

华为存储私享会

—Veritas 多云数据管理解决方案简介

殷剑
Veritas北方区 高级经理

VERITASTM

The truth in information.

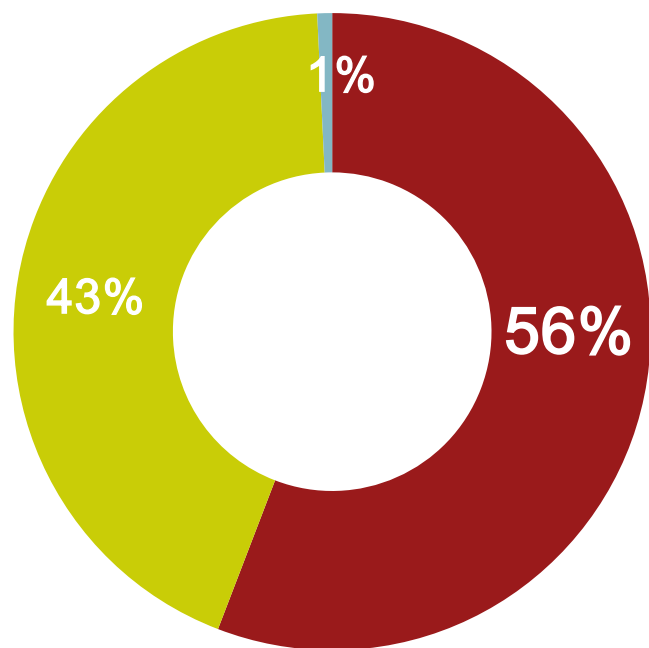
“ The increased use of multiple public cloud providers, plus growth in various types of private cloud services, will create a **multi-cloud (多云)** environment in most enterprises and a need to coordinate cloud usage using hybrid scenarios.”

The Gartner logo is displayed in a large, bold, blue sans-serif font.

Press Release, September 15, 2016

“云端优先” 理念

Truth in Cloud 对全球1200 CIO的调研



全球企业采用云的态度：

优先考虑云

优先本地环境，再考虑云

其他

62 %

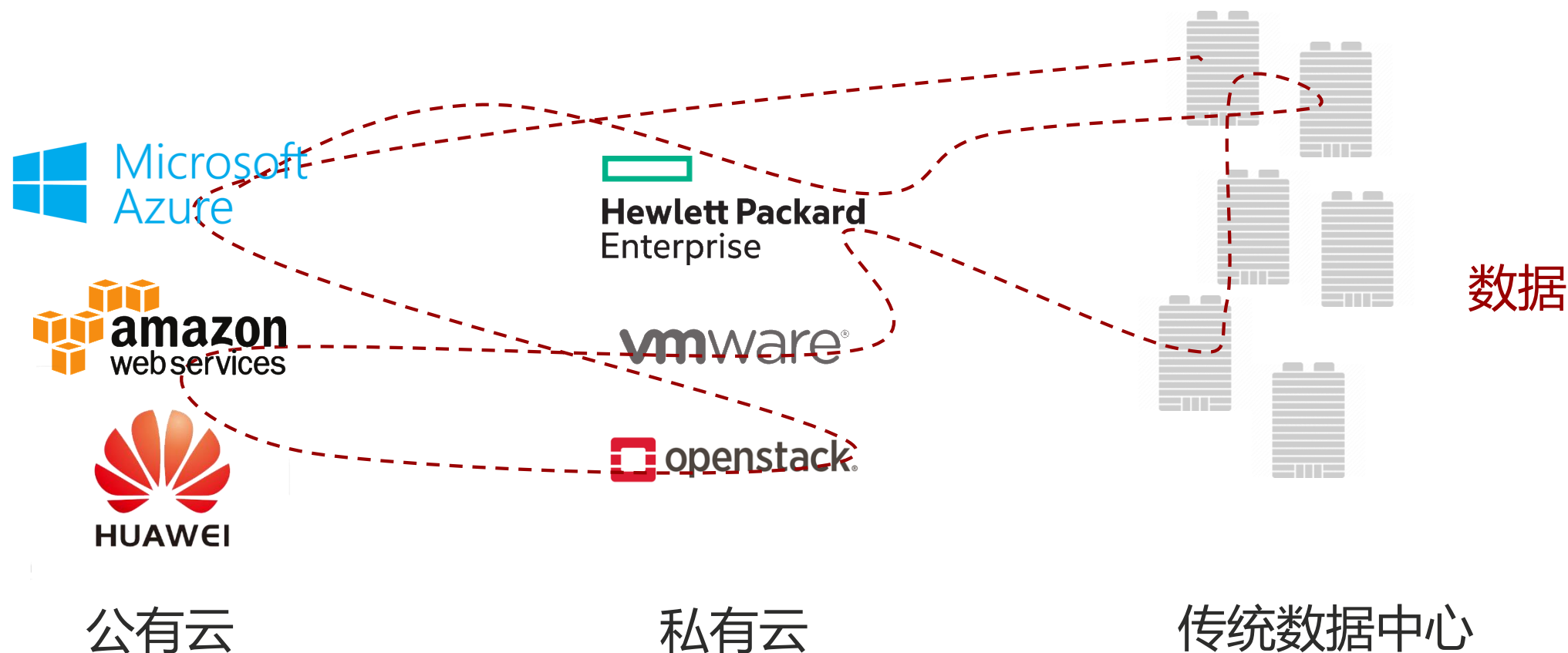
仅有 **1%** 的企业表示
他们将不会在未来两年采用云

的中国企业
表示优先采用云

多云环境带来管理的复杂度

如果没有正确的战略，快速发展的多云环境可能会变成一团乱麻

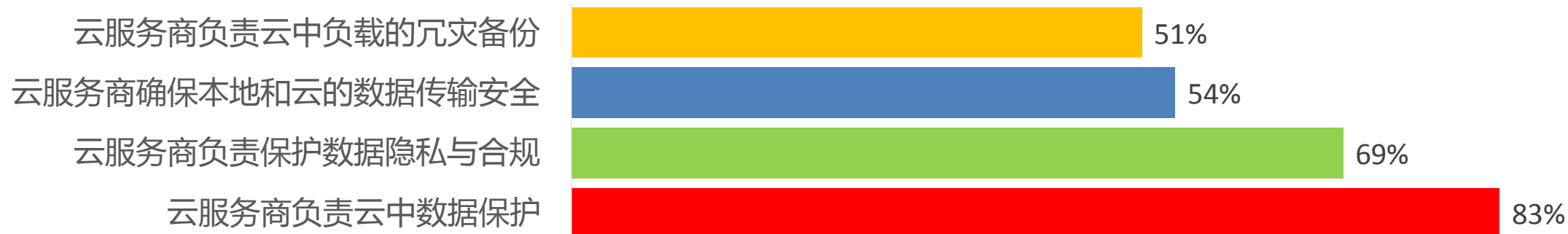
48% 的**中国及全球**企业采用**3个或更多**的云提供商...



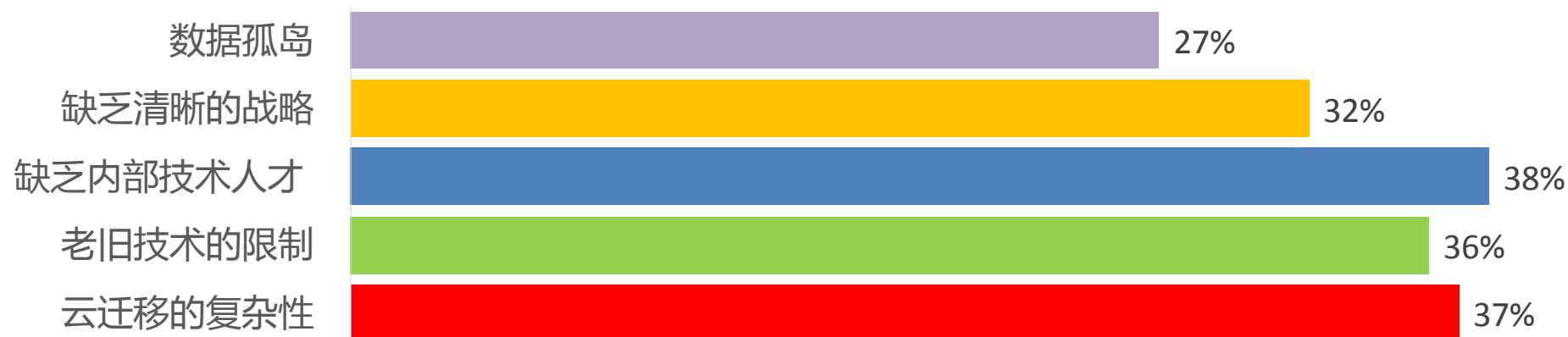
企业对公有云数据管理的误区与云迁移的挑战

Truth in Cloud 对全球1200 CIO的调研

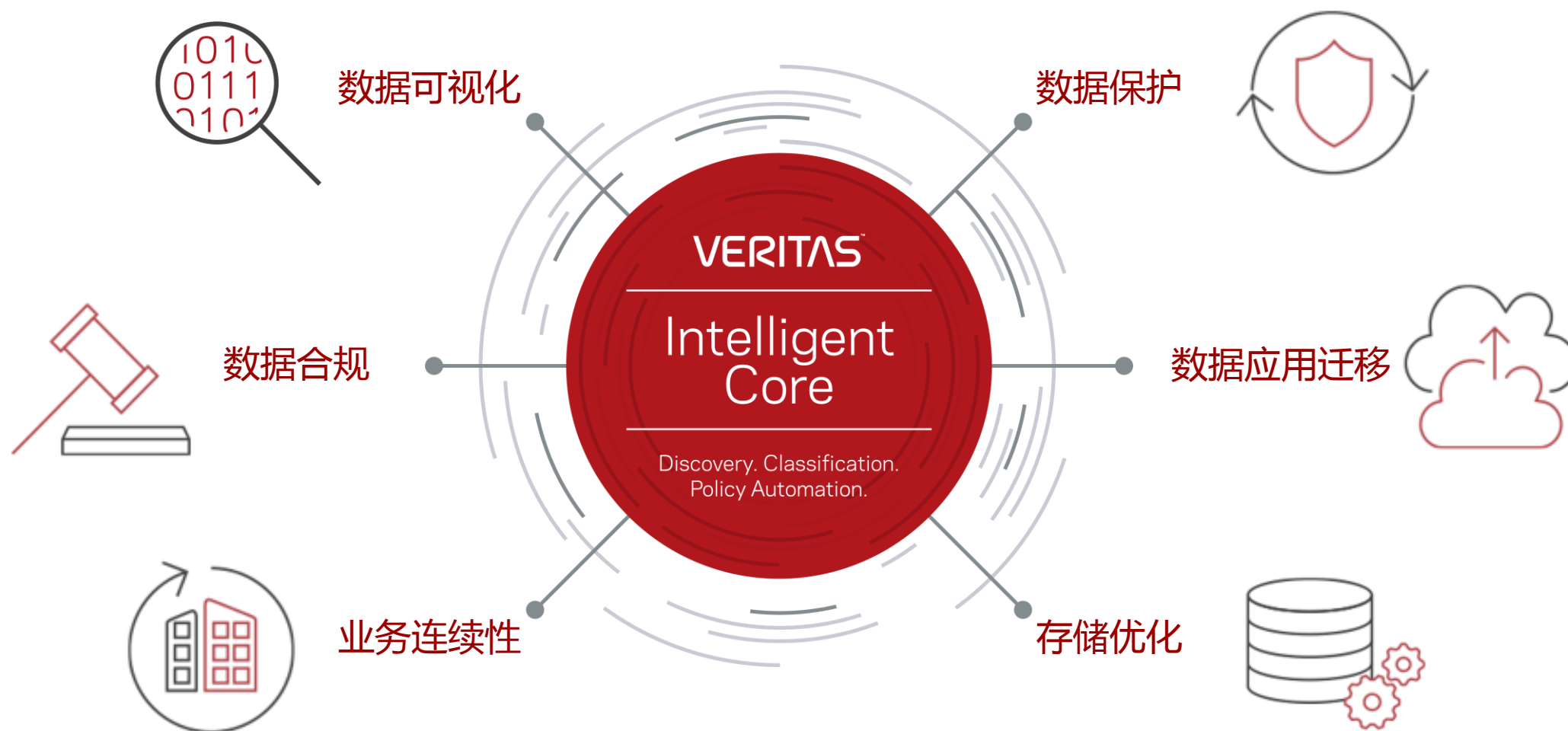
多数受访企业对公有云数据管理的误区



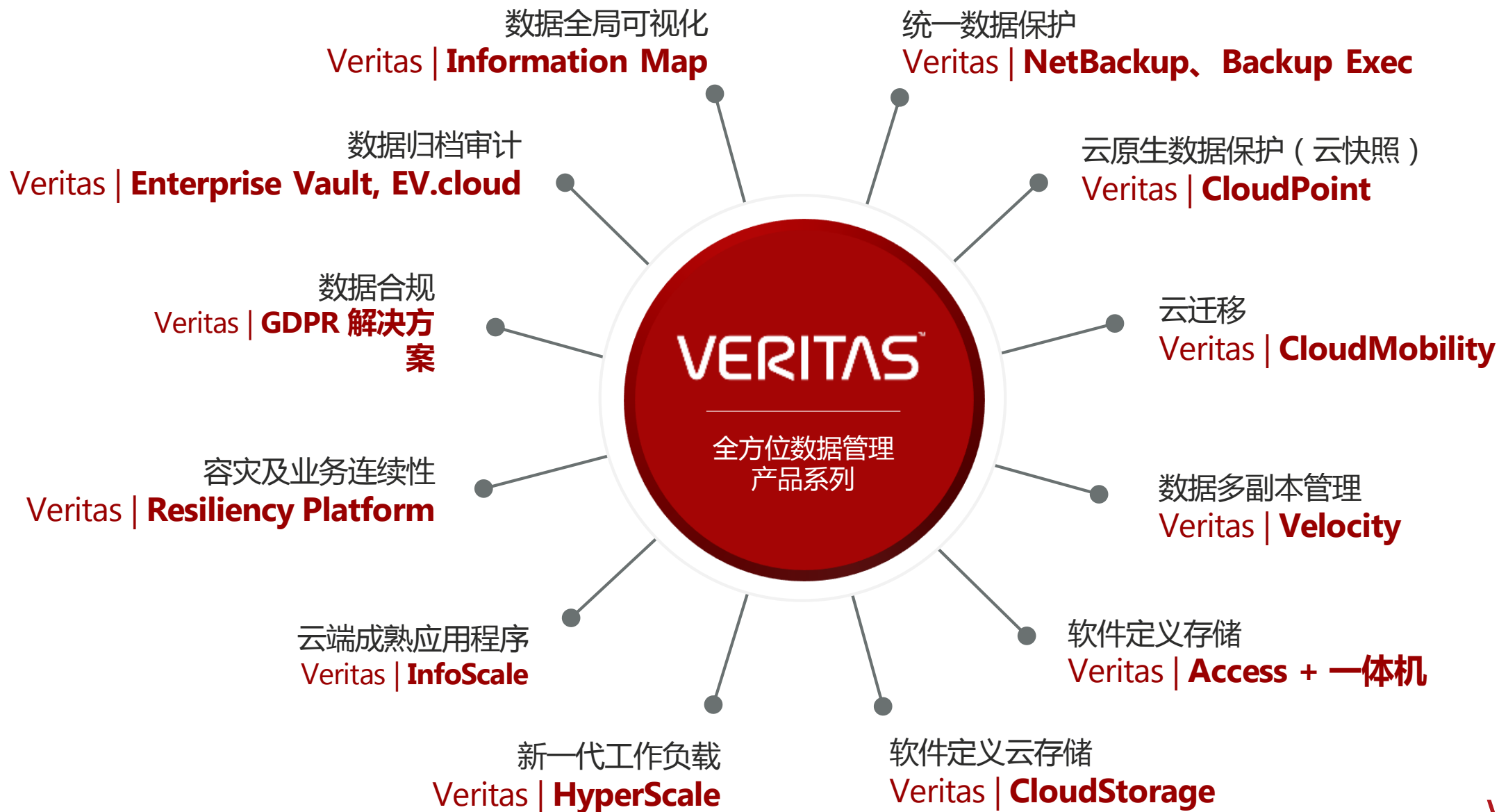
企业多云迁移部署的常见挑战



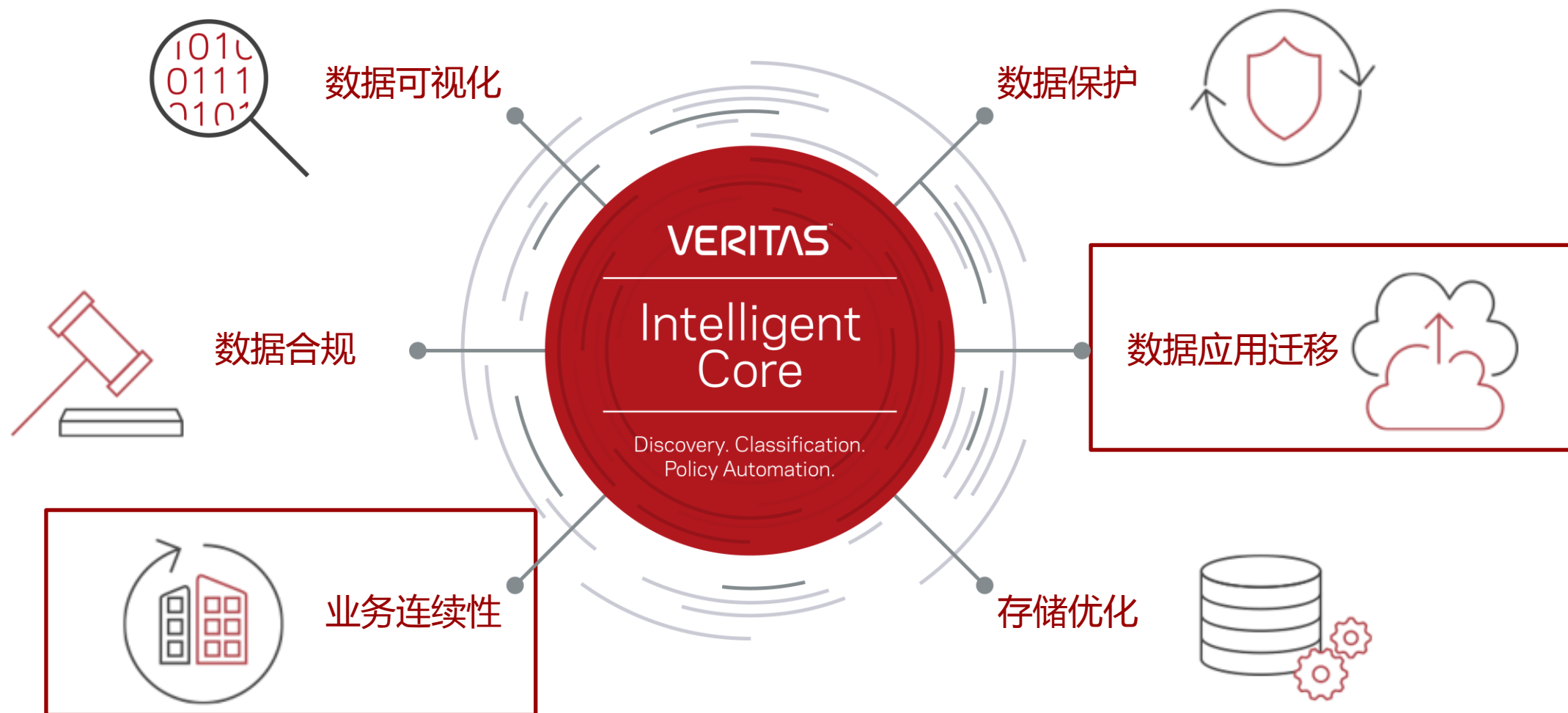
Veritas 多云全方位数据管理



Veritas 多云全方位数据管理方案组合



Veritas 多云全方位数据管理



Veritas 助您驾驭多云架构



一键实现灾难恢复或工作负载迁移/移动

Veritas业务弹性平台特点



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



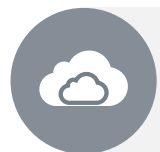
合规 COMPLIANCE: Be compliant to business continuity mandates with audit reports and non-disruptive recovery rehearsals



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



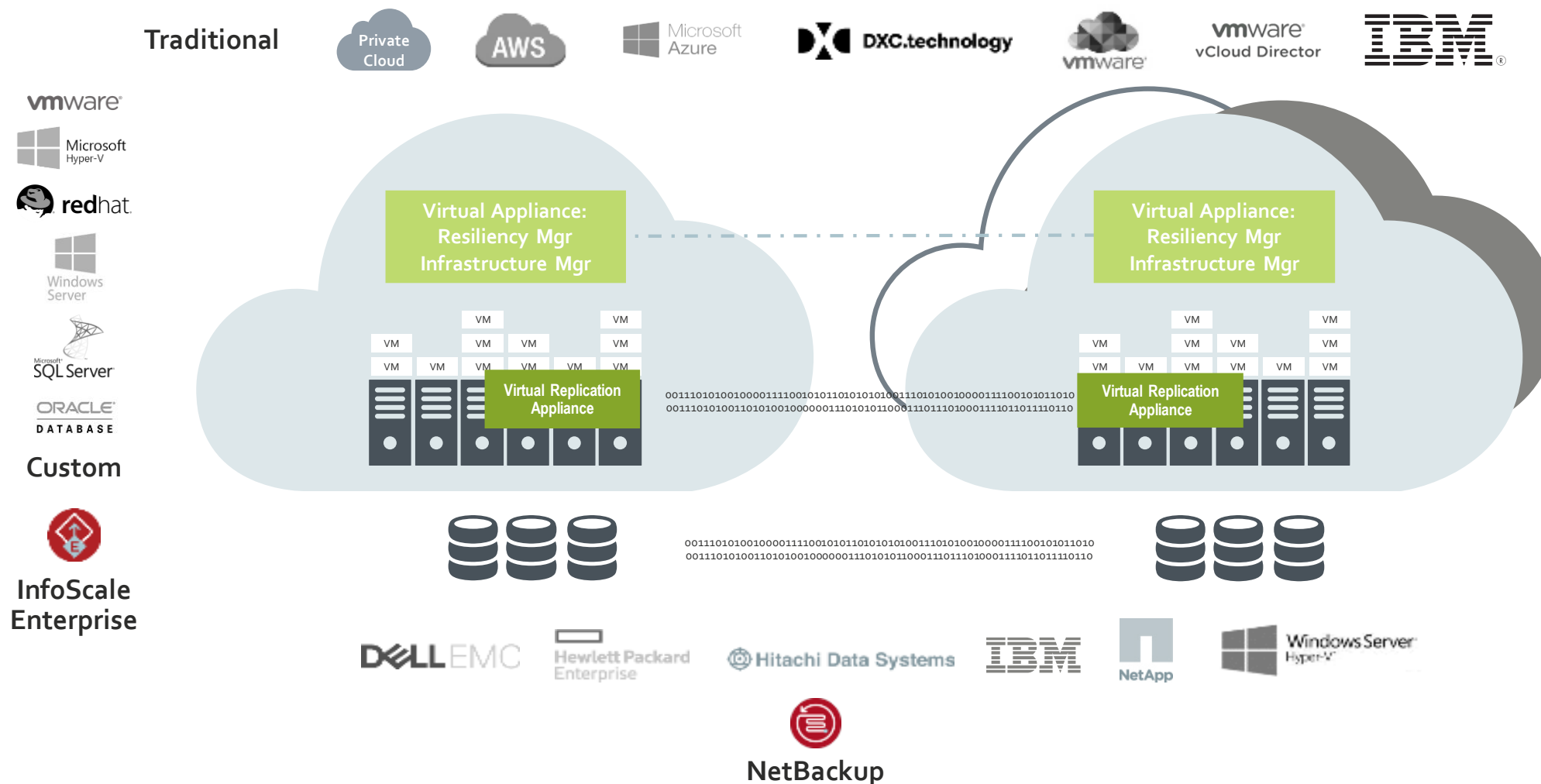
跨云移动 MOBILITY: Single-click workload mobility without time-consuming data conversions



弹性 FLEXIBILITY: Easy integration into existing environment and cloud technologies



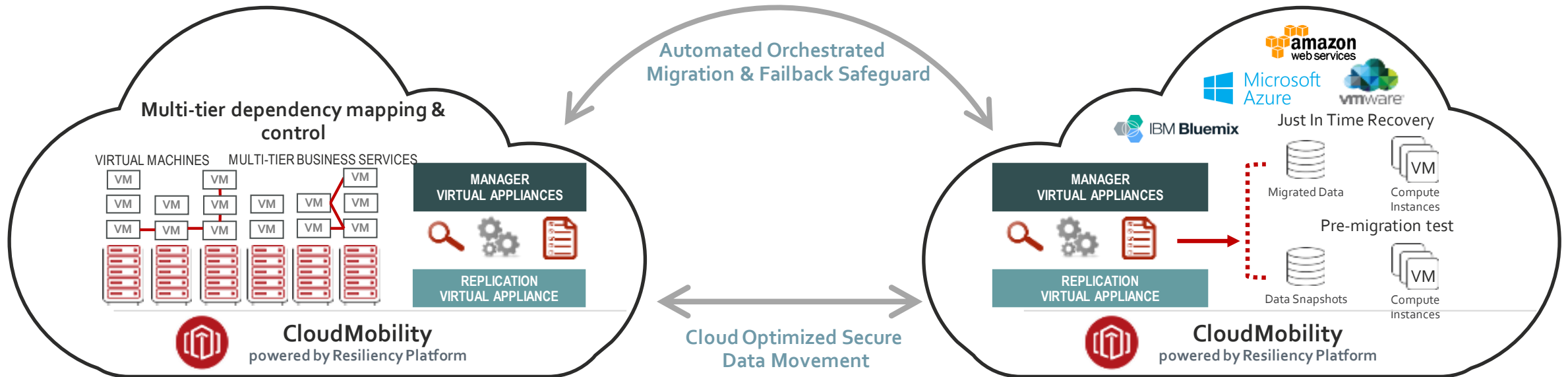
Veritas VRP帮您驾驭多云架构



弹指之间多云迁移数据和负载

Veritas 多云移动

- ✓ Multi- workload and multi-cloud support
- ✓ Pre-migration testing & failback safeguard
- ✓ Built-In Low RPO (5 min) Data Mover
- ✓ Orchestrated multi-tier or dependent workload migration



On premises, Traditional or Private Cloud

VRP平台核心组件

Resiliency Manager

Resiliency Manager

- Deployed as a Virtual Software Appliance (VSA)
- Provides the services required for protecting assets (i.e. VM's), within a resiliency domain
- Built-in Resiliency using Cassandra
- Discovers and manages information about data center assets from the Infrastructure Management Server (IMS)
- Stores asset information in its data repository and displays the information in its management console

Infrastructure Management Server

Infrastructure Management Server

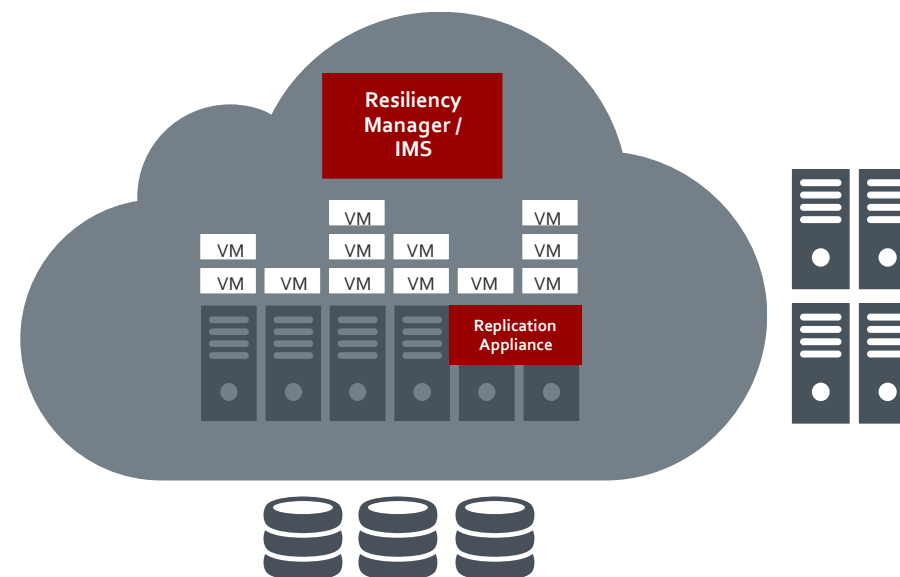
- Deployed as a Virtual Software Appliance (VSA)
- Can be co-located with Resiliency Manager for small environments
- Discovers and monitors assets within a data center
- Sends information about the assets to the Resiliency Manager for management
- Enables management operations on assets (i.e. start or stop a VM)
- Scales horizontally

Replication Appliance

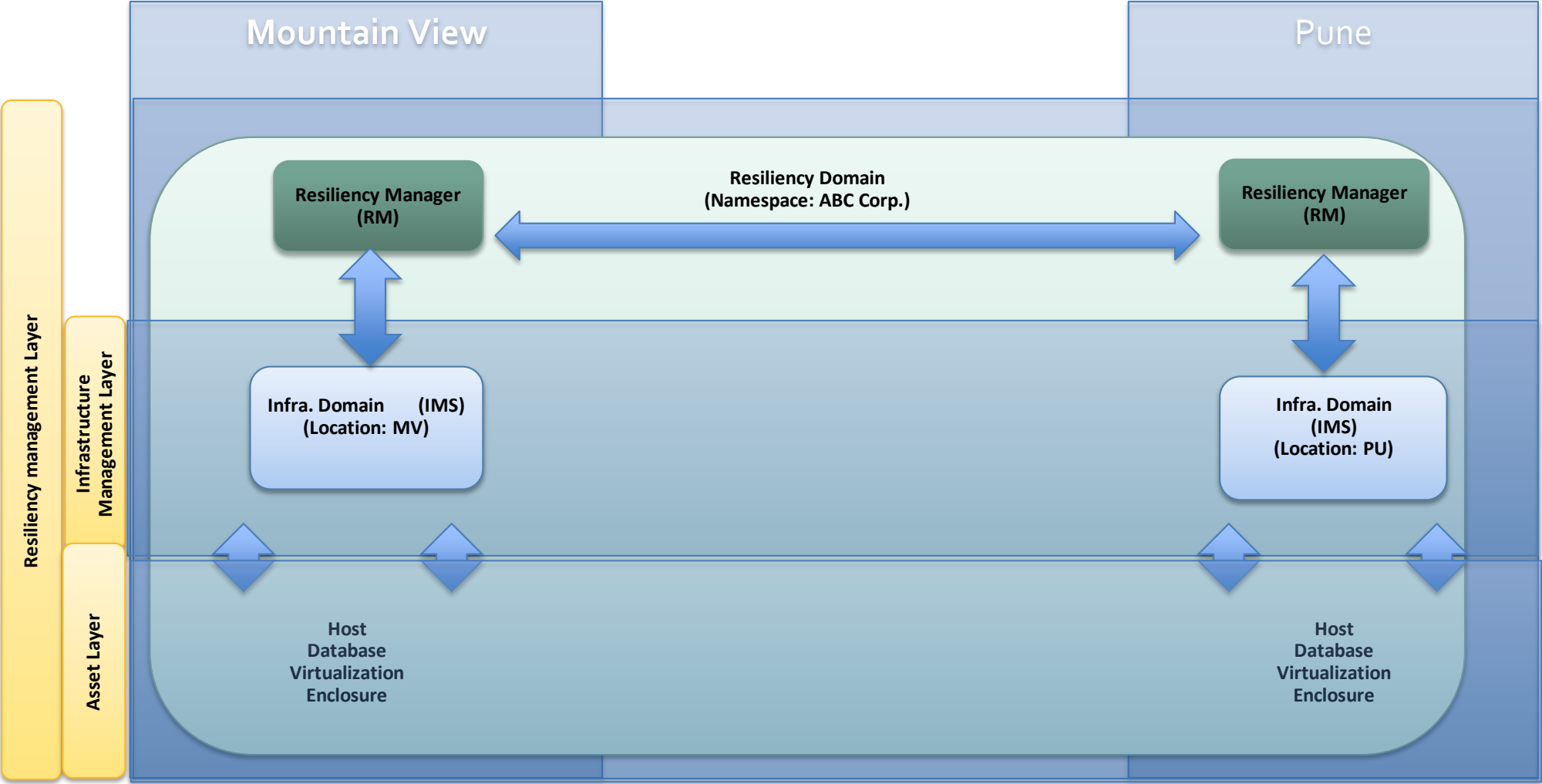
Replication Appliance

- Deployed as a Virtual Software Appliance (VSA)
- Provides Data Replication across sites & across hypervisors
- Two models to tap I/O: Hypervisor & In-Guest
- Scales horizontally

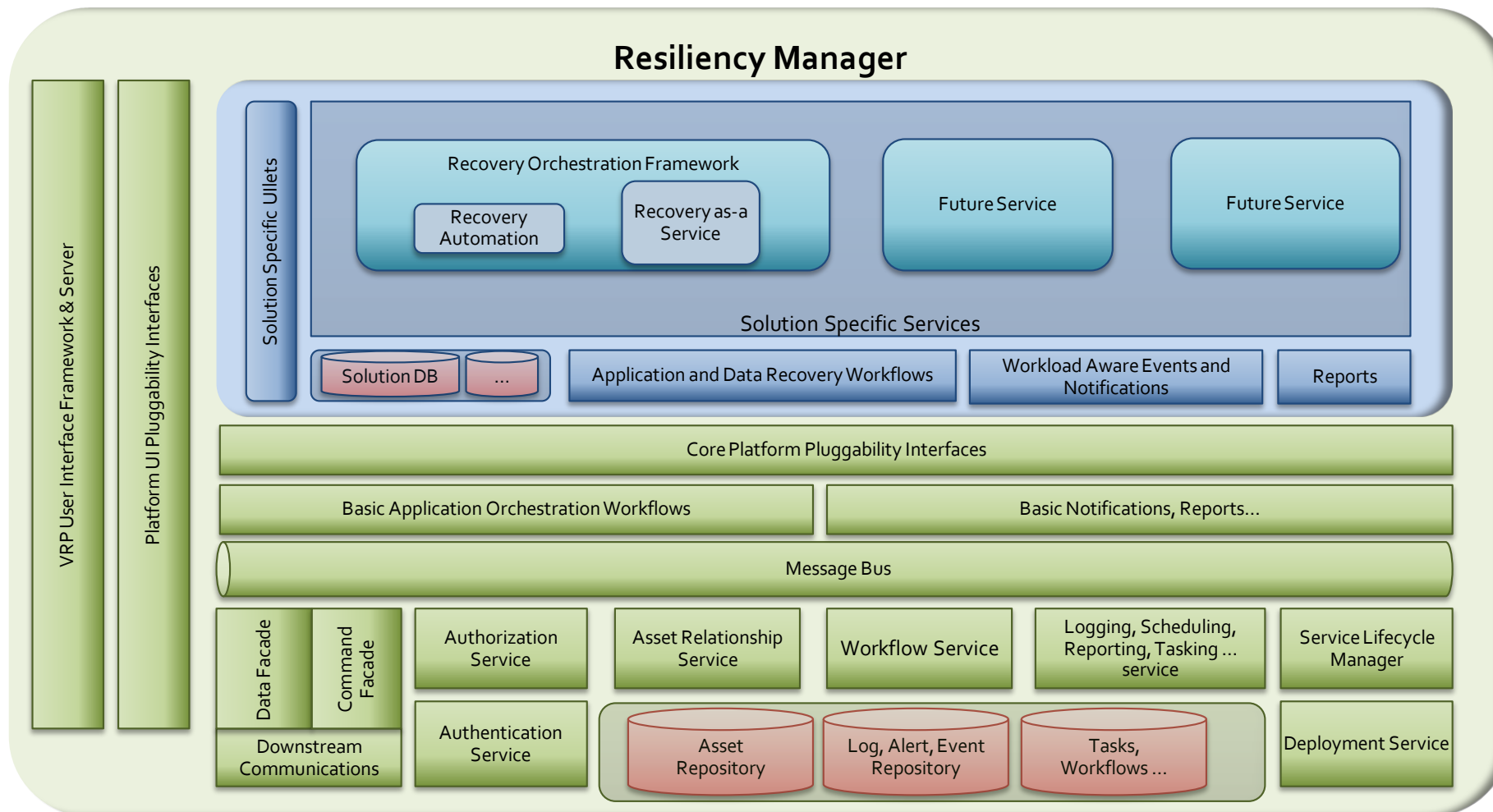
On-premise, Private or Public Cloud



VRP High-level Architecture



Resiliency Manager Architecture



Infrastructure Management Server

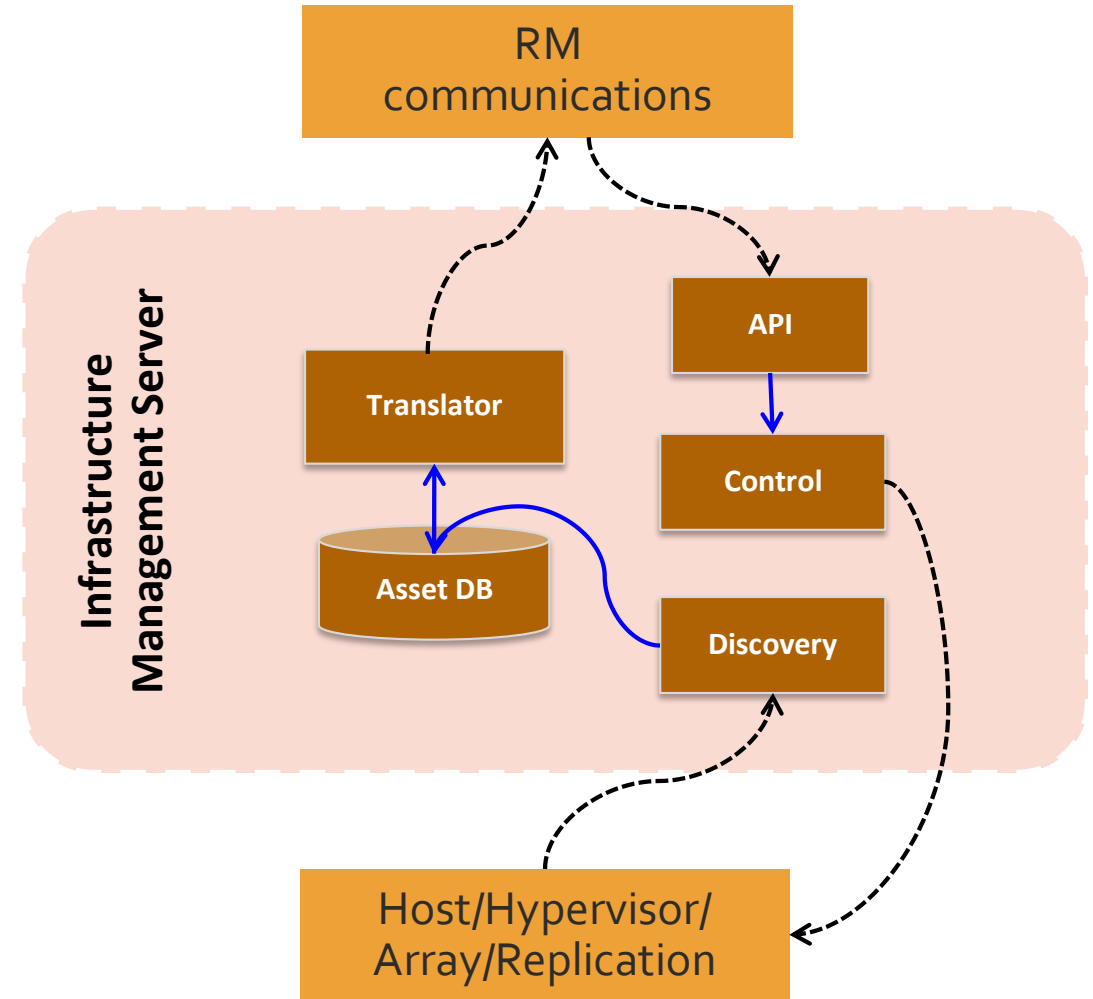
IMS is essentially VOM infrastructure with a few VRP-specific extensions

IMS discovers and monitors assets within a data center

Use the VRP web console to add assets to the IMS

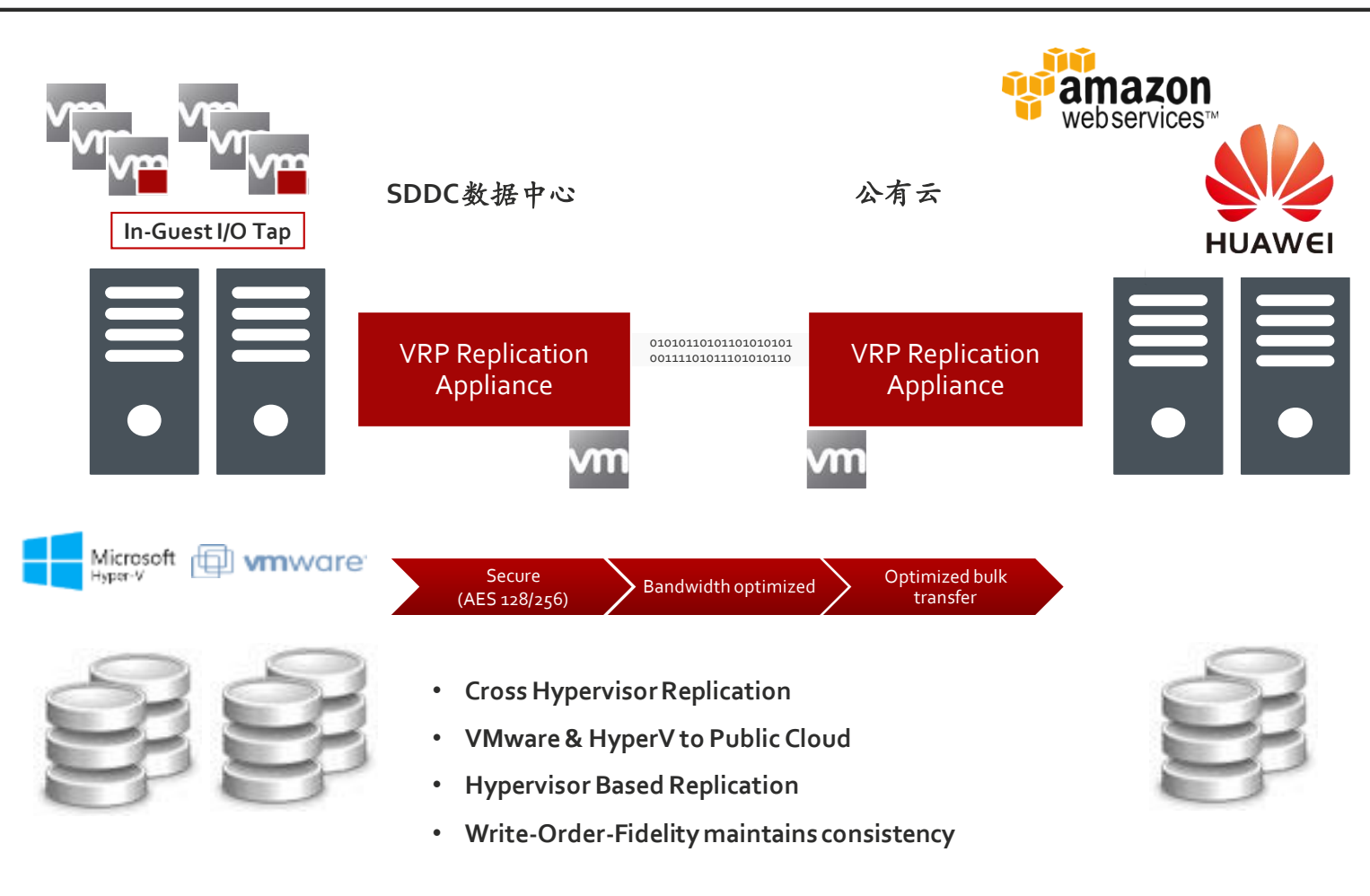
IMS transmits information about the assets to the Resiliency Manager

Operations on assets are initiated from the console and carried out by IMS



VRP Data Mover 技术原理

跨Hypervisor复制



组件

IO获取器IO-Filter

- Automatically deployed In-Guest
- Taps raw IO-Stream coming from the virtual machines
- Relays the data blocks to local replication gateway

复制网关

Replication Gateway (Appliance) - Primary

- Virtual appliance hosted in the primary data center
- Receives data from IO-Filter
- Bulk transfer - batch, compress, encrypt
- Pass the data blocks to the corresponding gateway in the pair

复制网关

Replication Gateway (Appliance) - Secondary

- Virtual appliance hosted in the secondary data center
- Receives data from primary Gateway
- Apply data to the VMware data stores

Global View



Resiliency Groups



Virtual Business Services



Activity Summary

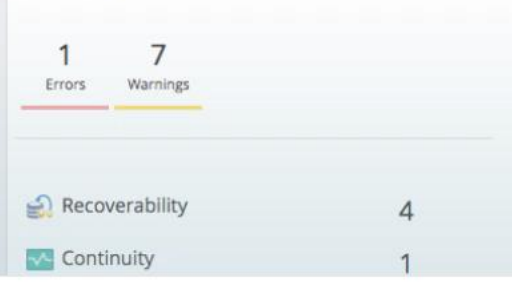
- 3** Rehearse resiliency group(s)
Average time: 6 Mins
Failed:1, Successful:2
- 9** Restore resiliency group(s)
Average time: 9 Mins
Failed:2, Successful:7
- 1** Rehearse Virtual Business Service(s)
Average time: 10 Mins
Failed:0, Successful:1
- 3** Restore Virtual Business Service(s)
Average time: 9 Mins
Failed:0, Successful:3

Virtual Machines by Platform and OS

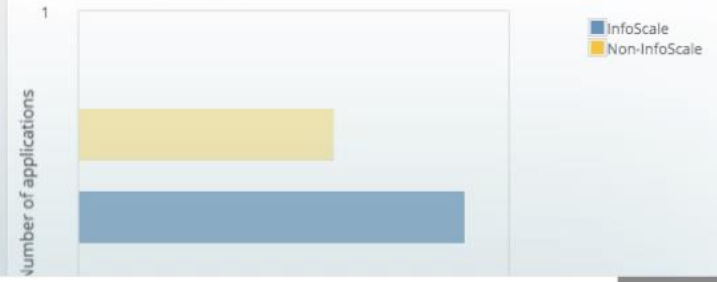
Datcenter: All ▾



Risks Summary



Application environment



<
NetSuite

State: Online

Details

Active Datacenter :
Data Type:
Current Activity :
Last Successful Activity :
Last UnSuccessful Activity :

Cupertino DC
NetBackup
None
[Restore Virtual Business Service \(17 days ago \)](#)
None

Risks

0
2

ErrorsWarnings

Recoverability
Continuity
SLA

2
0
0

[view details](#)

Copy

Cupertino DC: Local | Last reheasal: Sept 10, 2017

Backup copies of Virtual Machines in Resiliency Groups



*

Management Operations

AWS-US-East-1

Latest

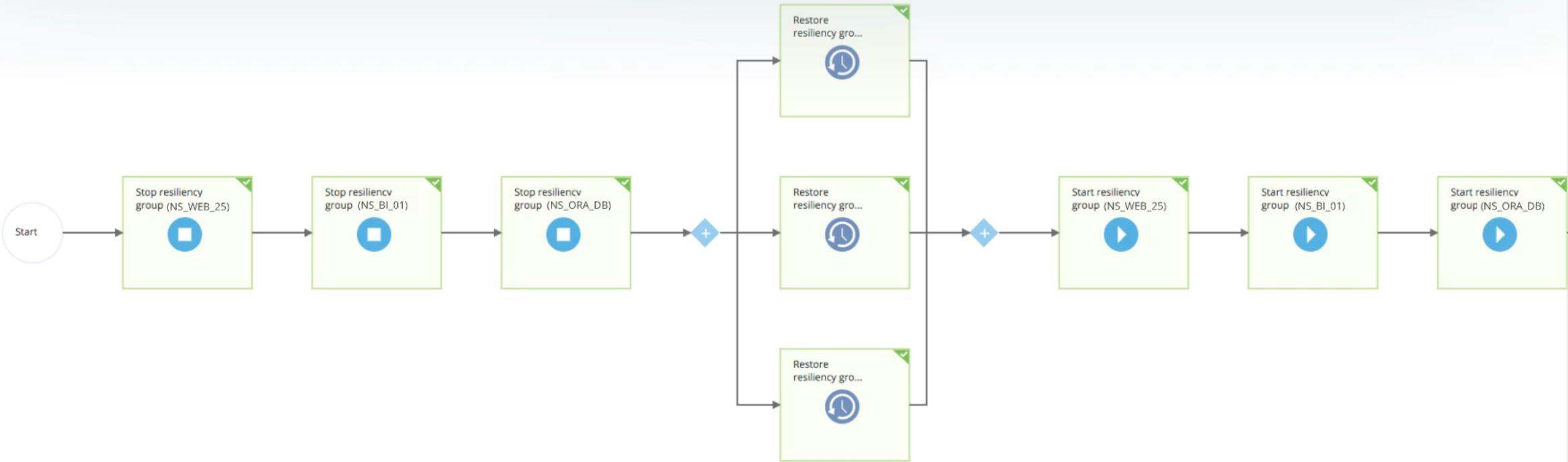
☐ Time range

Showing 2 record(s)

Cancel

Restore Virtual Business Service

Status : FINISHED
 Start time: Sep 15, 2017 4:40:01 PM
 End time: Sep 15, 2017 5:40:01 PM



Expand Collapse

	Activities	Status	Objects	Datacenter	Start Time	End Time	
+	Stop resiliency group (NS_W	Finished	(NS_WEB_25)	Cupertino DC	Sep 15, 2017 4:40:57 PM	Sep 15, 2017 5:15:57 PM	⋮
+	Stop resiliency group (NS_BI	Finished	(NS_BI_01)	Cupertino DC	Sep 15, 2017 4:41:50 PM	Sep 15, 2017 5:30:50 PM	⋮
+	Stop resiliency group (NS_W	Finished	(NS_WEB_25)	Cupertino DC	Sep 15, 2017 4:40:57 PM	Sep 15, 2017 5:15:57 PM	⋮
+	Stop resiliency group (NS_BI	Finished	(NS_BI_01)	Cupertino DC	Sep 15, 2017 4:41:50 PM	Sep 15, 2017 5:30:50 PM	⋮
+	Stop resiliency group (NS_W	Finished	(NS_WEB_25)	Cupertino DC	Sep 15, 2017 4:40:57 PM	Sep 15, 2017 5:15:57 PM	⋮

Global View



Resiliency Groups



Virtual Business Services



Activity Summary

- 3

Rehearse resiliency group(s)
Average time: 6 Mins
Failed:1, Successful:2
- 9

Restore resiliency group(s)
Average time: 9 Mins
Failed:2, Successful:7
- 1

Rehearse Virtual Business Service(s)
Average time: 10 Mins
Failed:0, Successful:1
- 3

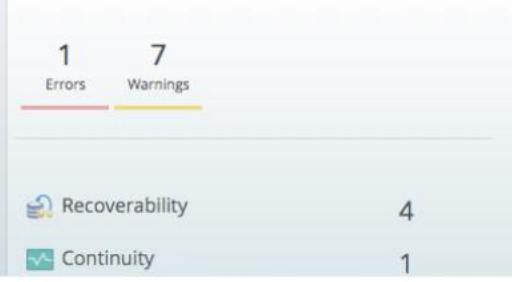
Restore Virtual Business Service(s)
Average time: 9 Mins
Failed:0, Successful:3

Virtual Machines by Platform and OS

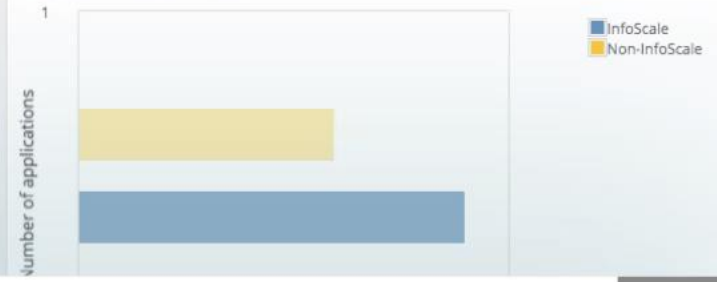
Datcenter: All ▾



Risks Summary



Application environment



◀ NetSuite State: Online

Details

Active Datacenter : US-East-1-AWS
Data Type: NetBackup
Current Activity : None
Last Successful Activity : [Restore Virtual Business Service](#) (Today)
Last UnSuccessful Activity : None

Risks

0 0
Errors Warnings

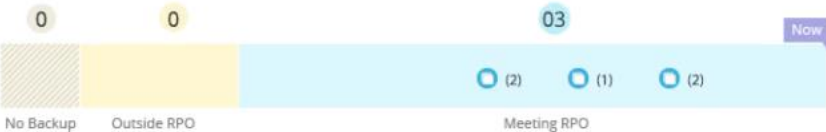
Recoverability 2
Continuity 0
SLA 0

[view details](#)

Copy

US-East-1-AWS: Local | Last reheasal: Sept 15, 2017

Backup copies of Virtual Machines in Resiliency Groups



AZURE-Central-US | Last reheasal: Sept 15, 2017

Backup copies of Virtual Machines



All AWS-US-East-1 AZURE-Central-US

Resiliency Group(s)

Name ▴ ▾	Type ▾	Active DC ▾	State ▾	Service Objective ▾	Availability ▾
NS_WEB_25	Virtual Machine	AWS-US-East-1	Online	Local and Remote Recovery of ...	POL_Test4_NBU
NS_BI_01	Virtual Machine	AWS-US-East-1	Online	Local and Remote Recovery of ...	POL_Test4_NBU
NS_ORA_DB_INST	Virtual Machine	AWS-US-East-1	Online	Local and Remote Recovery of ...	POL_Test4_NBU

Management Operations

Start Stop

Restore Rehearse

Cleanup rehearsal Clear outage

Configuration

Edit Delete

NetSuite

Details

Active Datacenter :
Data Type:
Current Activity :
Last Successful Activity :
Last UnSuccessful Activity :

Copy

US-East-1-AWS: Local

Backup copies of Virtual N

00

No Backup Outside RPO

All AWS-US-East-1

Resiliency Group(s)

Name ▲

NS_WEB_25

NS_BI_01

NS_ORA_DB_INST

Virtual Machine

AWS-US-East-1

Online

Local and Remote Recovery of ... POL_Test4_NBU

Virtual Machine

AWS-US-East-1

Online

Local and Remote Recovery of ... POL_Test4_NBU

Restore Virtual Business Service

Virtual Business Service : NetSuite

Select target datacenter :

AZURE-Central-US

Select the type of image to be used

☒ Latest

☐ Time range

☒	Name ▾	Image information ▾	Restore ▾	Target ESX Server ▾	Target Datastore ▾
☒	NS_WEB_25	Sep 16, 2017 9:40:57 AM ▾	Yes	vom-esx2.vxindia.veritas.com	datastore1_1
☒	NS_BI_01	Sep 16, 2017 9:51:50 AM ▾	Yes	vom-esx2.vxindia.veritas.com	datastore3
☒	NS_ORA_DB_INST	Sep 15, 2017 10:01:01 AM ▾	Yes	vom-esx2.vxindia.veritas.com	datastore3

Showing 2 record(s)

Next

Cancel

Management Operations



Start



Stop



Restore



Rehearse



Cleanup
rehearsal



Clear outage

Configuration



Edit



Delete