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MARKET EXPERTS
Your choice for IT solutions

AvailabilityGuard

Preventing Outages on Your Critical IT Infrastructure

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About us

- Founded in 2005, serving leading enterprises worldwide
- We help our customers to
  - Prevent outages on their critical IT infrastructure
  - Secure their data storage environment

Selected Partners

DELL EMC

vmware PARTNER TECHNOLOGY ALLIANCE

IBM

amazon web services | Partner Network
ADVANCED TECHNOLOGY PARTNER

Microsoft Azure

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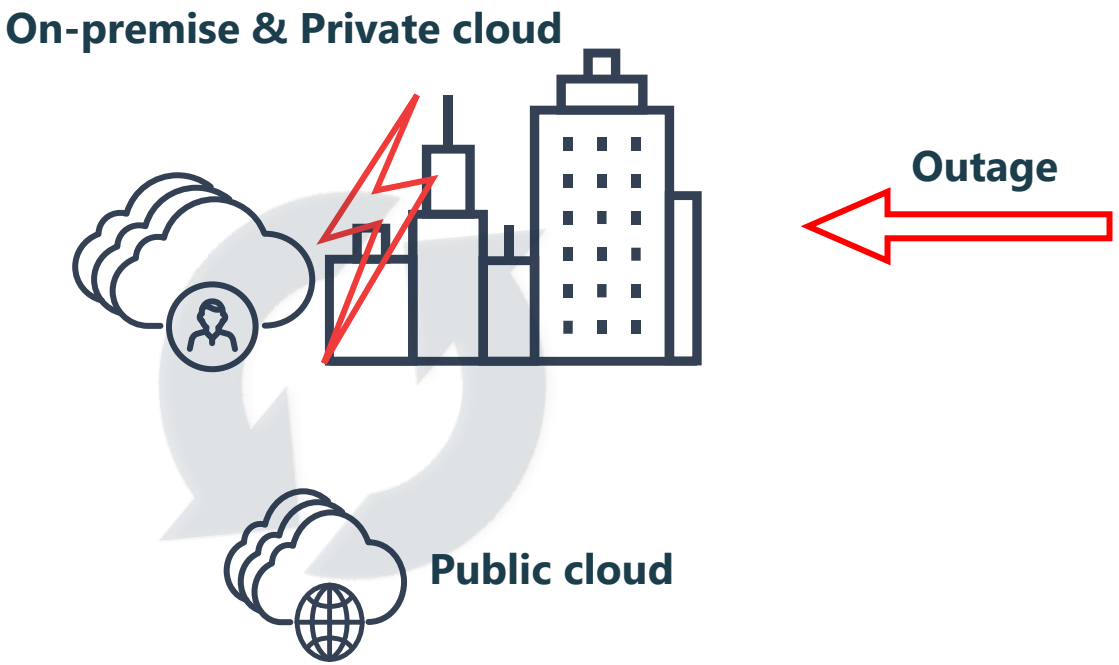
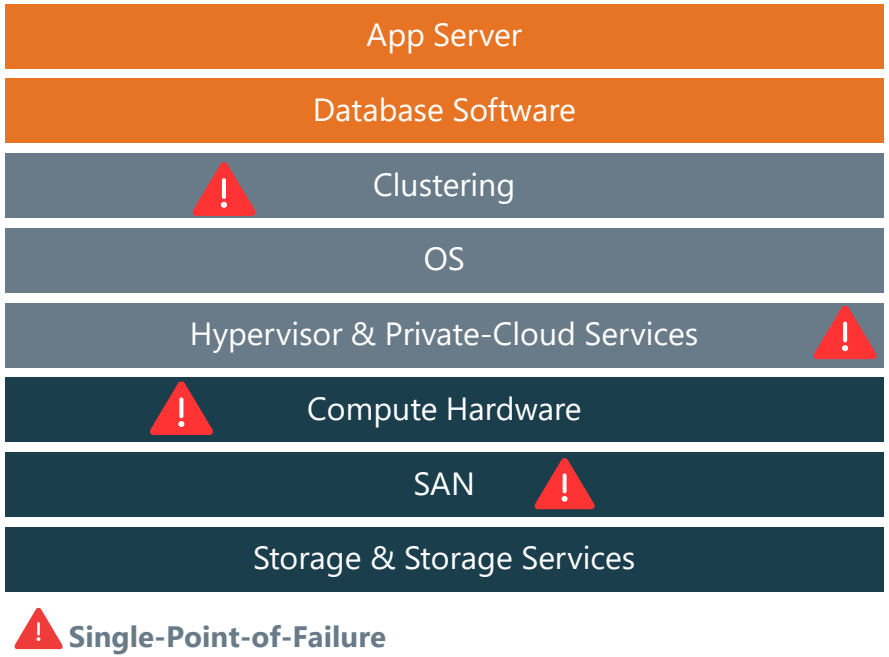
The Challenge: Outage Prevention



On-Premise or Hybrid IT
Engineered for always-on operation



Complexity
Thousands of vendor best-practices

Constant configuration changes

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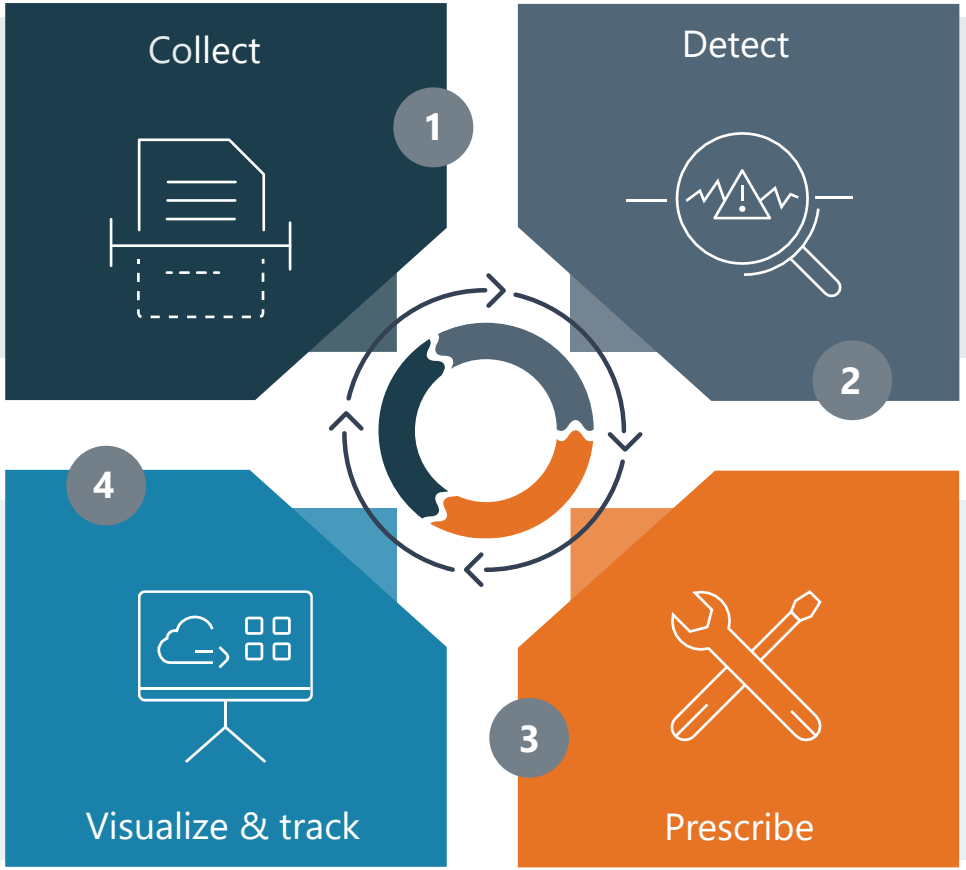
The Solution: AvailabilityGuard

- Automatic daily verification of Production, HA & DR systems
- Validates Compliance with Vendor Best Practices
- Validates that HA systems are always fail-over ready
- Validates that Production and DR are always in sync
- Clear visibility into RPO and other key Resilience metrics
- Supports both on-prem and public cloud environments

AvailabilityGuard helps make IT work – ALL THE TIME

How AvailabilityGuard works

- Daily collection of configuration from all infrastructure layers
- Non-intrusive
- Agentless



- **Correlates** config across layers to build a visual topology
- **Analyzes** config using a built-in risk detection engine (>7,000 issues)
- Detects single-points-of-failure and other misconfigurations

- Single-pane-of-glass for configuration quality & operational stability
- Presents issues by application or business service
- Automatically reports on successful resolution of issues

- Sends actionable alerts to appropriate teams
- Suggests remedial steps to prevent future outages
- Integrates with existing incident management systems

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AvailabilityGuard knowledgebase (>7,000 issues)

Data protection

Replication

- Data completeness
- Data consistency
- Process failures

Optimization

- Reclaimable storage
- I/O, replication replication
- Server performance
- SAN best practices

Data protection SLA

- RPO management
- Data retention
- Performance
- Protection, right location

Virtualization

- Storage allocation
- Dependency mapping

SAN best practices

- I/O multi-pathing best practices
- SAN security / tampering prevention

Database

- Data protection validation, detect corruption
- Performance
- Vendor recommendations

Availability management

Data access

- Access to shared storage (HA) and replicas (DR)
- Redundancy and performance

Clustering

- Consistent configuration across cluster nodes
- Vendor best practices
- Local / geo clustering

Host configuration

- OS version / SPs / patches
- Installed products / versions
- Kernel parameters
- Network services

Application Server

- Load balancing
- Deployment best practices

Virtualization

- HA & DR
- Vendor best practices

Redundancy

- Multi-pathing, Network, NIC / teaming
- DNS, LDAP, AD
- DB file configuration

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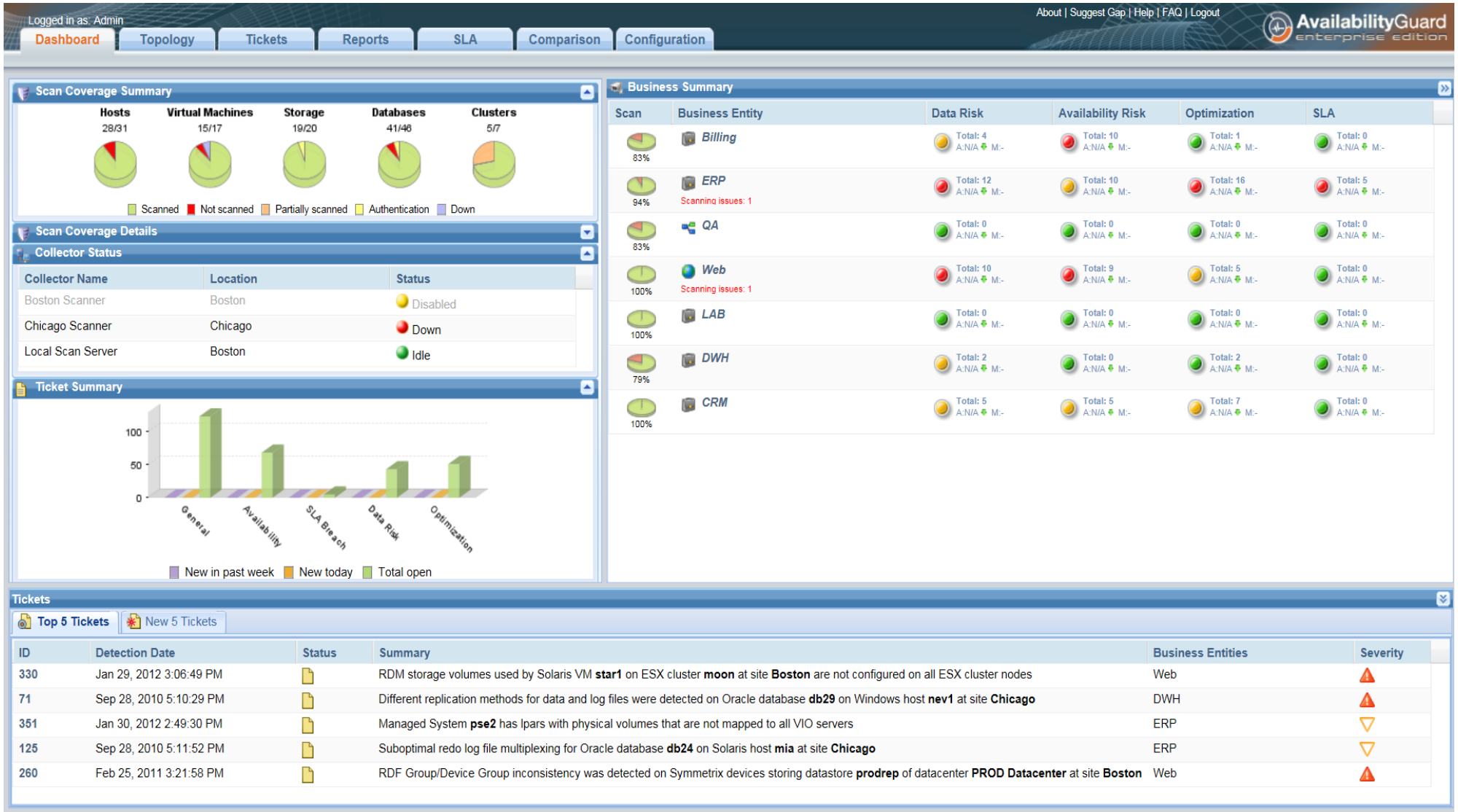
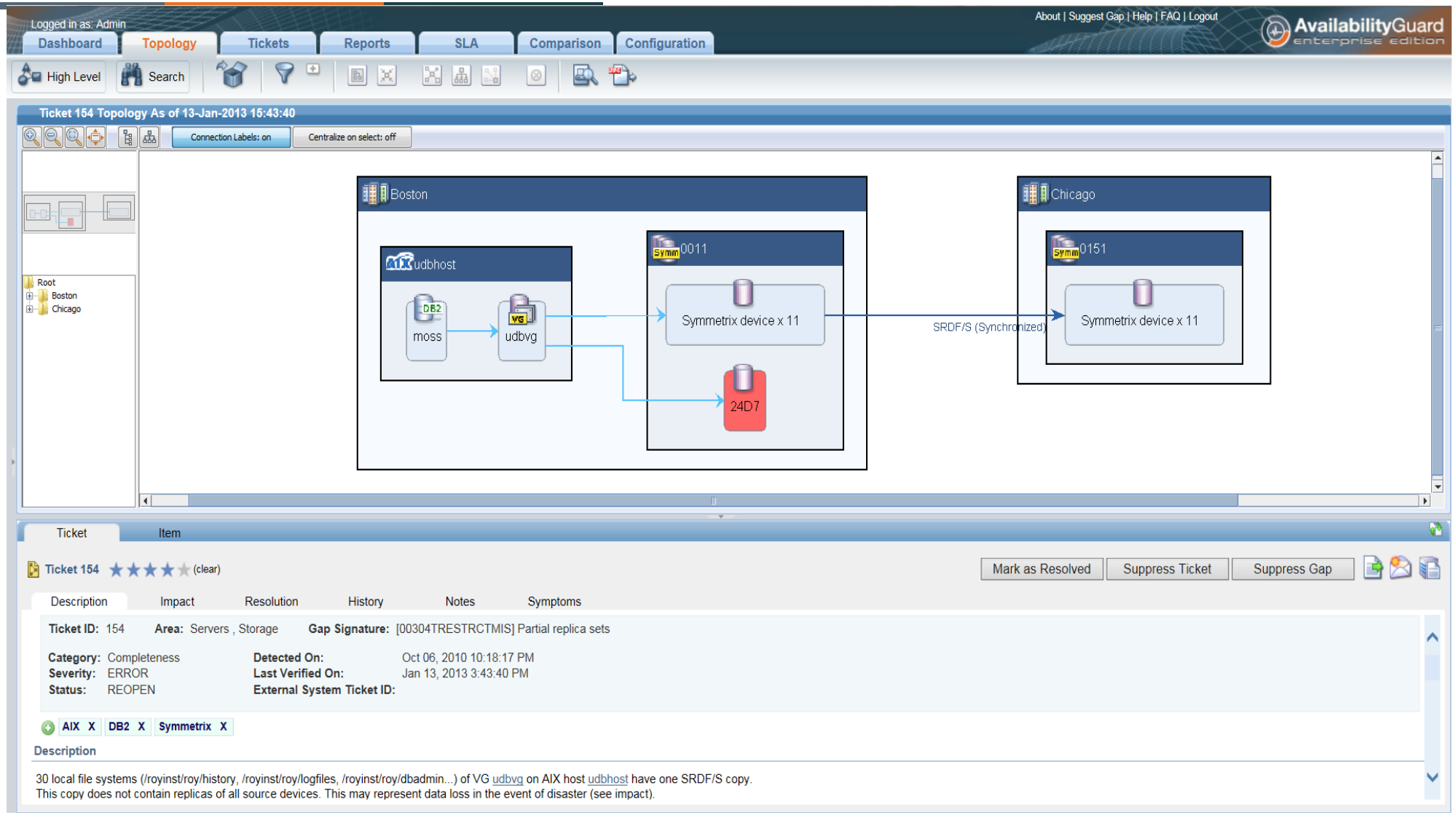
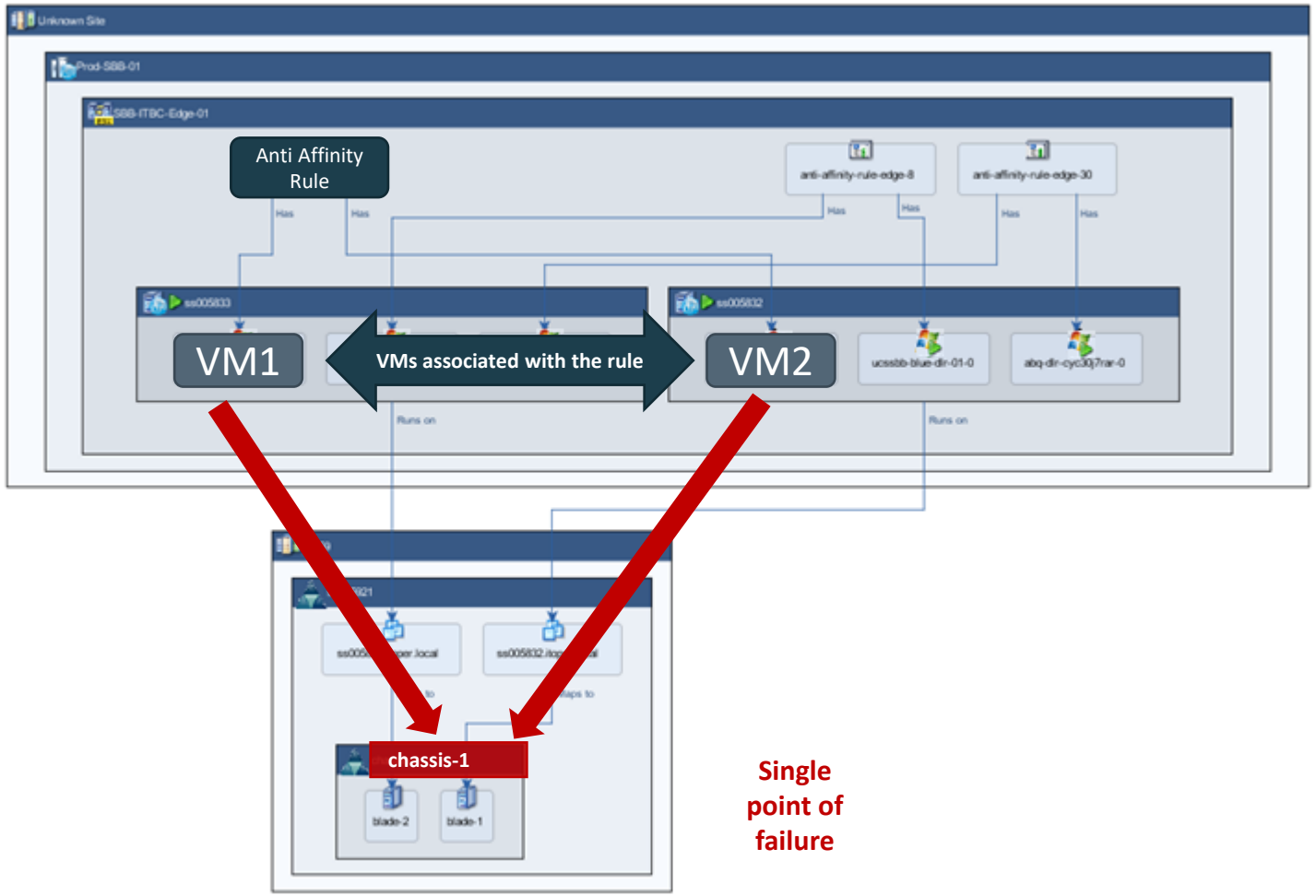
Operational stability dashboard



Drill-down on issues, with automatic visualization



Single-point-of-failure at blade chassis level



(1) Active-Active Windows VMs separated to different hardware by VMware Anti Affinity rules in order to ensure service availability and prevent single point of failure

(2) The VMs are running on different ESXi hosts but all of them are running on the **same BLADE CHASSIS**

Single point of failure

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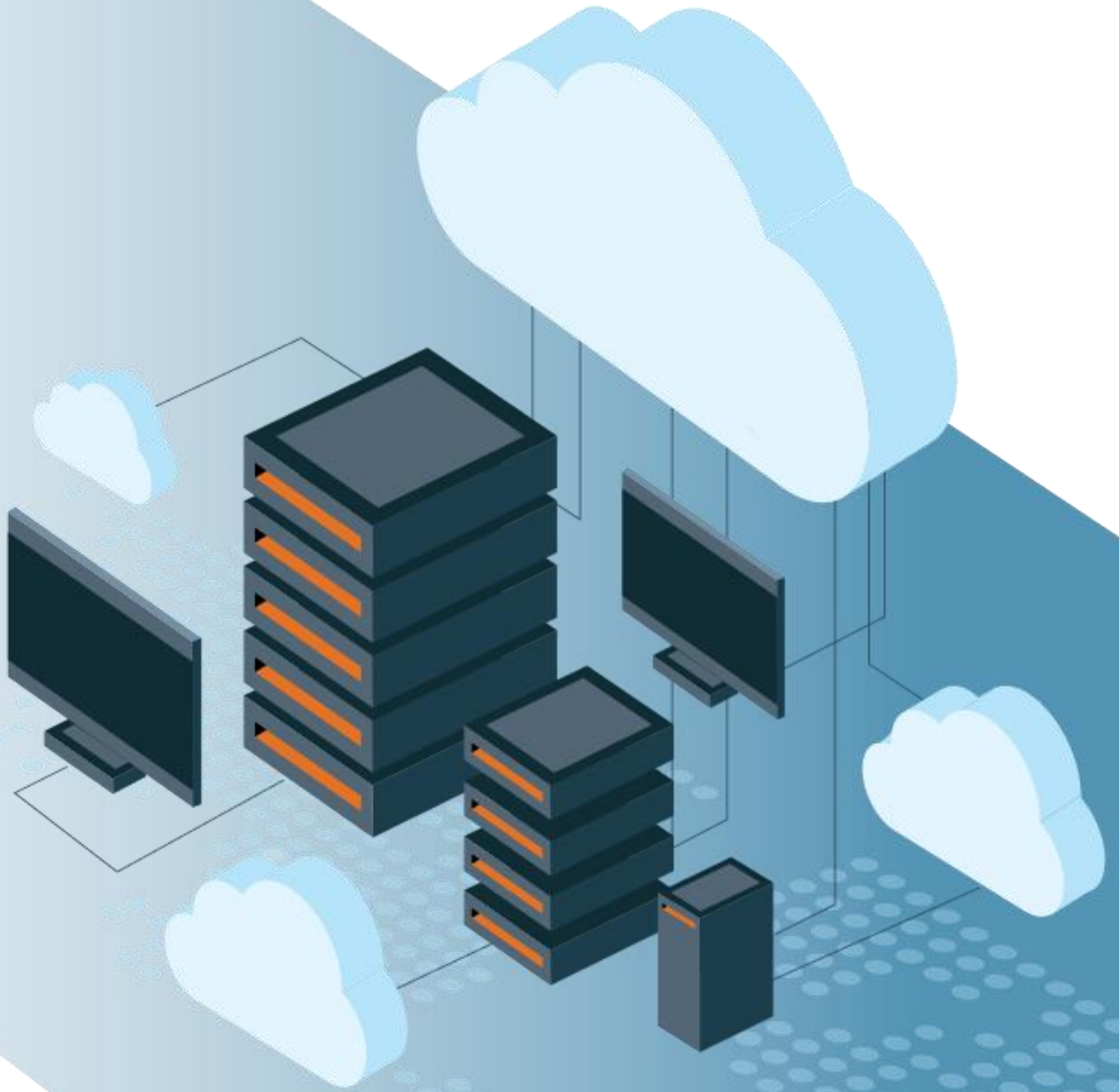
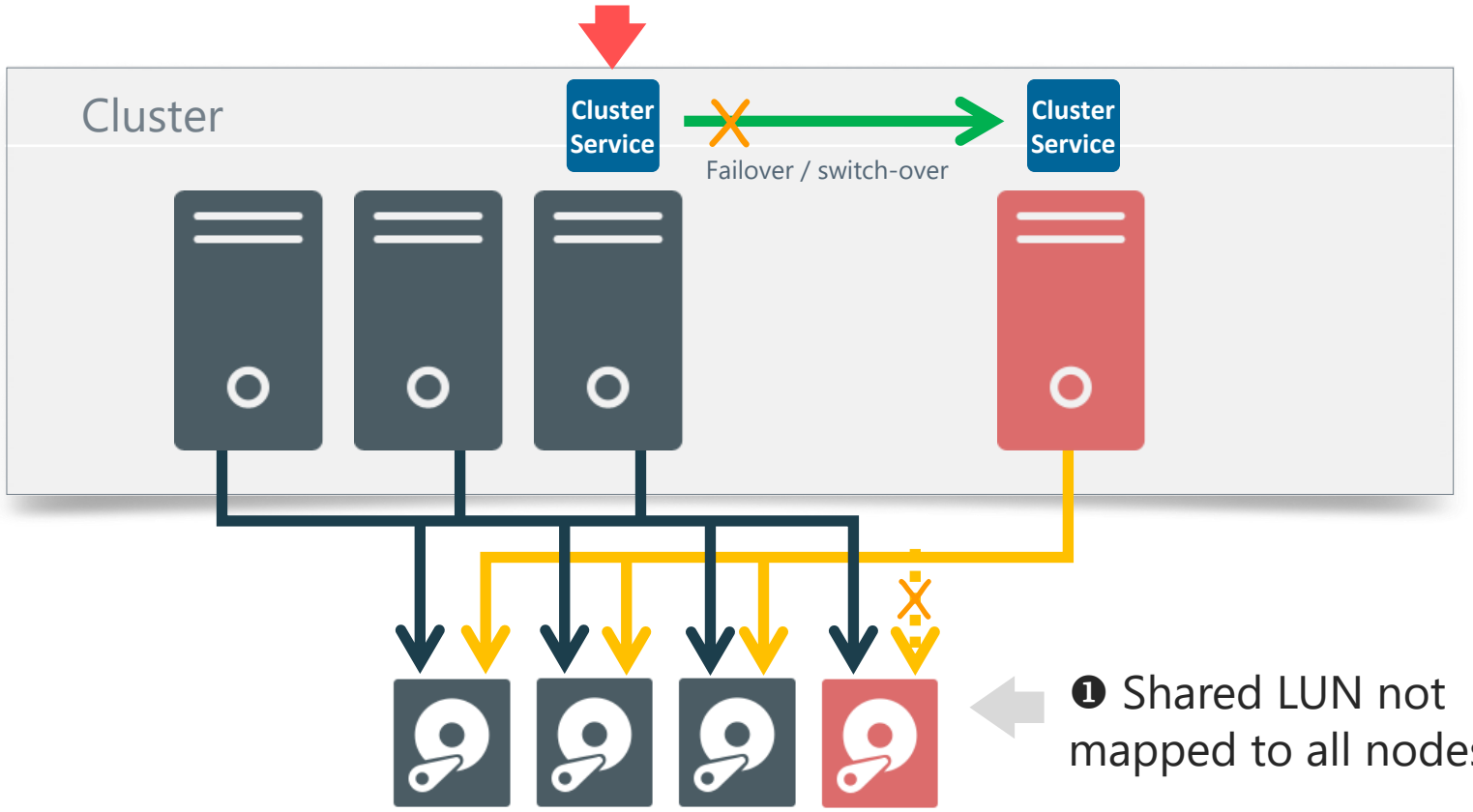
Examples of Issues Detected



Storage access issue in cluster

Production site

❷ Impact: cluster not ready for recovery. Downtime on both automated-failover and manual switch-over.



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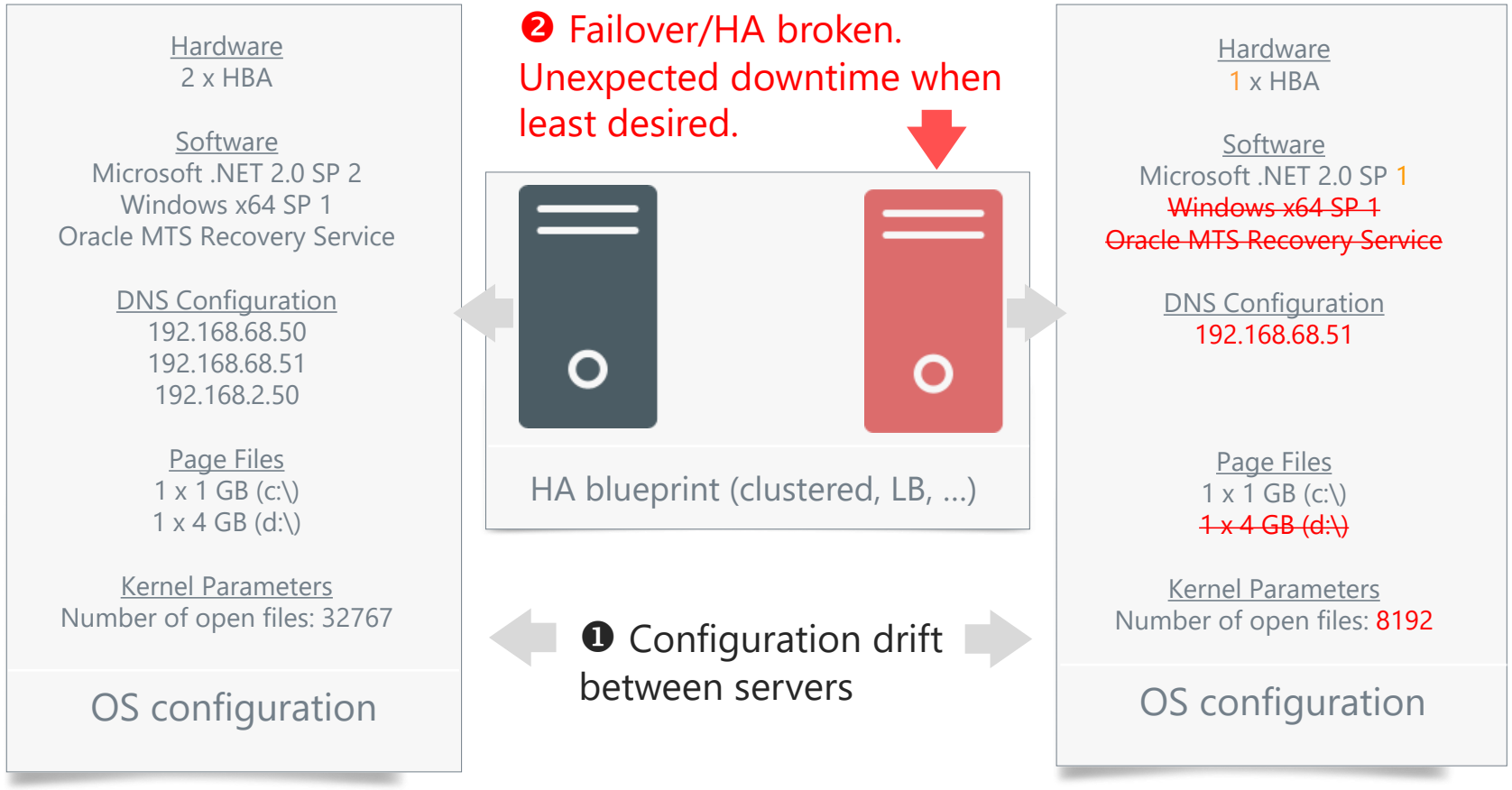
Cluster configuration drift



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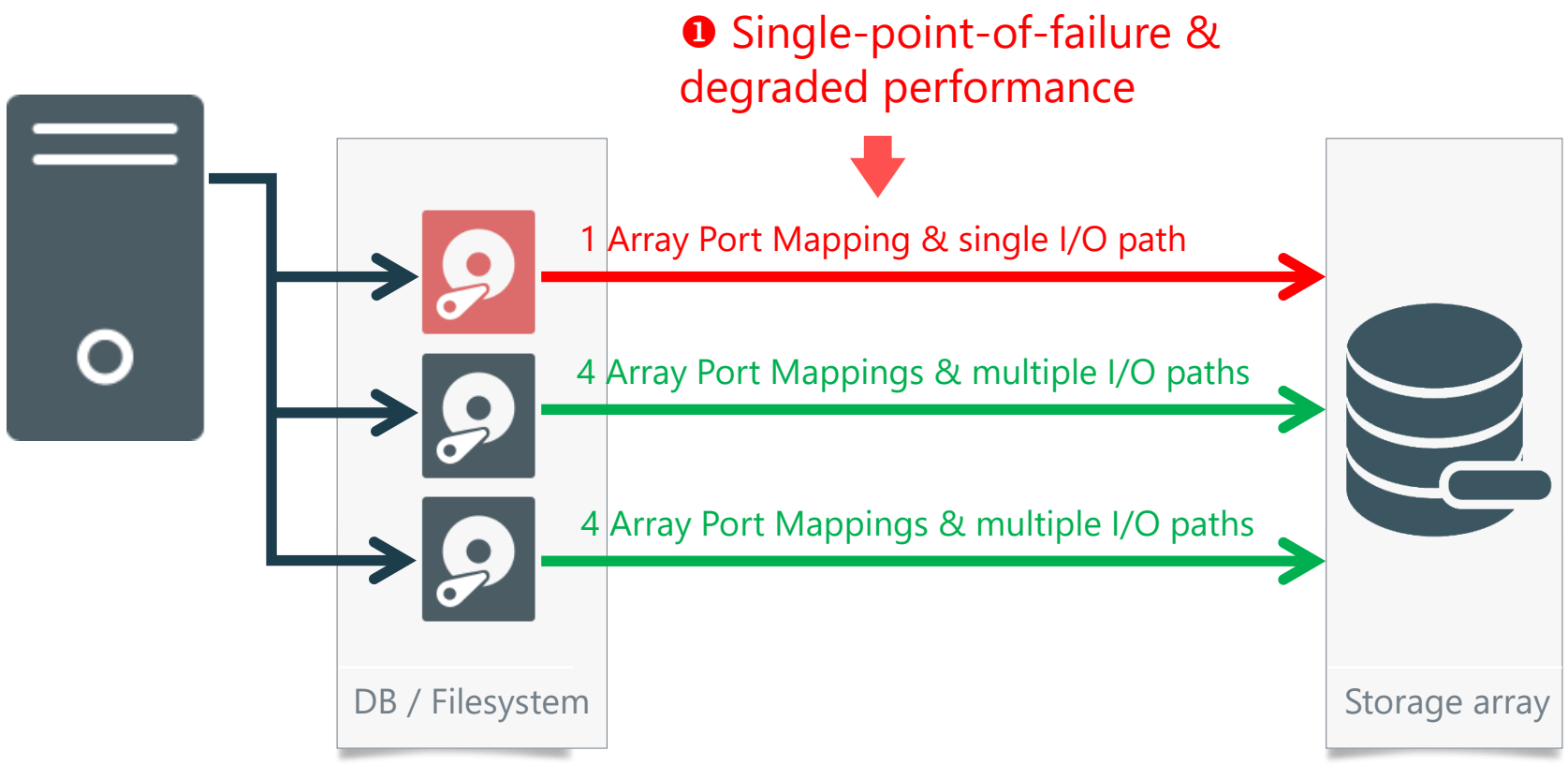
SAN I/O path – single-point-of-failure

Production site



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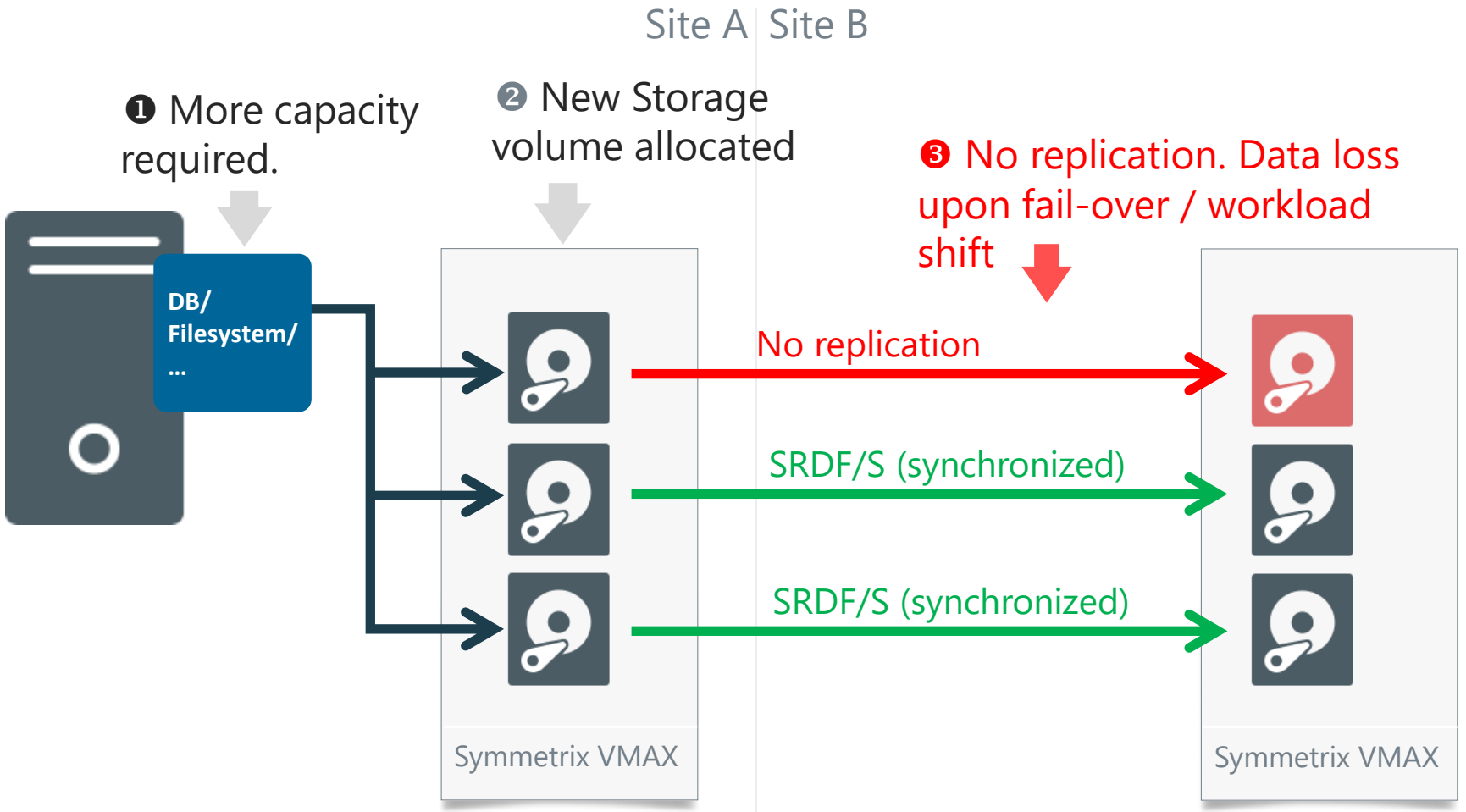
Partial replication



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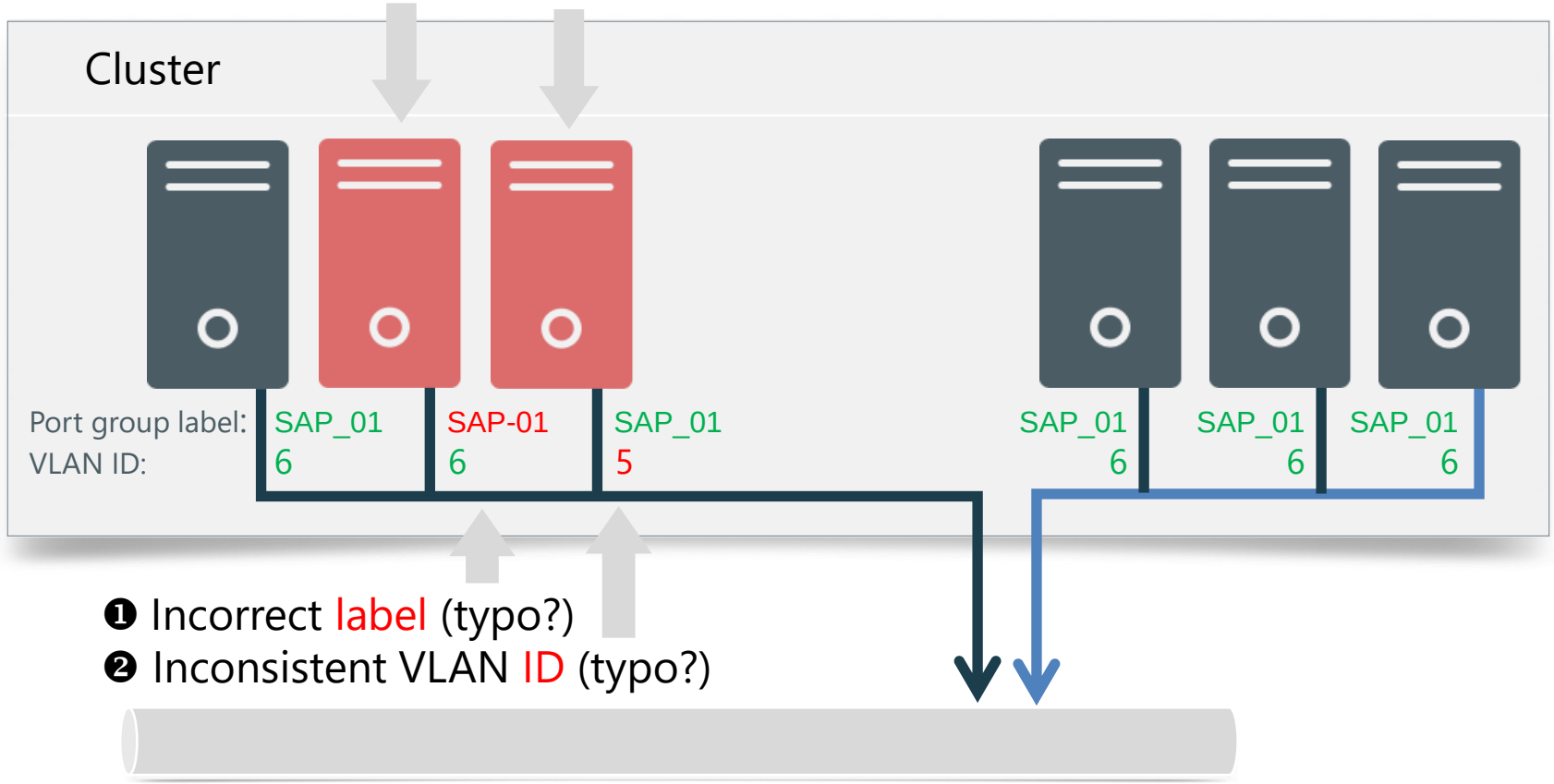
Deadly misconfigurations in virtual infrastructure

Production site

❸ Impact: VMs can't communicate with peers, leading to application failures



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Support matrix

OS, Hypervisors & Blades

- Linux RH 3+ • SuSE 8+ • Amazon Linux
- Windows Server (all releases)
- Solaris 8+ • HP-UX 11.0+ • AIX 4+
- VMware vSphere • Microsoft Hyper-V
- IBM PowerVM • Oracle VM • Zones
- Cisco UCS • HP BL/Synergy

LVM & Multi-Pathing

- All supported OS LVMs
- VxVM • LVM 2 • ASM • ZFS • more
- EMC PowerPath • Veritas DMP • Hitachi HDLM • IBM SDD • NetApp DSM
- Native: Linux • Windows • AIX • HPUX PVLinks • Solaris MPxIO • ESXi

Clustering

- VMware HA / FT / SRM / vMSC
- IBM PowerHA (HA/CMP)
- Microsoft Cluster
- Oracle RAC & CRS • HP MC/SG • PolyServe
- VCS • Sun Cluster • Linux cluster

Storage & SAN

- EMC Symmetrix: DMX • VMAX • PowerMAX
- EMC XtremIO • Data Domain • Isilon
- EMC VNX SAN • Unity • VPLEX
- NetApp FAS/AFF: cDot • 7-mode
- Hitachi VSP • USP • AMS • G-Series • HCP
- IBM DS • XIV • SVC • Storwize • A/V9000/R
- HP XP • 3PAR
- Infinidat InfiniBox
- SAN: Brocade • Cisco • HP VirtualConnect

Converged & HCI

- EMC vxRail • vxRack SDDC • Vblock/VxBlock
- NetApp FlexPod • HPE ConvergedSystem
- IBM Pure Systems • Cisco HyperFlex
- VMware VSAN • EMC ScaleIO

Application Servers

- IBM WebSphere
- Oracle WebLogic
- Apache Tomcat

Databases

- Oracle 8.1.7+ • Exadata
- MS SQL Server 2000 SP3+
- Sybase 12.5+ • DB2 UDB 8.1
- AWS RDS • Azure Database*

Replication

- EMC TimeFinder • SRDF • RecoverPoint
- EMC MirrorView • SnapView • Active-Active
- NetApp SnapMirror • SnapShots • SnapVault
- Hitachi TrueCopy • ShadowImage • GAD
- Hitachi UniversalReplicator • TrueShadow
- HP Snapshot • RemoteCopy
- IBM Flash/Global Copy • Metro/Global Mirror
- Oracle Data Guard • GoldenGate
- Microsoft SQL Server Always On
- Veritas Volume Replicator
- Infinidat Snapshot • Clone • RemoteCopy
- Zerto • vSphere replication
- AWS snapshots • S3 replication
- Azure snapshots • storage replication*

Cloud Vendors

- Amazon Web Services
- Microsoft Azure*

Containers & Orchestration

- Amazon EC2 Container Service (ECS)
- Azure Service Fabric (ASF) *
- Kubernetes (Unmanaged / managed)
- Docker

Load balancers & DNS

- F5
- AWS ELB/ALB • Amazon Route 53
- Azure Load Balancer • Application Gateway *
- Azure Traffic Manager *

Cloud Storage

- Amazon Elastic Block Storage • S3 • Glacier
- Azure Blob / Disk Storage *

(*) Public Cloud roadmap items

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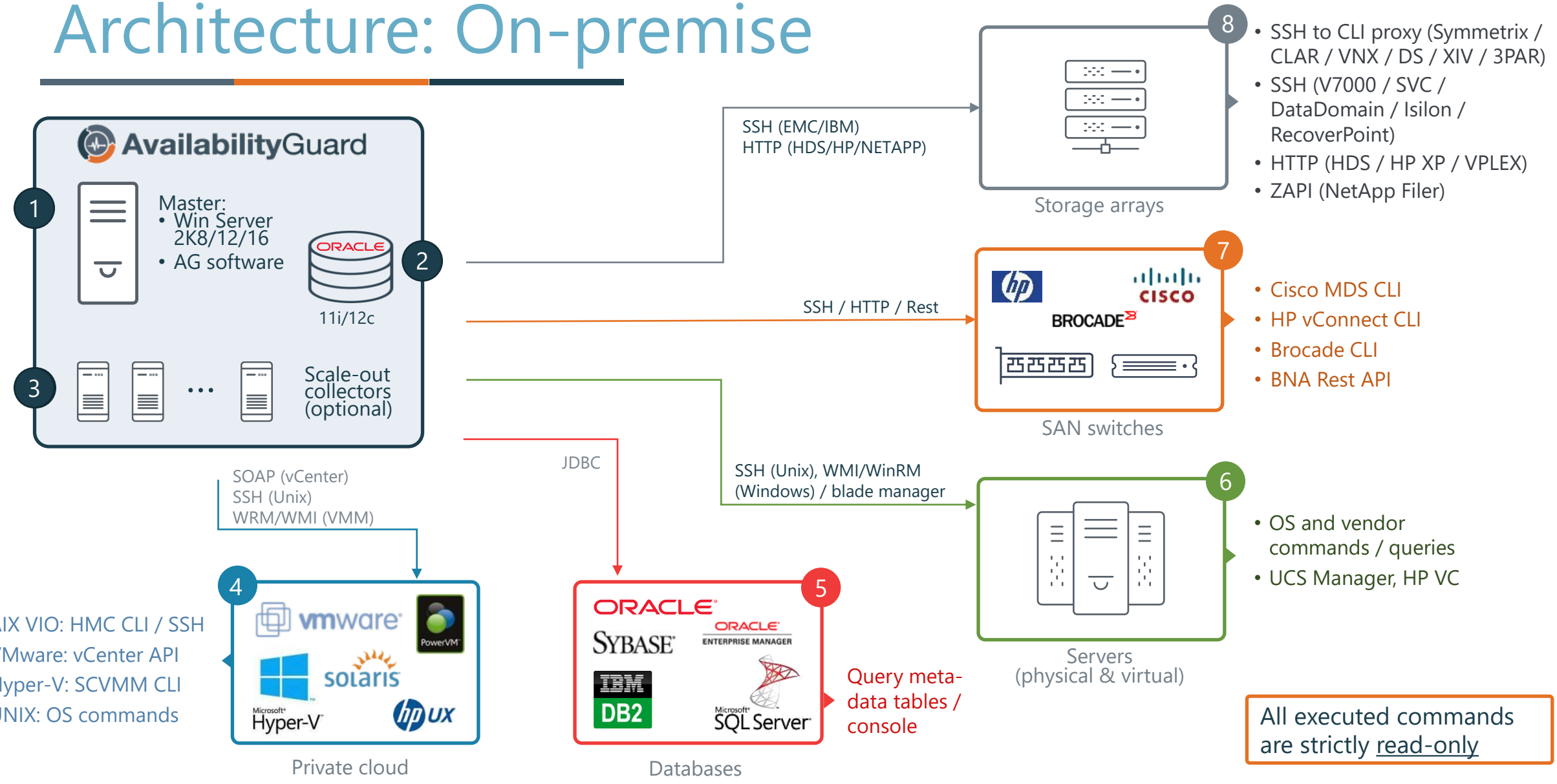
Architecture: On-premise



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Next Step: AvailabilityGuard HealthCheck

- Detects single-points-failure and misconfigurations that cause downtime or data loss in production
- Performed by a Continuity Software engineer using AvailabilityGuard
- Includes a one-time scan of up to 100 physical servers and all their associated infrastructure (VMs, storage, clustering, databases…)
- Initial results viewable during the HealthCheck
- A complete and extremely valuable HealthCheck report delivered following the HealthCheck
  - See Sample HealthCheck report
- Minimal customer effort required

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Thank You!

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