RTO

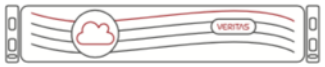
Veritas Appliance Family

Veritas Flex 5150
Enterprise protection
for the edge'

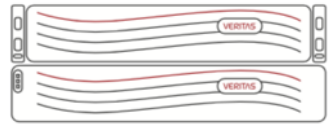
Access 3340
Long-term retention,
tap replacement and
backup archiving.



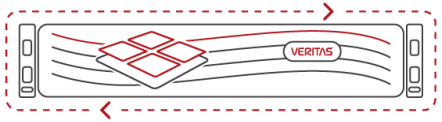
NetBackup 5340
Veritas Flex 5340
High-performance protection for
enterprise workloads. Large capacity, high
throughput and high availability.



NetBackup Cloud Catalyst
Efficiently move NetBackup
deduped data into/out of
public and private clouds.

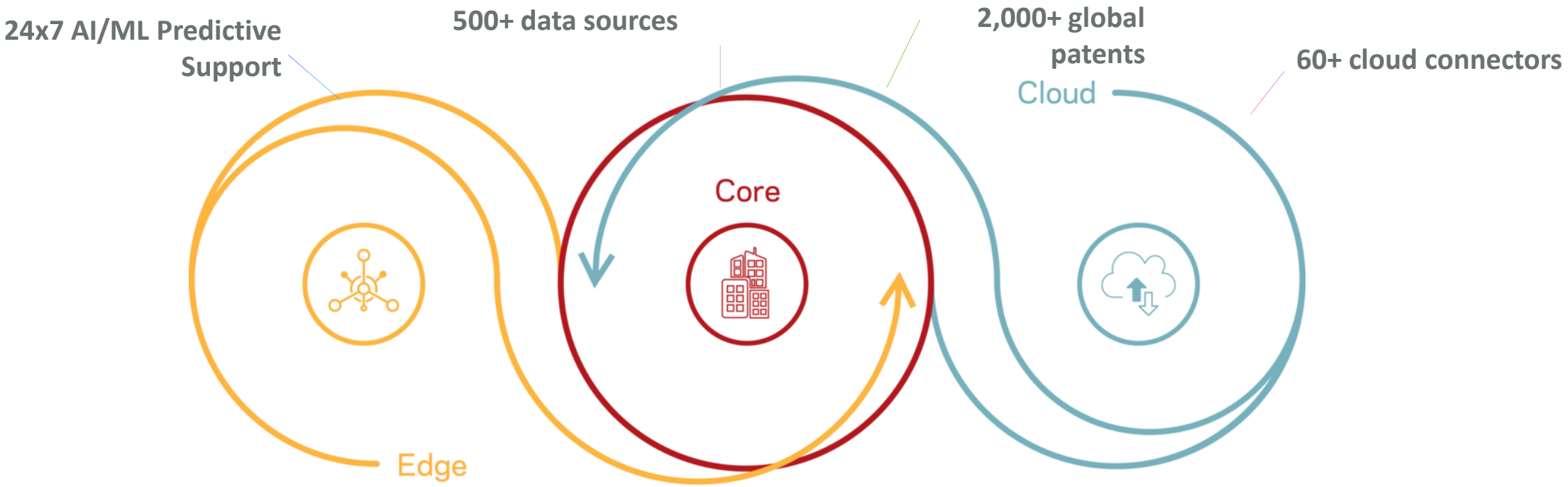


NetBackup 5240
Protection for small or
medium workloads.



NetBackup Virtual Appliances
Protection for remote offices
and the virtualized enterprise.

NetBackup Appliances



Gartner
14x MQ Leader

Recognized Leadership

IDC
#1 Market Share

99% of Fortune 100

86% of Fortune 500

VERITAS

Veritas Resiliency Platform

Business Continuity with Resiliency Platform

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Veritas Resiliency Platform

What Makes Us Different

Centralized management console

Built-in task automation & orchestration

Get business back online fast

Business-level reporting

Built-in encryption and deduplication

VERITAS

Why choose Veritas Resiliency Platform

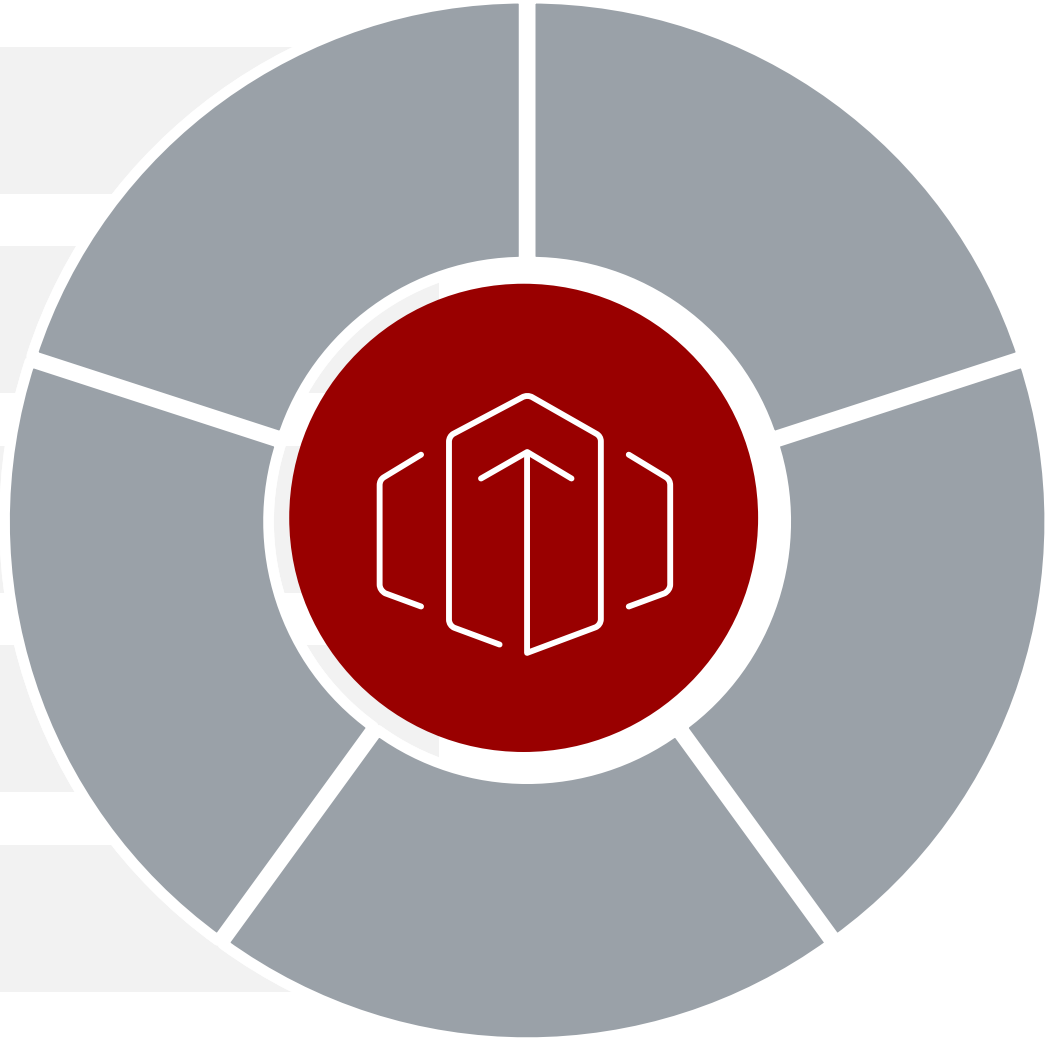
PREDICTABILITY : Meet ALL Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs)

COMPLIANCE: Be compliant to business continuity mandates with audit reports and non-disruptive recovery rehearsals

AUTOMATION: Automate recovery run books, and start, stop recovery orchestration for multi-tier applications

FLEXIBILITY: Easy integration into existing environment and cloud technologies

MOBILITY: Single-click workload mobility without time-consuming data conversions



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Threats to IT Resiliency

Logical

- Software defect
- User Error
- Data Corruption
- Ransomware
- External (DDoS)
- Internal (Sabotage)

Infrastructure

- Compute
- Storage
- Network
- Cloud Platform
- Environmental

Site Wide

- Utilities
- Telecom
- Catastrophic Weather
- Geological Event
- Personnel
- Political Unrest

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Challenges to Adopting IT Resiliency

Financial

Prioritizing investments in IT and justifying spend

Heterogeneous Infrastructure

Azure
NUTANIX
ORACLE
HUAWEI Cloud
openstack
docker
amazon web services
vmware

Establishing a unified continuity strategy across disparate technologies & platforms

Validation & Compliance

Ensuring your applications as well as your information are readily available at the time of a disaster

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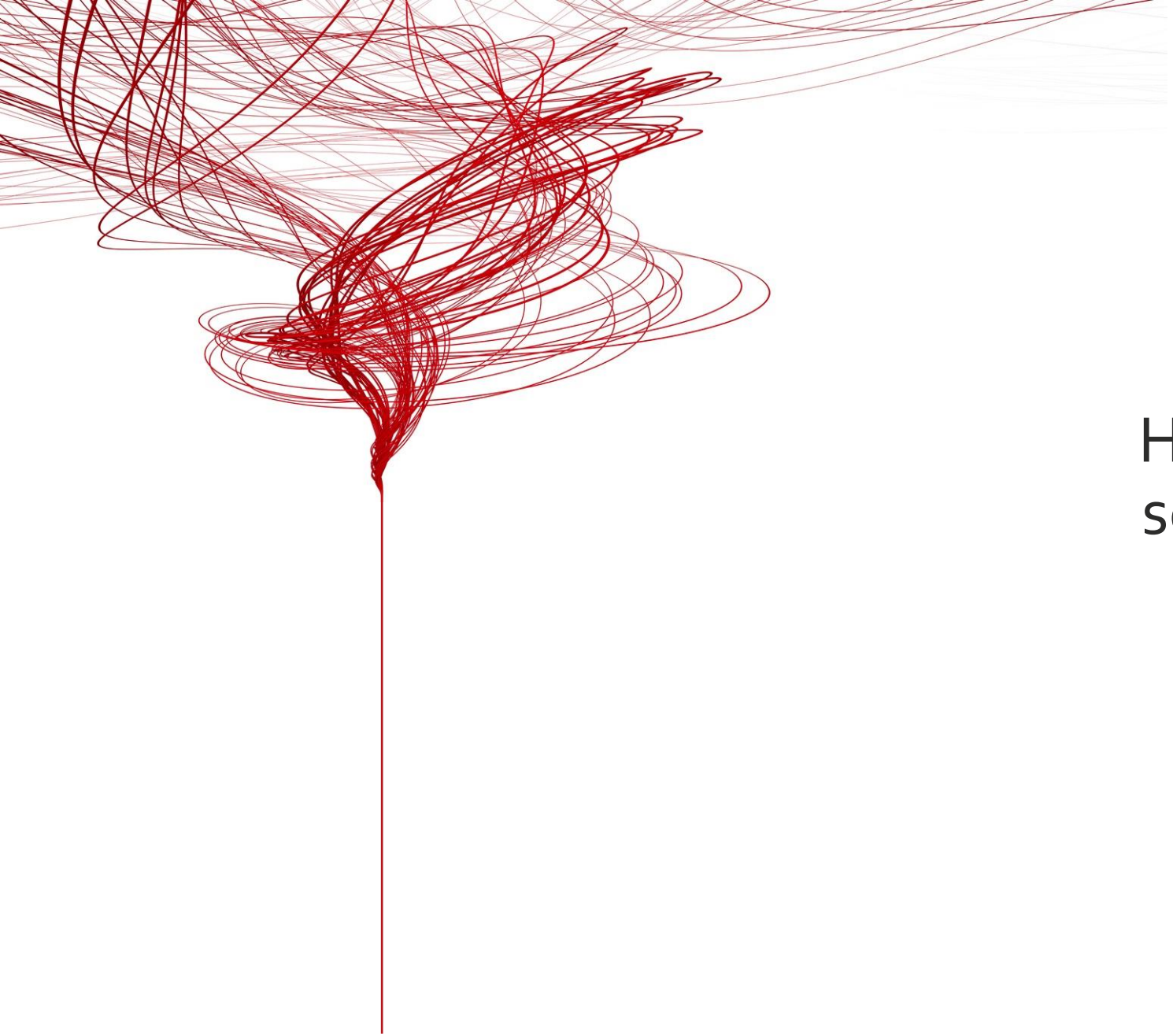

How does Resiliency Platform solve the Business Challenge?

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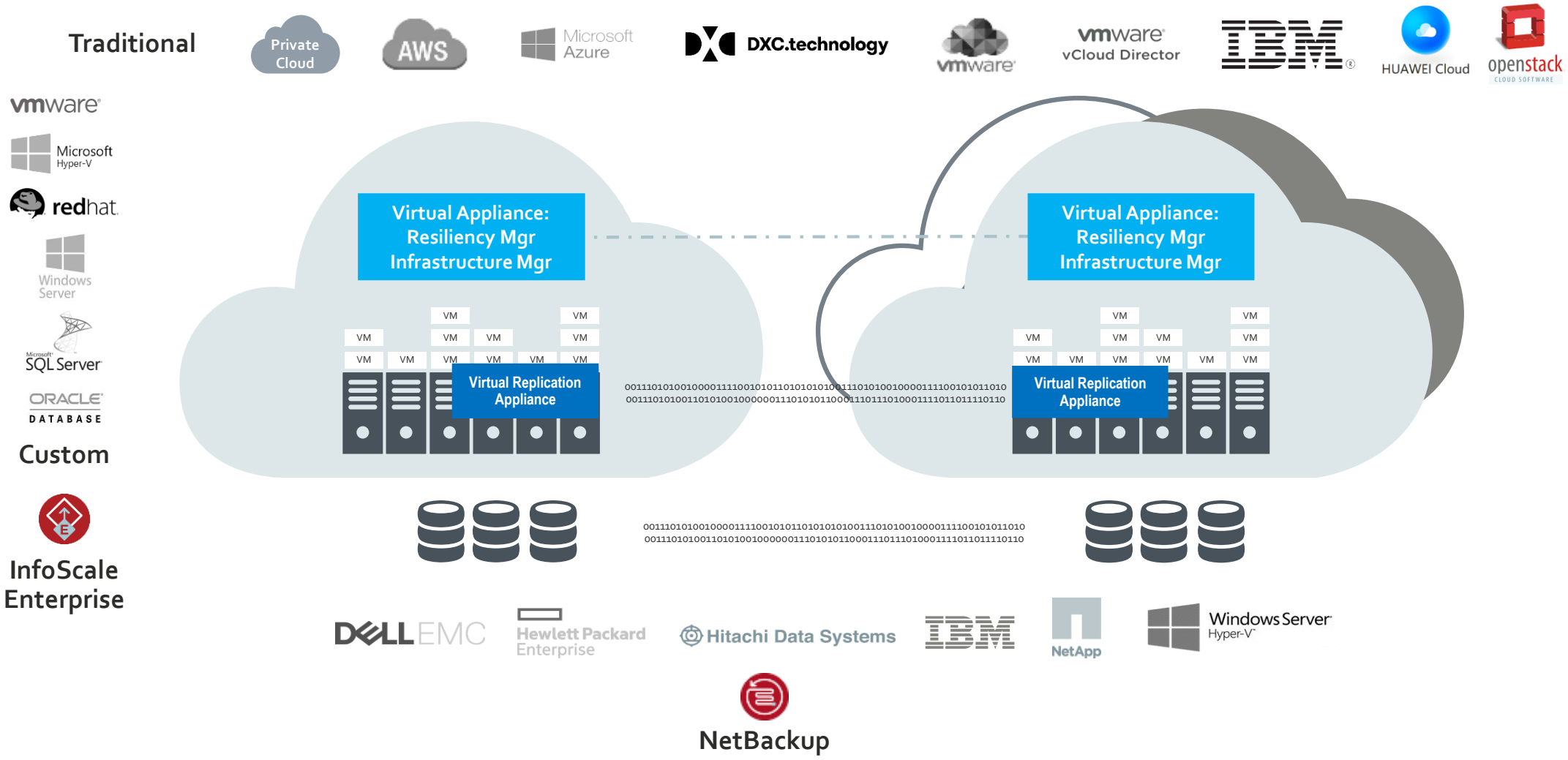
How Does Resiliency Platform Work In Your Environment?



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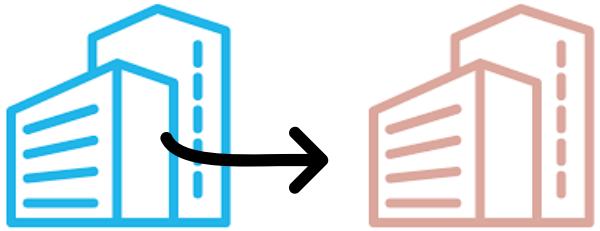
Primary Use Cases

On-premise VMware to On-premise VMware
On-premise Hyper-V to On-premise Hyper-V

1



On-premise VMware to Cloud
On-premise Hyper-V to Cloud

2

Azure

AWS

HUAWEI

openstack
CLOUD SOFTWARE

Service Providers offering DRaaS

3

vmware vCloud Director → vmware vCloud Director

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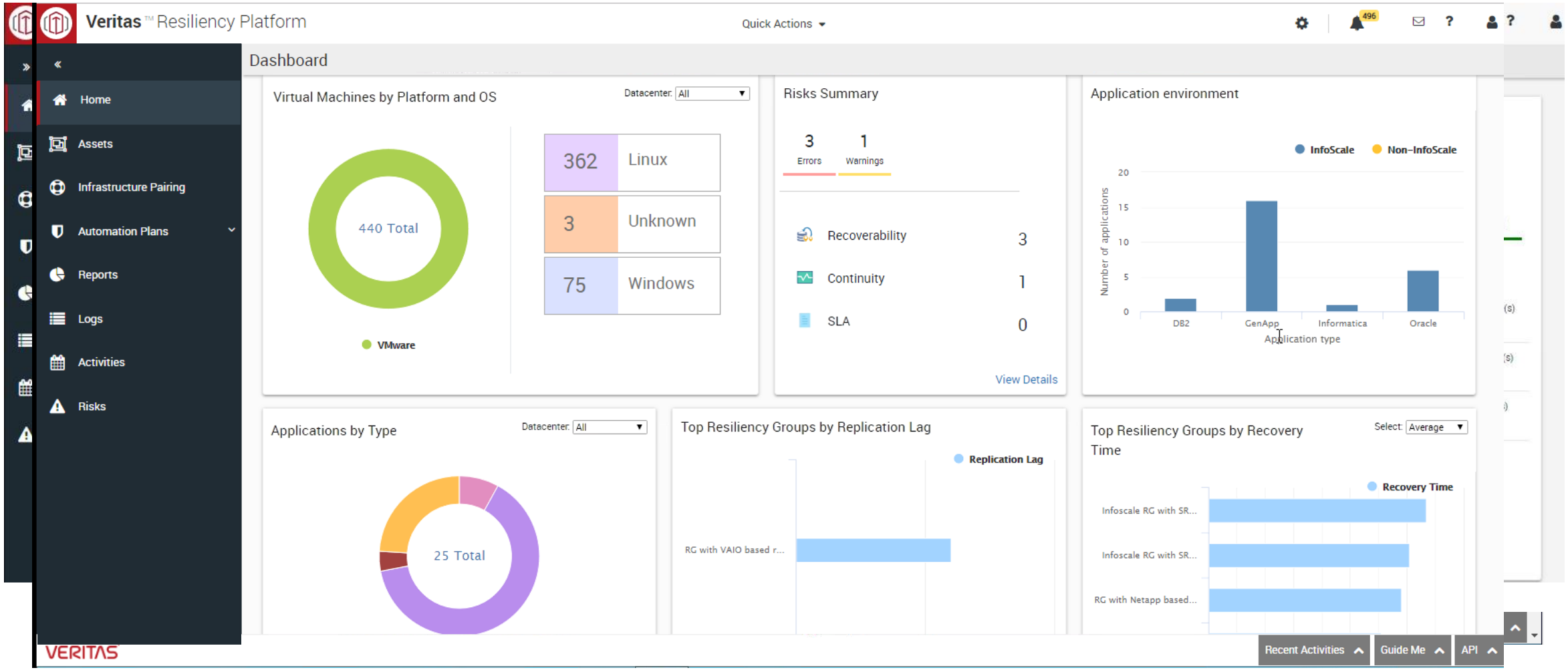
Key Features



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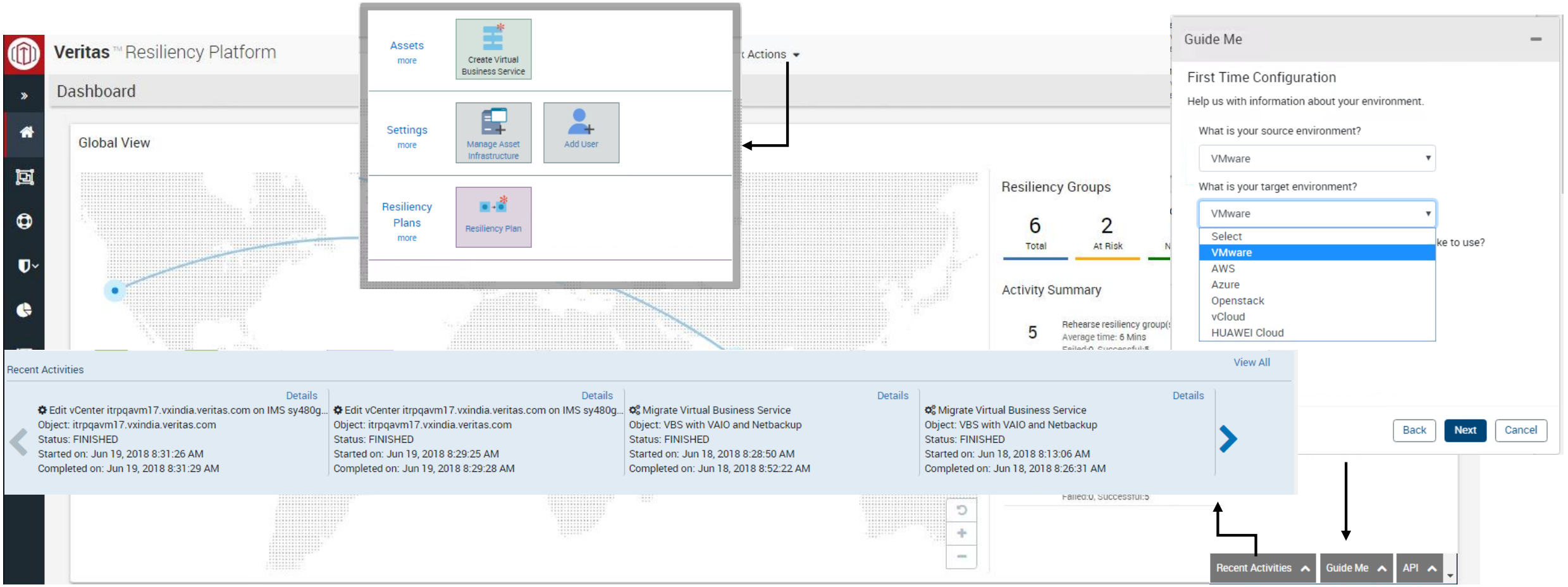
Simplified Configuration & Navigation



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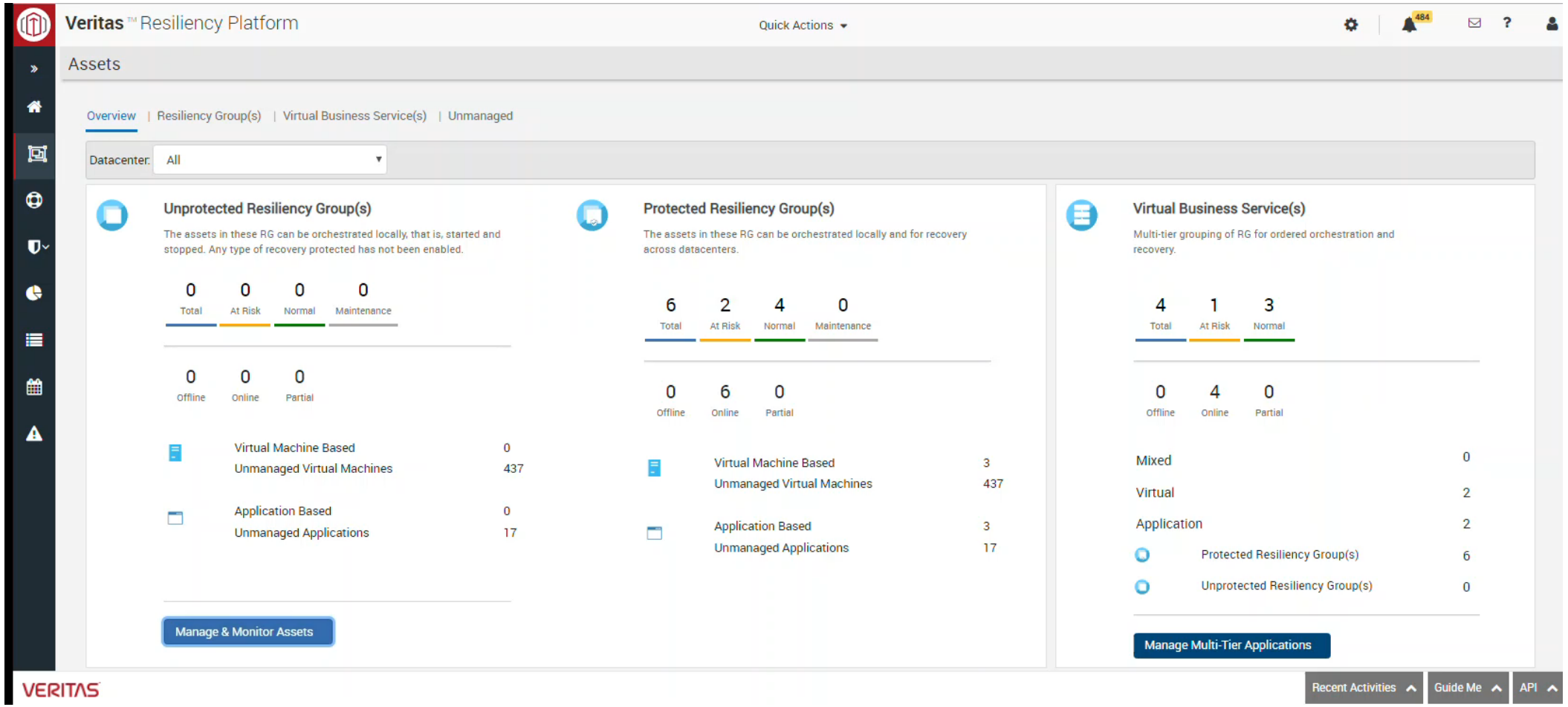
Resiliency Group Creation



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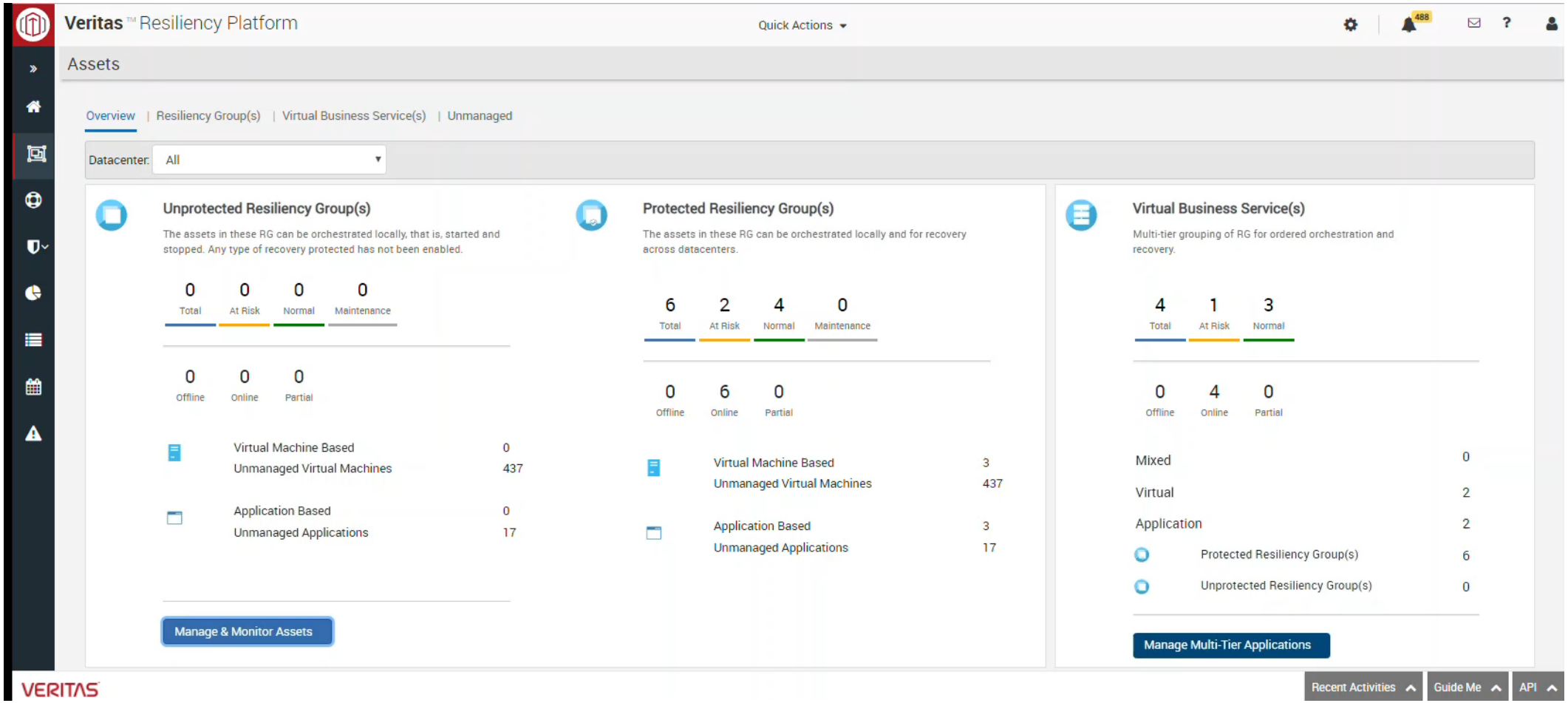
Virtual Business Services



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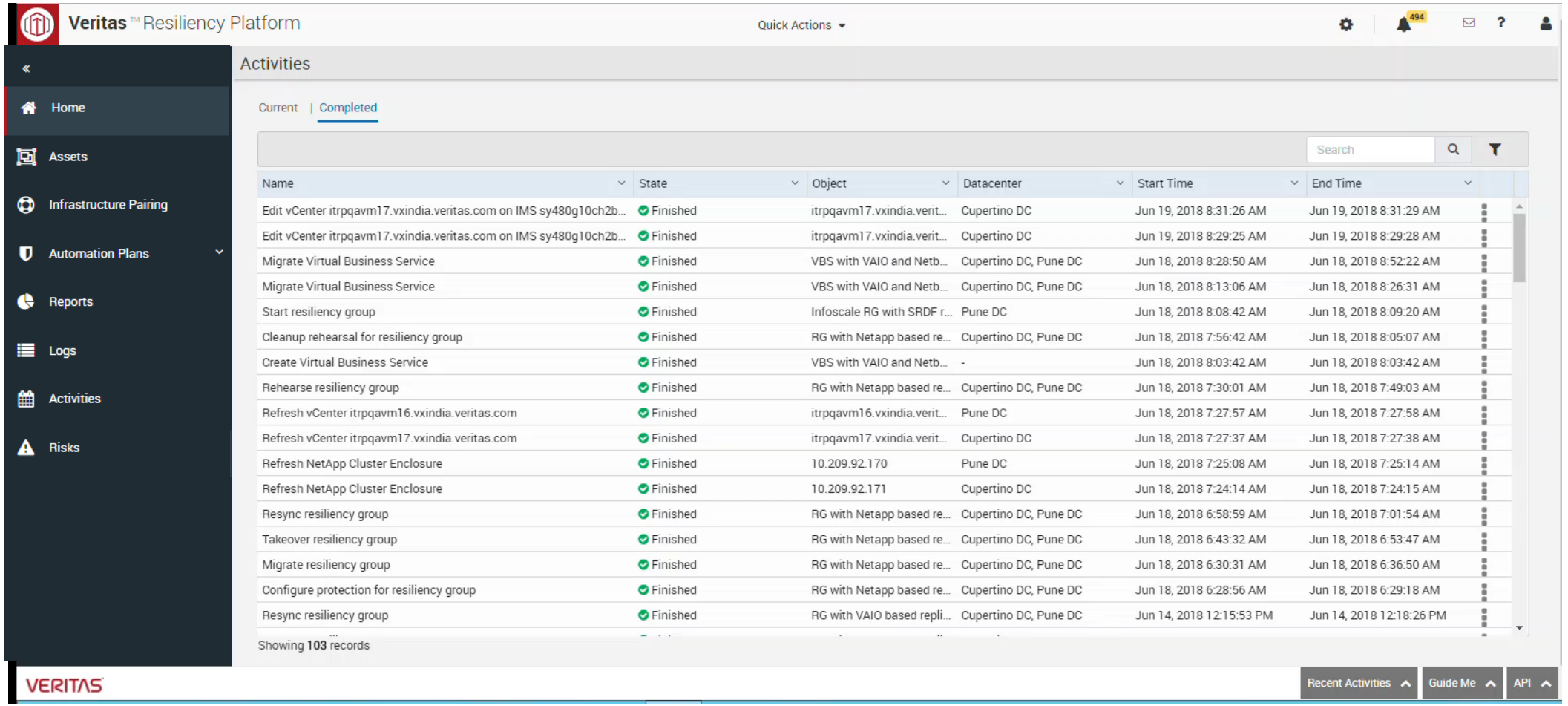
Reports: Activities & Risks



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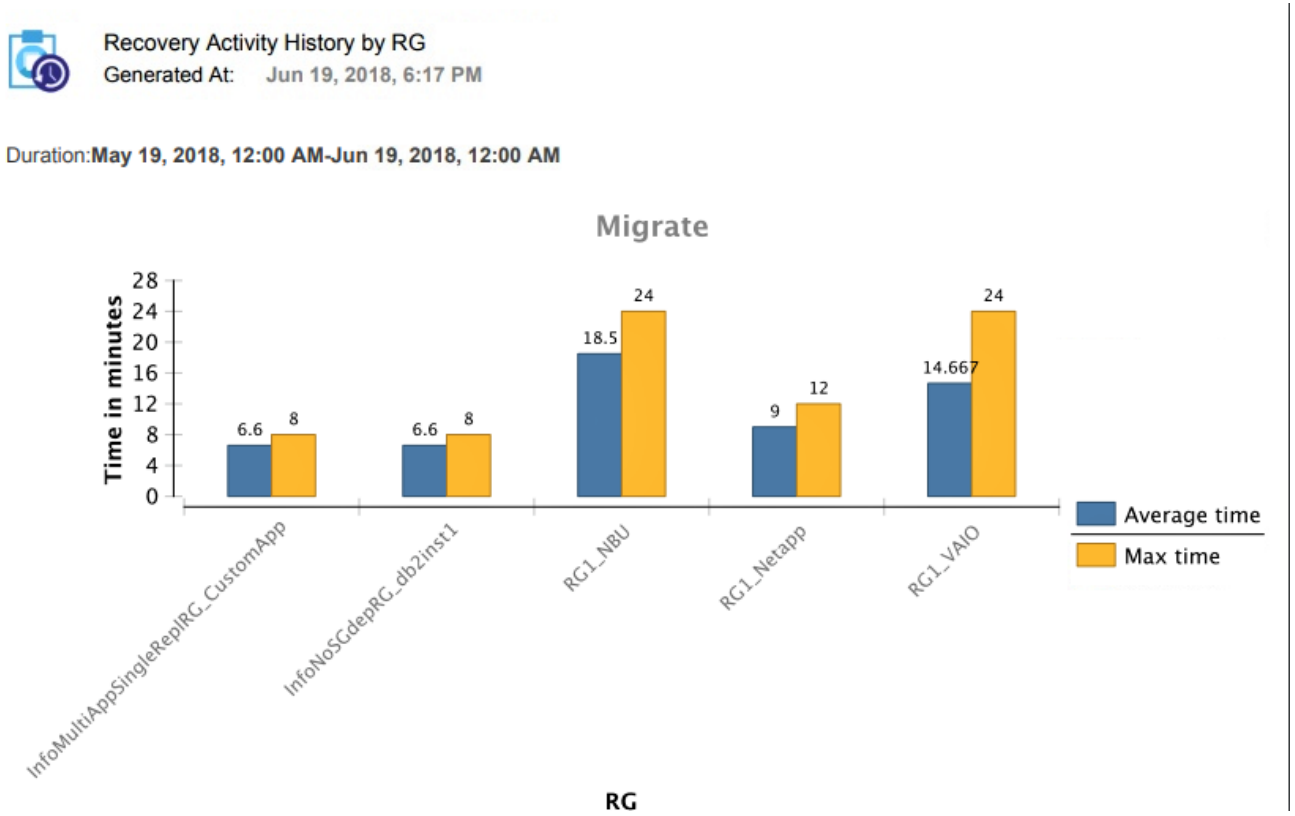
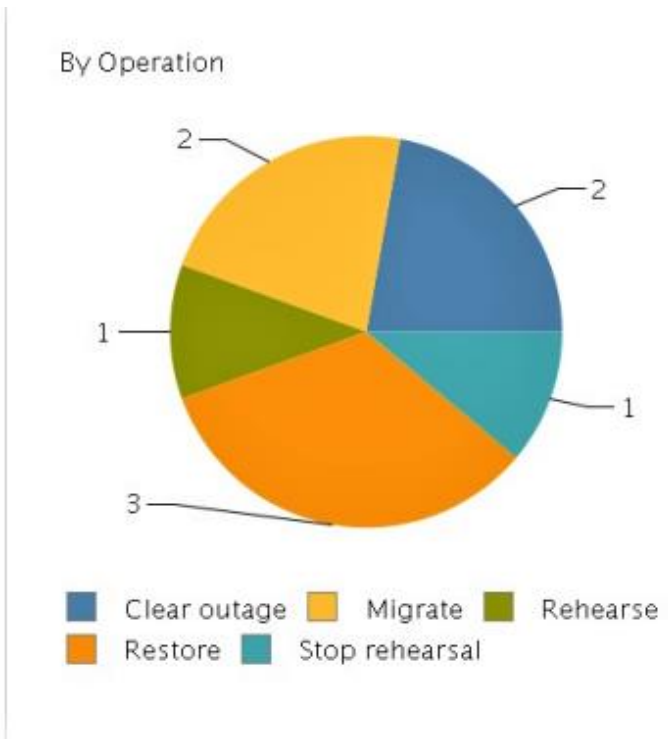
Scheduled Reports





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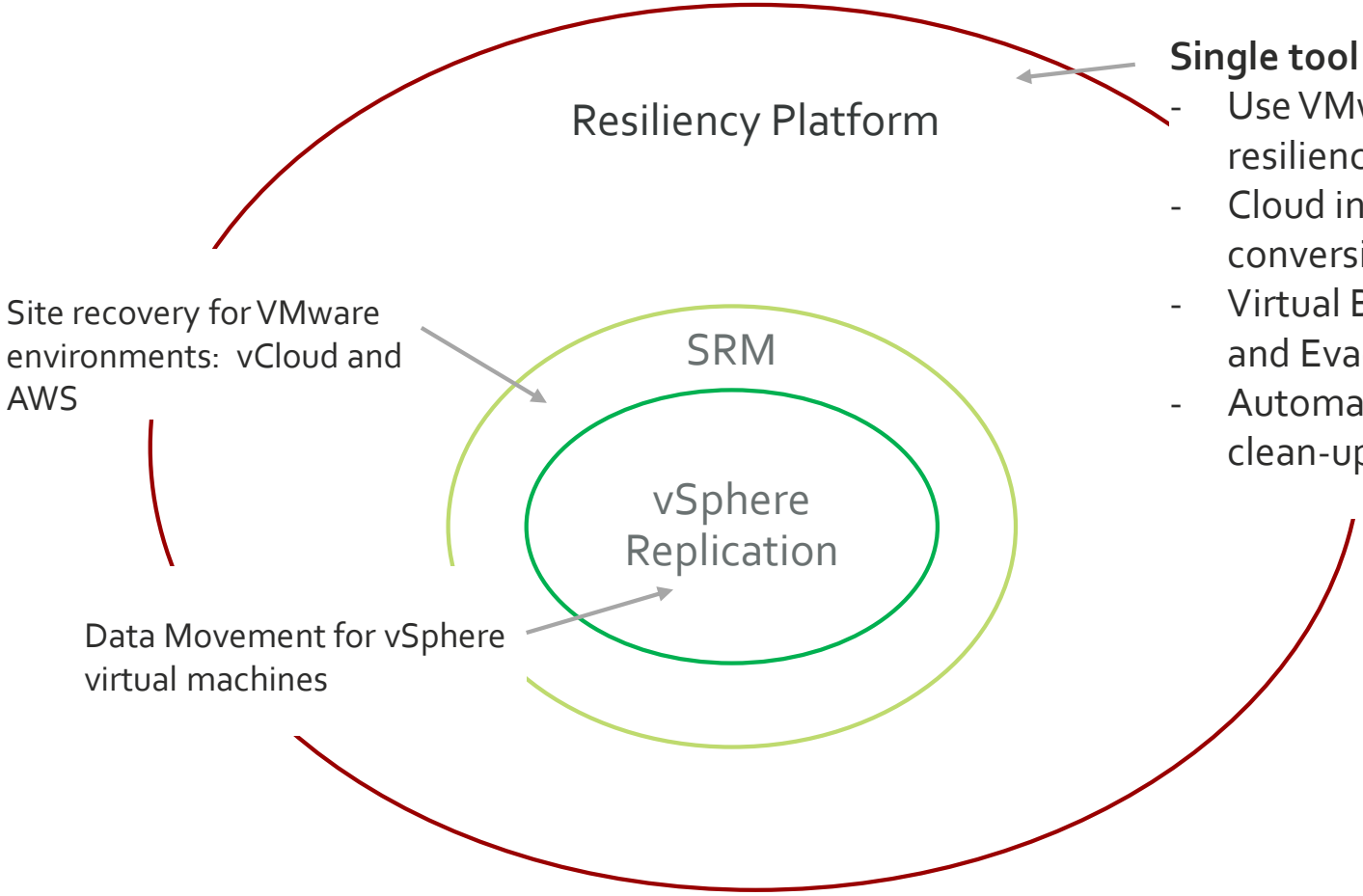
Comprehensive Resilience
VMware and Resiliency Platform



Single tool for multi cloud resilience

- Use VMware tools without compromising resilience
- Cloud integration with no format conversion
- Virtual Business Service, Resiliency and Evacuation Plans
- Automated Rehearsals and clean-up

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APTARE IT Analytics

IT Analytics with Chargeback and Capacity Planning

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What is APTARE IT Analytics?

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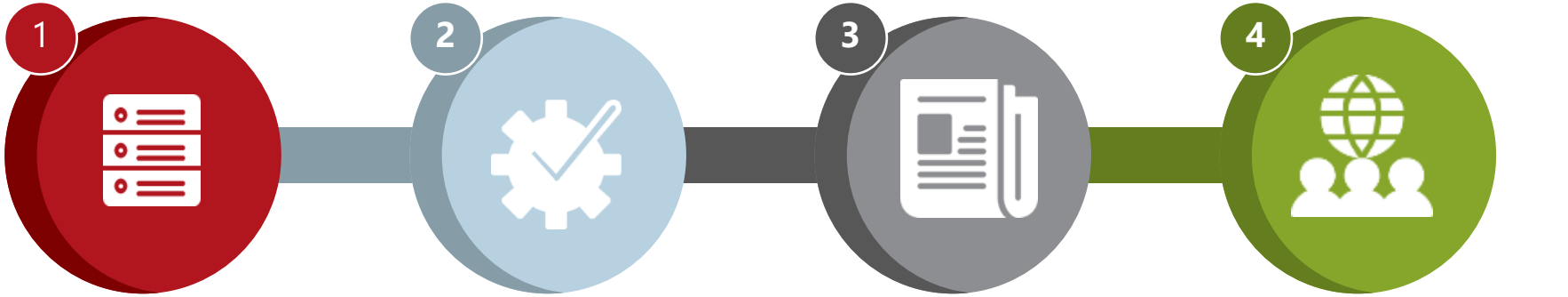
APTARE IT Analytics – How Does It Work?



Collect meta-data from IT assets On-Prem and in the Cloud (Applications, Backup, Hosts/VM's, Network & Storage)

Correlate that data to track full end-to-end IT relationships against business data

Present analytics and adaptive intelligence by business unit, or global on-prem and cloud IT environments.

Provide actionable insights to plan & optimize capacity, mitigate risk, streamline compliance and significantly reduce IT costs

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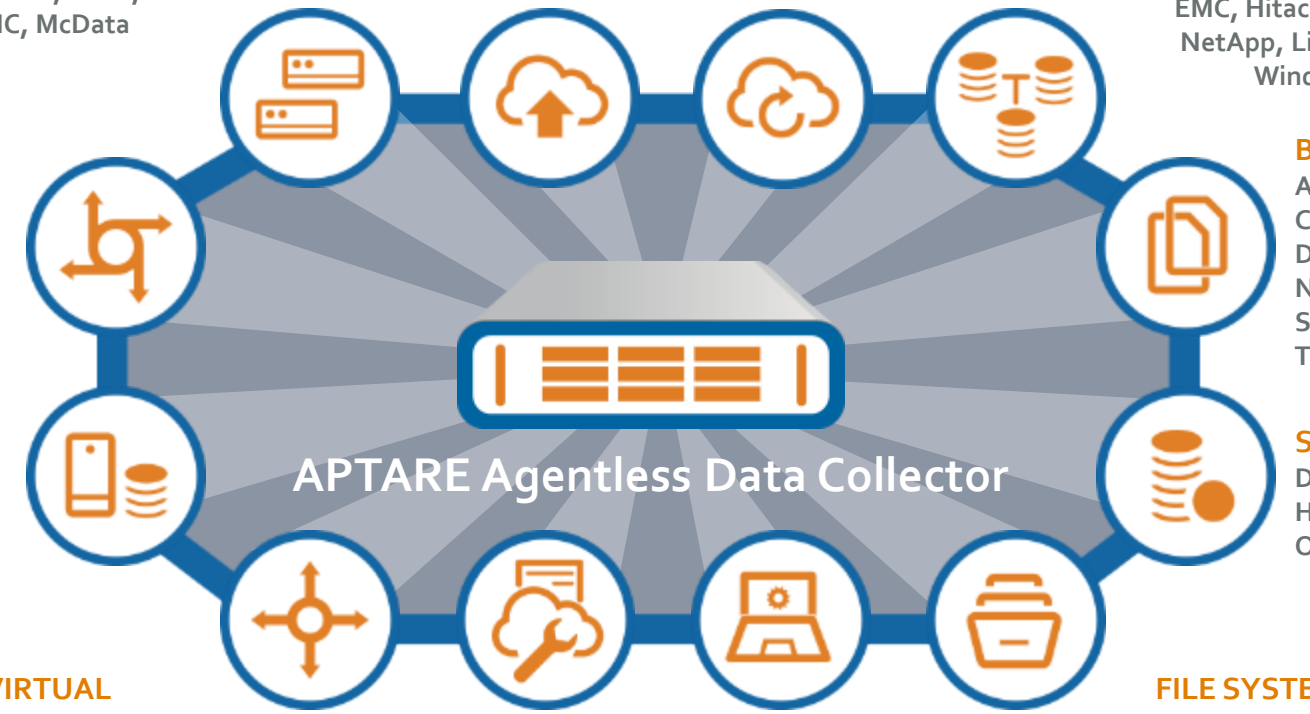
Data Collection: Agent-less



PUBLIC CLOUD
AWS
Azure

PRIVATE CLOUD
Dell, Cisco, EMC, Hitachi Vantara, IBM, OpenStack

SAN SWITCHES
Brocade, Cisco, EMC, McData

NETWORK STORAGE
EMC, Hitachi Vantara, NetApp, Linux, Unix, Windows

MULTI-PATHING
Device Mapper Multipath for Linux, EMC Powerpath, Hitachi Dynamic Link Manager, Veritas DMP

BACKUP/REPLICATION
Avamar, Azure Backup, Backup Exec, Cohesity, Data Domain, FlexClone, Data Protector, NetBackup, NetWorker, Oracle RMAN, Rubrik, Simpana, SnapMirror/SnapVault, Tivoli Storage Manager, Veeam

VOLUME MANAGERS
HP-UX, IBM AIX, Linux, Veritas Volume Manager

STORAGE
Dell EMC, Hitachi, HPE Huawei, IBM, INFINIDAT, NetApp, Oracle, Pure Storage

VIRTUAL ENVIRONMENTS
ESX, ESXi, vCenter, vSphere, IBM VIO, Solaris

SDK – BACKUP, STORAGE, CLOUD
Quickly create data connectors for emerging technologies

OPERATING SYSTEMS
Linux, Unix, Windows

FILE SYSTEMS & APPLICATIONS
Linux, Oracle, Unix, Veritas, Windows, SQL Server, Exchange

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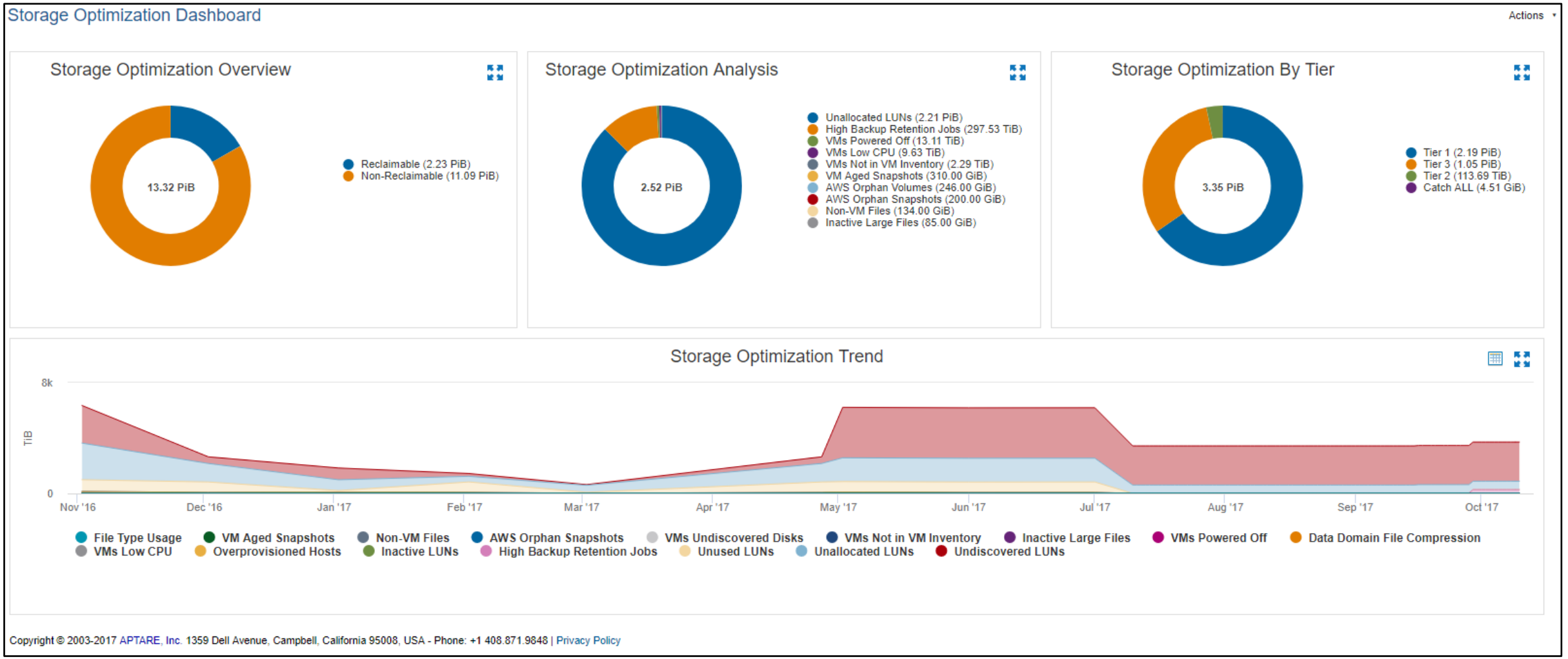
IT Resource Optimization / Reclamation Analytics



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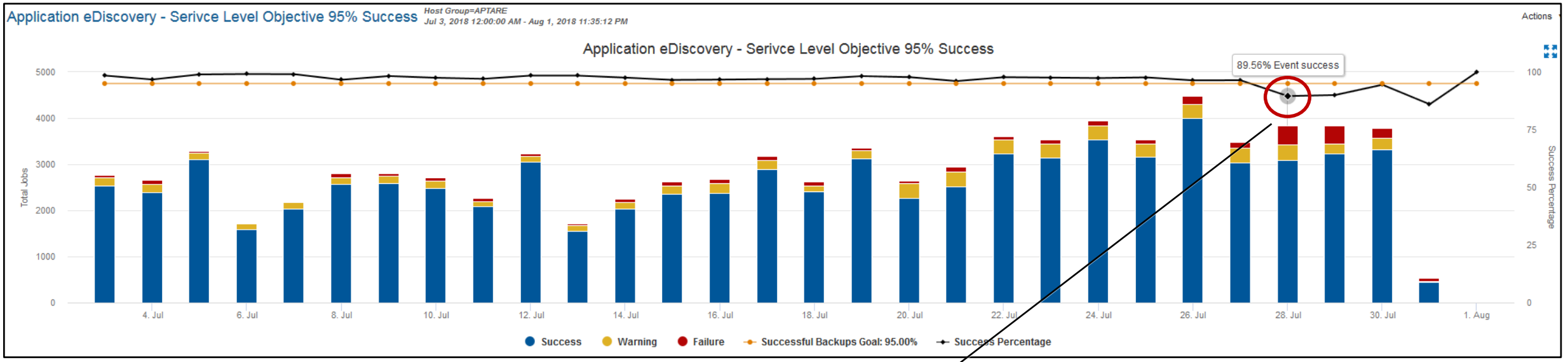
Improve Service Delivery by Monitoring Service Level Objectives



Job Summary

Host Group=APTARE
Jul 28, 2018 12:00:00 AM - Jul 28, 2018 11:59:59 PM

Total Rows: 124

Source	Source Type	Parent/Child	Server	Product	Type	Start Date	Finish Date	Duration	MBytes	MBytes/Sec	Exit Code	# of Files	Tapes
forster	Host	Child	little	Veritas Backup Exec	Backup	Jul 28, 2018 9:45:19 PM	Jul 28, 2018 11:30:44 PM	01:45:25	12,121.27	1.92	Failed	191,383	
forster	Host	Child	little	Veritas Backup Exec	Backup	Jul 28, 2018 9:38:52 PM	Jul 28, 2018 11:28:40 PM	01:49:48	12,528.20	1.90	Failed	209,631	
liechtenstein	Host	Child	liechtenstein	IBM Spectrum Protect (TSM)	Storage Pool Backup	Jul 28, 2018 8:31:47 PM	Jul 28, 2018 11:24:09 PM	02:52:22	211,708.41	20.47	Failed	357,579	
liechtenstein	Host	Child	liechtenstein	IBM Spectrum Protect (TSM)	Storage Pool Backup	Jul 28, 2018 10:31:49 PM	Jul 28, 2018 11:18:35 PM	00:46:46	12,189.26	4.34	Failed	19	
liechtenstein	Host	Child	liechtenstein	IBM Spectrum Protect (TSM)	Storage Pool Backup	Jul 28, 2018 11:31:39 AM	Jul 28, 2018 11:17:47 PM	11:46:08	619,560.91	14.62	Failed	1,483	
pivabiska	Host	Child	latoya	EMC Avamar	Scheduled Backup	Jul 28, 2018 10:26:54 PM	Jul 28, 2018 11:12:56 PM	00:46:02	365.19	0.13	Failed	75,160	
tchoutacabouffa	Host	Child	everest	Veritas NetBackup	Full Backup	Jul 28, 2018 11:08:33 PM	Jul 28, 2018 11:09:16 PM	00:00:43	0.00	N/A	Failed	0	
ashley	Host	Child	latoya	EMC Avamar	Scheduled Backup	Jul 28, 2018 10:26:48 PM	Jul 28, 2018 10:47:24 PM	00:20:36	97.87	0.08	Failed	165,688	

Job Details

Client:	fort	**Job Server:**	little	**Device Name:**	
Vendor Product:	Veritas Backup Exec	**Total Job Size (MB):**	49,434.40	**Target Name:**	
Job Name:				**Media Set Name:**	
Job Id:	10945937	**MBytes/Sec:**	7.28	**Resource Name:**	
Job Type:	Backup			**Backup Policy:**	
Job Status:		**# of Files:**	456,139	**Schedule Name:**	
Job State:	Scheduled	**# of Directories:**	15,083		
Final Error:	0xE0000307	**# of Skipped Files:**	6		
Final Error Category:	4	**# of Corrupted Files:**	0		
		# of in Use Files:	0		

Scheduled Start Time: Jan 10, 2016 2:01:24 AM
Actual Start Time: Aug 1, 2018 5:06:10 PM
Actual Finish Time: Aug 1, 2018 6:59:19 PM
Time Zone: Etc/GMT+5

Job log file: D:\Program Files\VERITAS\Backup Exec\NT\Data\BEX_MCG-HOSTOPS3_07199.xml

Alert Log: 2006-12-02 - WK-POLHQWEB -- The job failed with the following error: Microsoft SQL Server supports only

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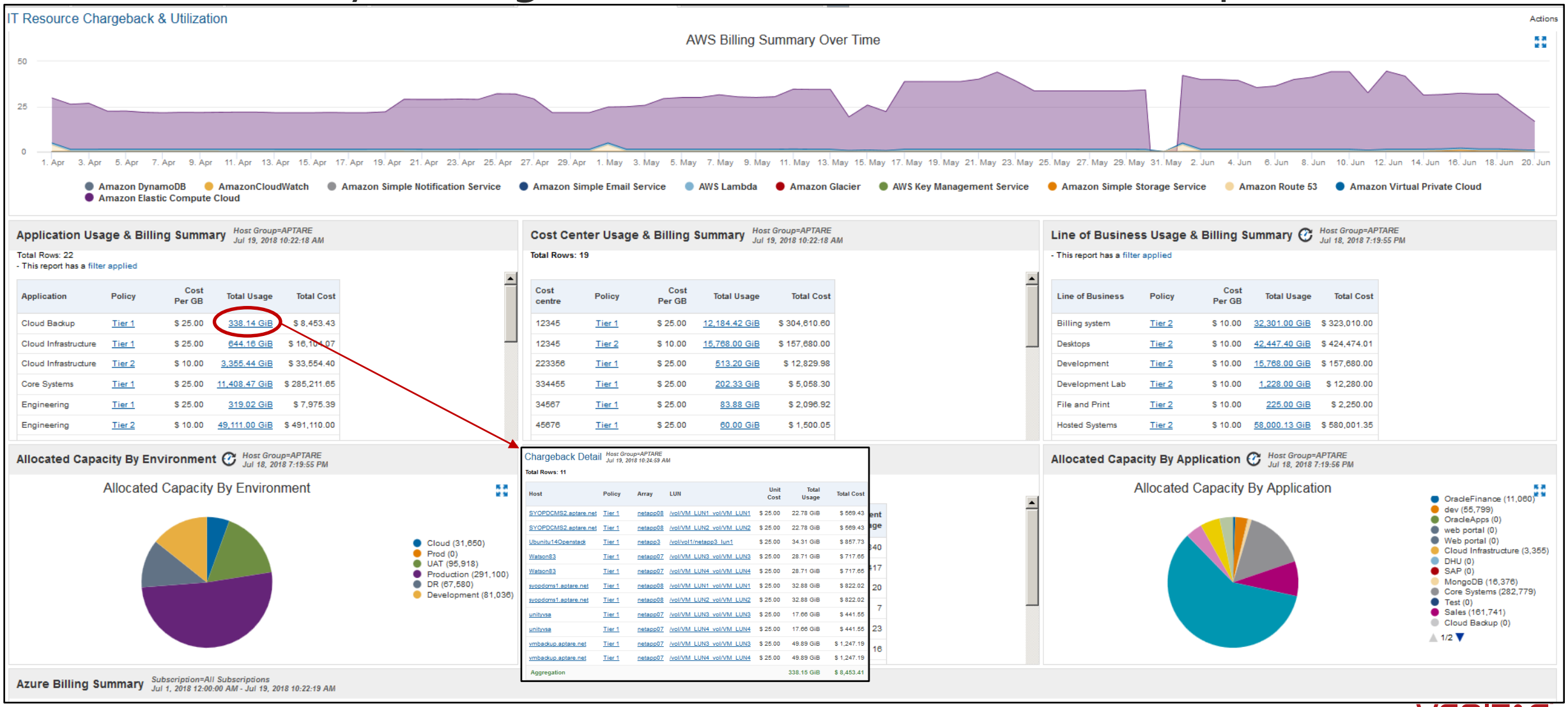
Cost Recovery / Chargeback for IT Resource Consumption



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IT Resource Capacity Planning

Multi-vendor Thin Pool Usage Forecast

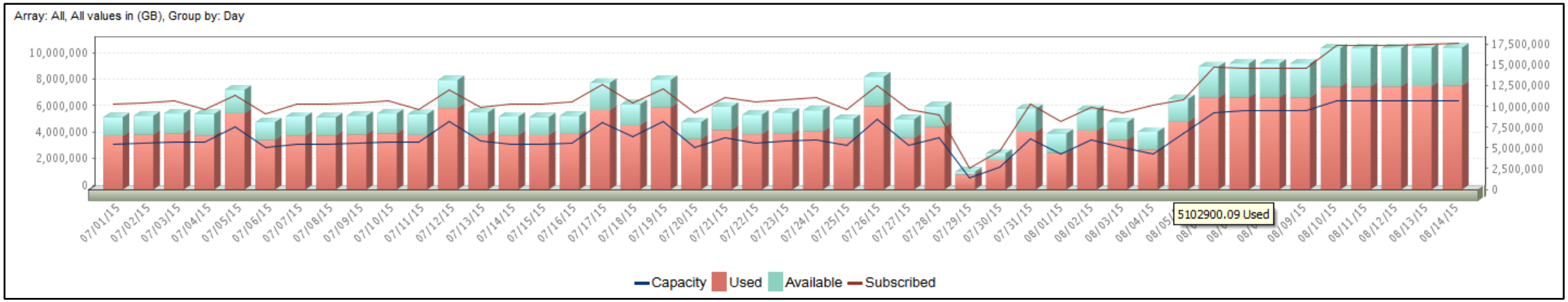
Arrays=All Storage Arrays
Mar 10, 2018 12:00:00 AM - May 8, 2018 8:46:59 PM

Actions

Total Rows: 10 - This report has a filter applied

*All values in (GB), Pool Threshold 50 Over Sub Threshold 50

Array Family	Array	Pool	RAID Type	Pool Size	Pool Available	Available History	Risk Level	At Risk?	Pool Used	Pool Used	Subscribed Size	#Days	First Available	Last Available	Avg Available	Delta	Avail Delta%	Daily Usage Linear	Daily Usage POP	Change% Linear	Change% POP	Available Capacity	Linear Analysis	POP Analysis
Symmetrix VMAX	000295700636	Pool_FC	RAID-5(3+1)	128,865.16	49,556.69		1	Y	79,308.47	61.54%	85,051.00	46	53,357.02	49,556.69	50,906.80	-3,800.33	-7.12%	-79.09	-82.62	-.16%	-.16%	Decreased	Will Run Out on 25-JAN-20	Will Run Out on 29-DEC-19
Symmetrix VMAX	000295700636	Pool_EFD	RAID-5(3+1)	4,120.40	4,120.40		0	N	.00	.00%	.00	46	4,120.40	4,120.40	4,120.40	.00	.00%	.00	.00	.00%	.00%	Did Not Change	Capacity not Changing	Capacity not Changing
Symmetrix VMAX	000295700666	Pool_FC	RAID-5(3+1)	329,409.72	38,488.28		1	Y	290,921.44	88.32%	316,233.33	45	39,557.25	38,491.62	38,987.03	-1,065.62	-2.69%	-31.47	-23.68	-.08%	-.06%	Decreased	Will Last Over 3 Years	Will Last Over 3 Years
Symmetrix VMAX	000295700666	Pool_EFD	RAID-5(3+1)	19,801.68	1,034.45		1	Y	18,767.23	94.78%	.00	45	1,130.26	1,034.45	1,067.78	-95.80	-8.48%	-3.02	-2.13	-.28%	-.20%	Decreased	Will Run Out on 16-APR-19	Will Run Out on 06-SEP-19
Symmetrix VMAX	000295700666	Pool_FC_R1	2-Way Mir	659.18	659.18		0	N	.00	.00%	.00	45	659.18	659.18	659.18	.00	.00%	.00	.00	.00%	.00%	Did Not Change	Capacity not Changing	Capacity not Changing
VN-series	VNX57K1	Generico_WINDOWS	Mixed	170,308.98	142,946.64		0	N	27,362.34	16.07%	27,362.34	9	2,547.97	142,946.64	111,746.94	140,398.67	5,510.22%	2,339.98	15,599.85	2.09%	13.96%	Increased	Capacity is Increasing	Capacity is Increasing
VN-series	VNX53K1	Generico_WINDOWS	Mixed	22,439.75	2,547.97		0	N	19,891.78	88.65%	19,891.78	2	2,547.97	142,946.64	72,747.30	140,398.67	5,510.22%	140,398.67	70,199.34	193.00%	96.50%	Increased	Capacity is Increasing	Capacity is Increasing
VN-series	VNX57K1	Generico_UNIX	Mixed	46,745.12	7,814.23		0	N	38,930.89	83.28%	38,929.89	1	7,814.23	7,814.23	7,814.23	.00	.00%		.00		.00%	Did Not Change		
VN-series	VNX57K1	Pool NL RAID6	r_6	36,642.42	1,648.21		0	N	34,994.21	95.50%	34,994.21	1	1,648.21	1,648.21	1,648.21	.00	.00%		.00		.00%	Did Not Change		
VN-series	VNX57K1	Pool CORPBA-MAIL Mixed	Mixed	33,904.09	5,547.81		0	N	28,356.28	83.64%	28,356.28	1	5,547.81	5,547.81	5,547.81	.00	.00%		.00		.00%	Did Not Change		
Aggregation											550,818.83													



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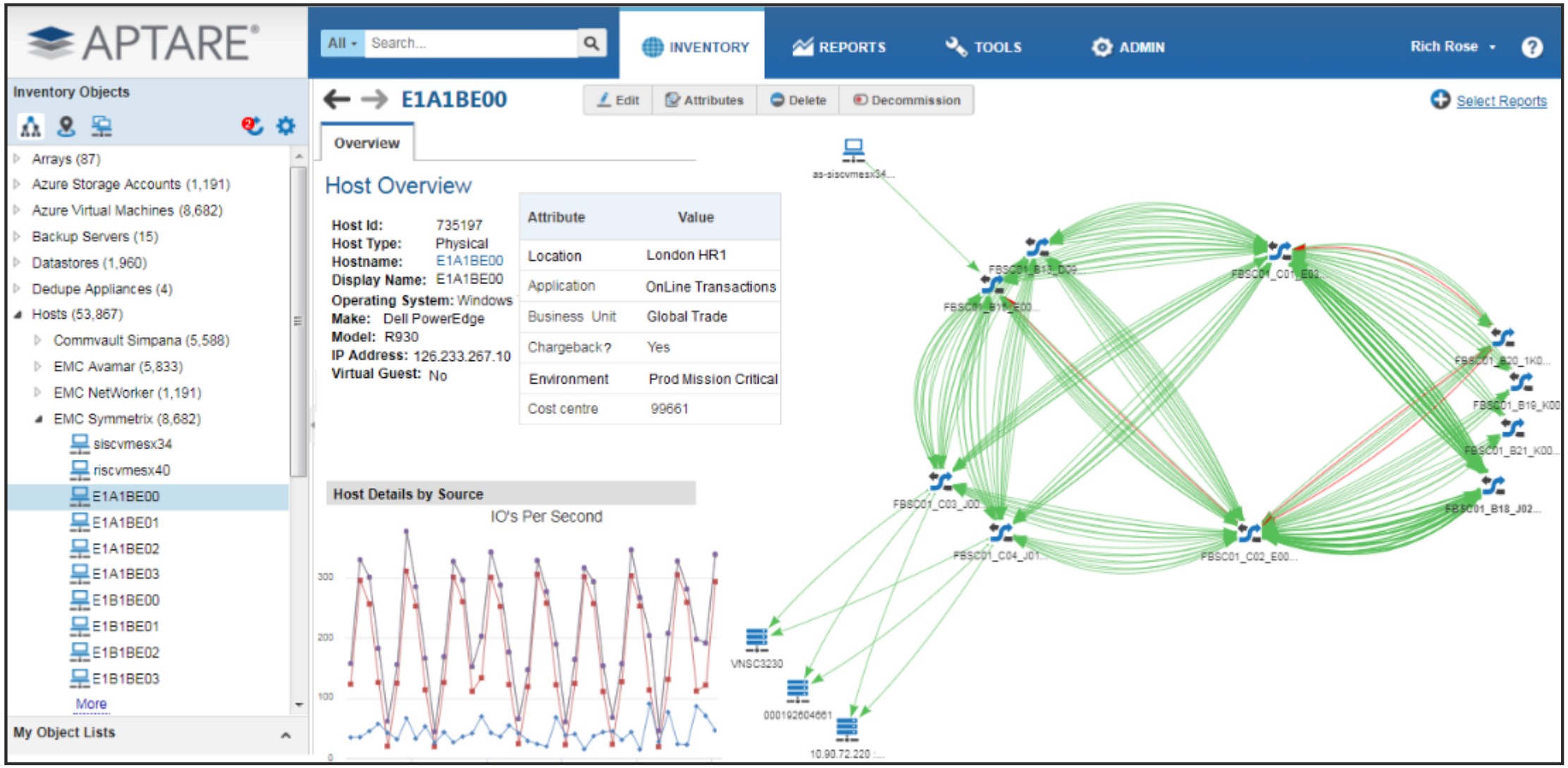
Inventory View



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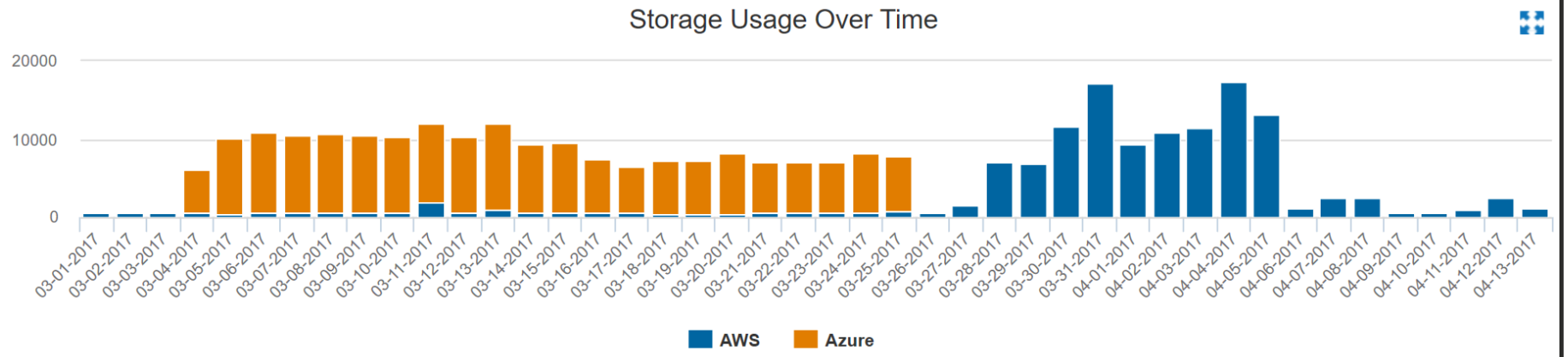
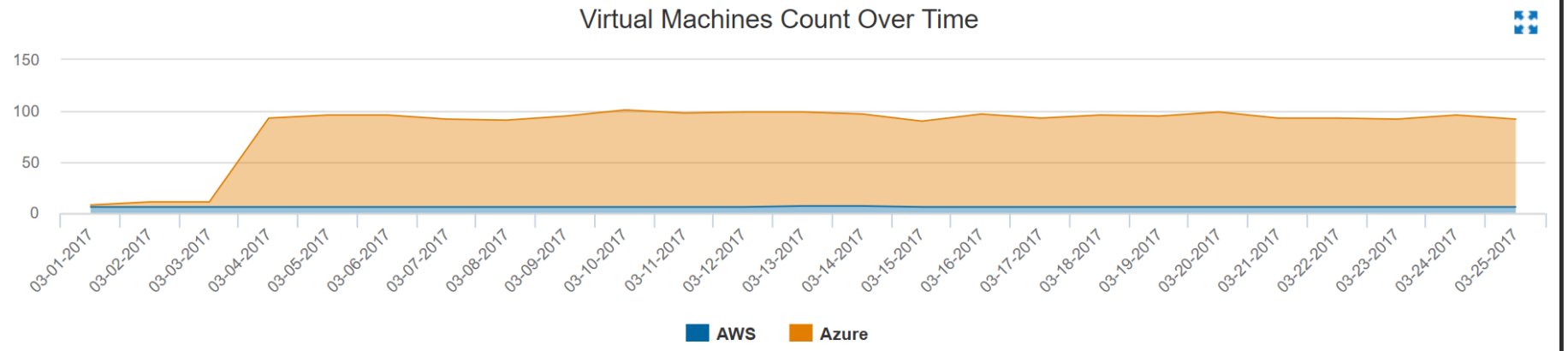
Incorporation of Public & Private Cloud

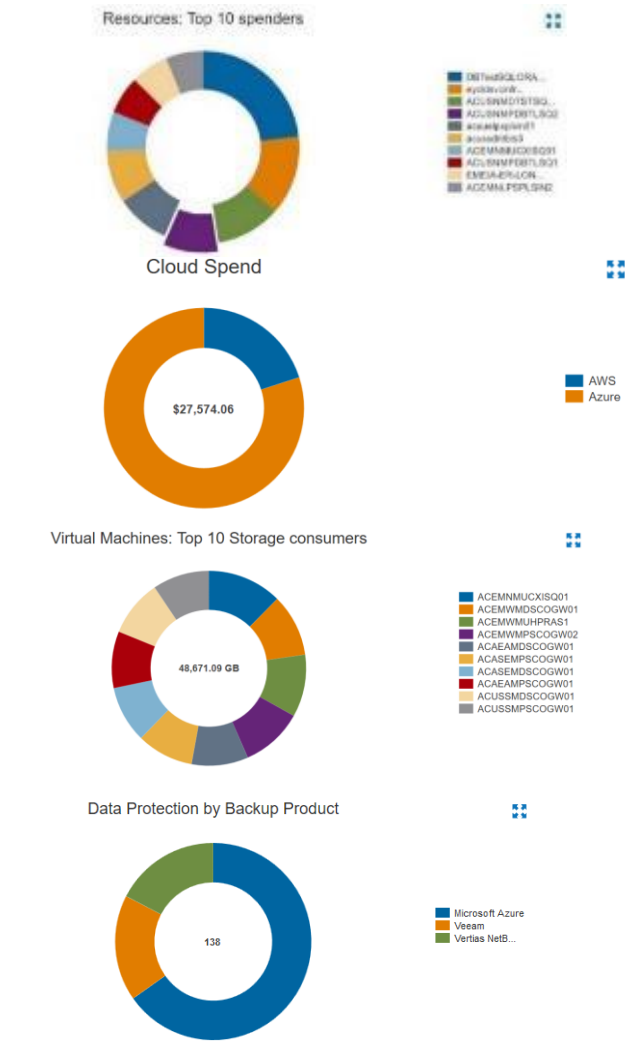


OpenStack Swift Storage Utilization by Node

Arrays=All Storage Arrays
Aug 2, 2018 9:03:14 PM

Cluster	Storage Node	# Devices	# Zones	Raw Total	Logical Total	Logical Used	Usage	Avg Resp Time	Avg IO/sec	CPU Usage
OpenstackSwift 10.2.2.187	10.2.2.187	1	1	2.00 GiB	1.70 GiB	0.29 GiB				
OpenstackSwift 10.2.2.158	10.2.2.158	3	1	30.00 GiB	29.97 GiB	3.66 GiB		3.97	23.06	





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Unified Application Views: On-Prem & Cloud

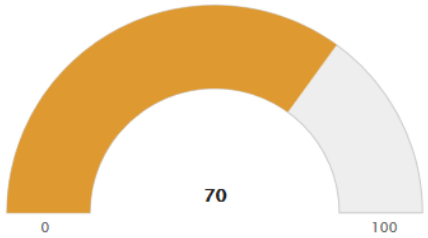
Application Imagination - IT Resource Consumption

Actions

Application Storage Consumption - SAN

Aug 2, 2018 8:19:13 PM

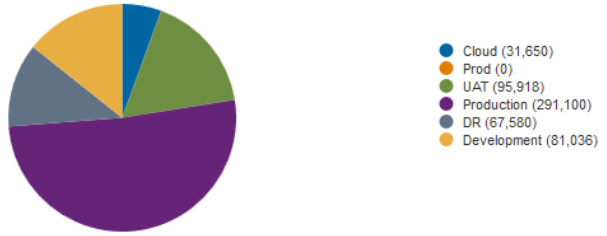
Application Storage Consumption – SAN



Capacity Distribution By Application Environment

Host Group=APTARE
Aug 2, 2018 8:19:17 PM

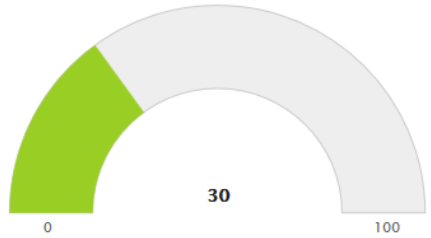
Capacity Distribution By Application Environment



Application Storage Consumption - NAS

Aug 2, 2018 8:19:13 PM

Application Storage Consumption – NAS



On-Prem Application Servers

Host Group=APTARE
Aug 2, 2018 8:21:03 PM

- This report has a filter applied

Connection: Connected Inaccessible Unknown **Power:** Powered On Suspended Powered Off Unknown **Status:** Normal Warning Alert Unknown

			Avg Usage Last 24 Hrs		Size			Storage	
VM Name	VM Server	Data Center	CPU	Memory	VM	VM Disk	VM Size (KB)	Volume Usage	Datastores
salesdb	aptesx09.corp	HQ LAB			288.04 GiB	280.00 GiB			Netapp7_Prod1
qaprod-win	aptesx07.corp	HQ LAB			167.31 GiB	80.00 GiB			Netapp8_Prod2
qaautodeploy_w2012	aptesx08.corp	HQ LAB			114.25 GiB	80.00 GiB			Netapp7_Prod1
InstallWin3	aptesx07.corp	HQ LAB			93.50 GiB	70.00 GiB			aptareesx_lun1
App-Networker76_136	esx.corp				20.26 GiB	0.00 GiB			storage1

AWS EC2 Application Instances

Ec2 Instance=All Ec2 Instances
Dec 1, 2016 12:00:00 AM - Dec 15, 2016 5:16:01 PM

- This report has a filter applied

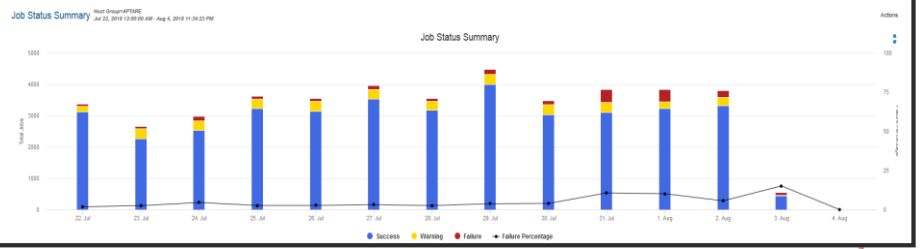
Instance Name	Host Name	Account ID	Region	Zone	Type	Tenancy	EBS Volume	State
aptarefin3	ec2-52-43-121-226.us-west-2.compute.amazonaws.com	003642222656	us-west-2	us-west-2b	t2.medium	default	160.00 GiB	running
Avamar 7.5.1 VE	ip-172-30-0-46.ec2.internal	691564591984	us-east-1	us-east-1a	m4.large	default	276.00 GiB	stopped
awsASMTest	ip-172-31-23-46.us-west-2.compute.internal	003642222656	us-west-2	us-west-2b	t2.xlarge	default	190.00 GiB	stopped
AWSSalesDB	ec2-35-165-245-44.us-west-2.compute.amazonaws.com	003642222656	us-west-2	us-west-2b	t2.large	default	180.00 GiB	running
DDM VE 3.1 (DDOS 6.1)	ip-172-31-27-169.us-west-2.compute.internal	003642222656	us-west-2	us-west-2b	m4.xlarge	default	760.00 GiB	stopped
hg	hg	691564591984	ap-southeast-2	ap-southeast-2b	t1.micro	default	148.00 GiB	running
qaInstallTestLin	ip-172-31-23-107.us-west-2.compute.internal	003642222656	us-west-2	us-west-2b	t2.xlarge	default	150.00 GiB	running
qaInstallTestWin	ip-172-31-18-113.us-west-2.compute.internal	003642222656	us-west-2	us-west-2b	t2.xlarge	default	160.00 GiB	running
tmpFATest2	ip-172-31-21-231.us-west-2.compute.internal	003642222656	us-west-2	us-west-2b	c4.large	default	1,020.00 GiB	stopped

AWS S3 Bucket Summary

Aug 1, 2018 12:00:00 AM - Aug 4, 2018 7:32:04 PM

Total Rows: 15

									Cost	
Bucket Name	Account ID	Region	Zone	Owner	Current Object Count	Used Capacity	Last Updated	Tags	Blended Cost	Last 7 Days
hcp.aptare.1	691564591984	us-west-1		kiwicmc	4,025.00	578.75 MiB	Jun 20, 2018 8:33:50 PM	user:satish		
aptbackups	003642222656	us-west-2		graeme.kelly	0.00	0.00 Bytes	Jun 21, 2018 12:37:46 AM	Owner:Graeme		



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Conclusion

- APTARE provides a single pane of glass
- Covers On-Prem & Hybrid Cloud Storage

- Actionable Insights to:
  - Optimize Storage Costs
  - Identify & Mitigate Risks
  - Make Compliance Easier & Faster

Unified IT Analytics

VERITAS

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Q & A

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Thank you!

Paris Kaskas

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