

Washington Systems Center - Storage

Accelerate with IBM Storage:

**IBM Spectrum Copy Data Management
(CDM) Technical Deep Dive and
Impressive Use Cases**



https://www.ibm.com/support/knowledgecenter/en/SS57AN_2.2.7/com.ibm.spectrum.cdm.doc/ss57an_pdf_files.html

CDM Quick
Reference
Link

Brad Ashbaugh - IT Storage Flash and SDS SME
Washington Systems Center - Storage

For any Industry

Accelerate with IBM Storage Webinars

The Free IBM Storage Technical Webinar Series Continues in 2019...

Washington Systems Center – Storage experts cover a variety of technical topics.

Audience: Clients who have or are considering acquiring IBM Storage solutions. Business Partners and IBMers are also welcome.

To automatically receive announcements of upcoming Accelerate with IBM Storage webinars, Clients, Business Partners and IBMers are welcome to send an email request to accelerate-join@hursley.ibm.com.

Located in the Accelerate with IBM Storage Blog:
<https://www.ibm.com/developerworks/mydeveloperworks/blogs/accelerate/?lang=en>

Also, check out the WSC YouTube Channel here:
https://www.youtube.com/channel/UCNuks0go01_ZrVVF1jgOD6Q



2019 Upcoming Webinars:

June 18 - Spectrum Copy Data Management Technical Deep Dive and Impressive Use Cases

June 28 - Clouds to the left - Objects to the right - TS7700 in the middle for you!

Register Here: <https://ibm.webex.com/ibm/onstage/g.php?MTID=e7b7072c5b470b84d8b5c8147ef15f9d4>

IBM Storage and SDI

AGENDA

- I. IBM Spectrum Copy Data Management (CDM) Introduction
- II. Technical Deep Dive into CDM
- III. CDM Use Cases
- IV. Reference
- V. Demo

IBM Spectrum CDM

What



IT Storage Hardware
Assisted Snapshot Manager
Data protection and CDM in
one platform
Across data centers and in
multi-cloud

Why



Solve multiple IT pain
points

Application recovery
Disaster Recovery
Dev and Test
Reporting & Analytics

How



Empower users with self-
service portal
DBAs, Dev-Test, QA, etc.
Infrastructure-as-Code via
RESTful APIs

Instant Restores and Cloning Self Service

IT Modernization No Matter What Industry, What Type of Environment

Your IBM Infrastructure



IBM FlashSystem A9000
IBM FlashSystem A9000R
IBM FlashSystem FS9100



IBM Spectrum Accelerate
IBM Spectrum Virtualize



VersaStack



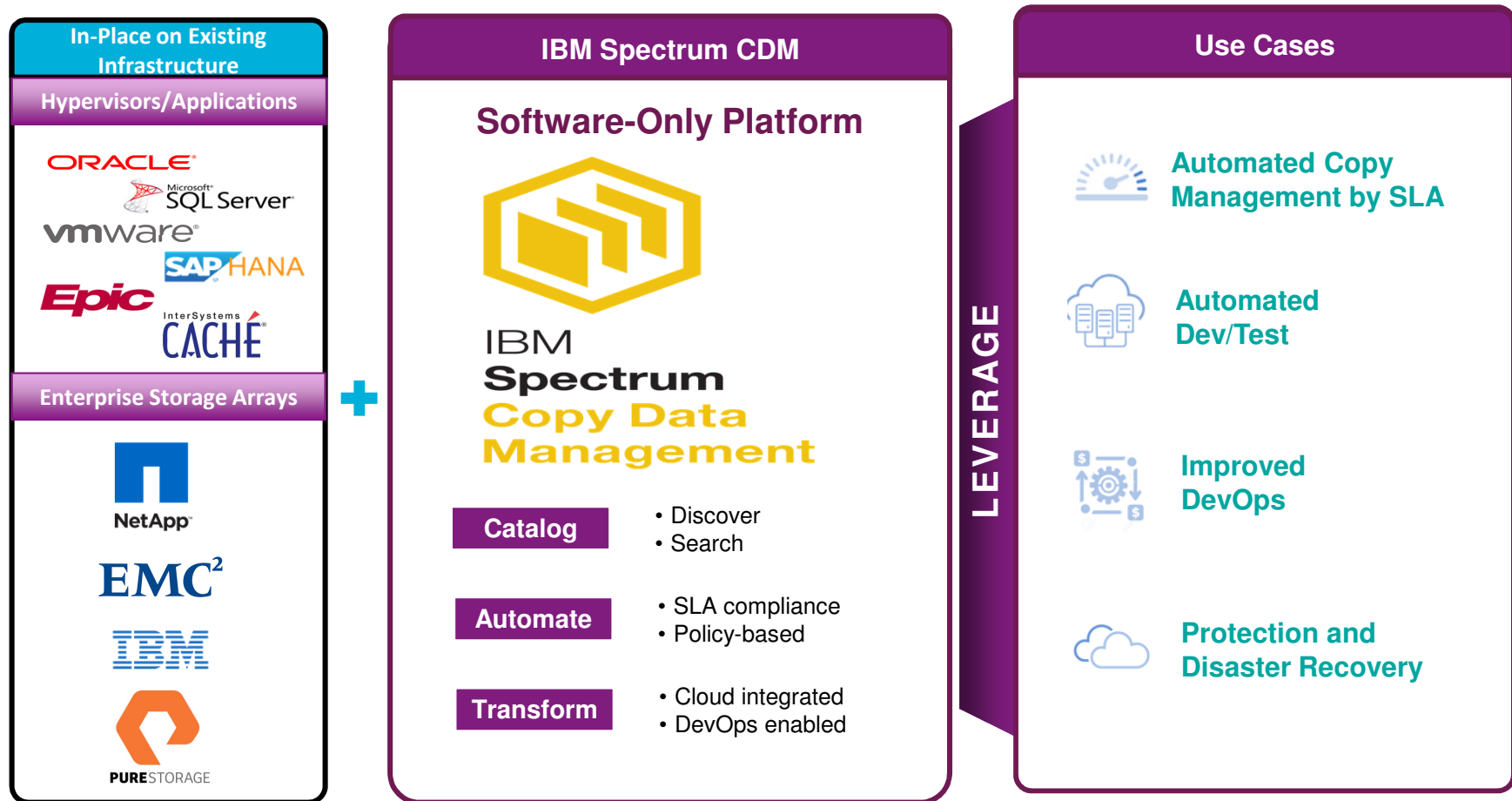
Use Cases

LEVERAGE

-  Automated Copy Management by SLA
-  Automated Dev/Test
-  Improved DevOps
-  Protection and Disaster Recovery

Near-Zero RPO RTO SLAs

IT Modernization No Matter What Industry, What Type of Environment



Auto FlashCopy Pruning

Supported Applications/Databases and Environments

Environment	Virtual	Physical	Operating System	Comment
Virtual Machines	✓	-	Windows, Linux	VMware, any application/database via script
Physical Machines	-	✓	Windows, Linux, AIX	Any application/database via script
Oracle	✓	✓	Linux, AIX	Includes Oracle 12c
MS SQL Server	✓	✓	Windows	Includes MS SQL Server 2012
EPIC/Cache	✓	✓	Linux, AIX	Ability to mount pRDMs
SAP HANA	✓	✓	pLinux and xLinux	Also available on IBM Power
VersaStack	✓	✓	VMware	Hybrid and On-Prem
IBM Spectrum Protect Snapshot	✓	✓	Windows, Linux	VMware only, Catalog and Use function

Agentless and Super Easy to Deploy

CDM Enables the Ability to Snap at all Levels of the Stack

Application

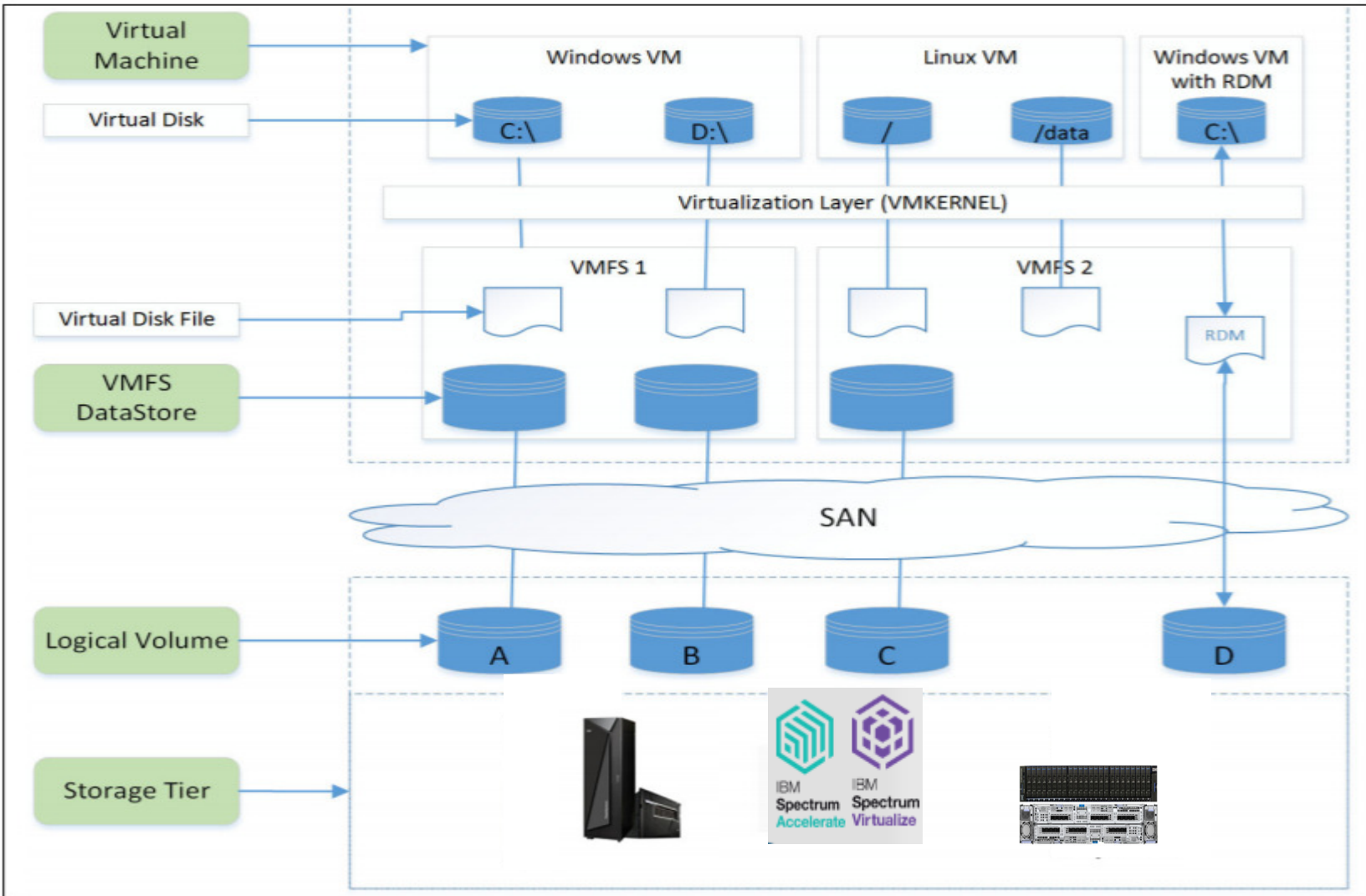
ORACLE®

Microsoft®
SQL Server®

SAP HANA

Epic

Homegrown Apps + Services



CDM Enables the Ability to Snap at all Levels of the Stack

Application

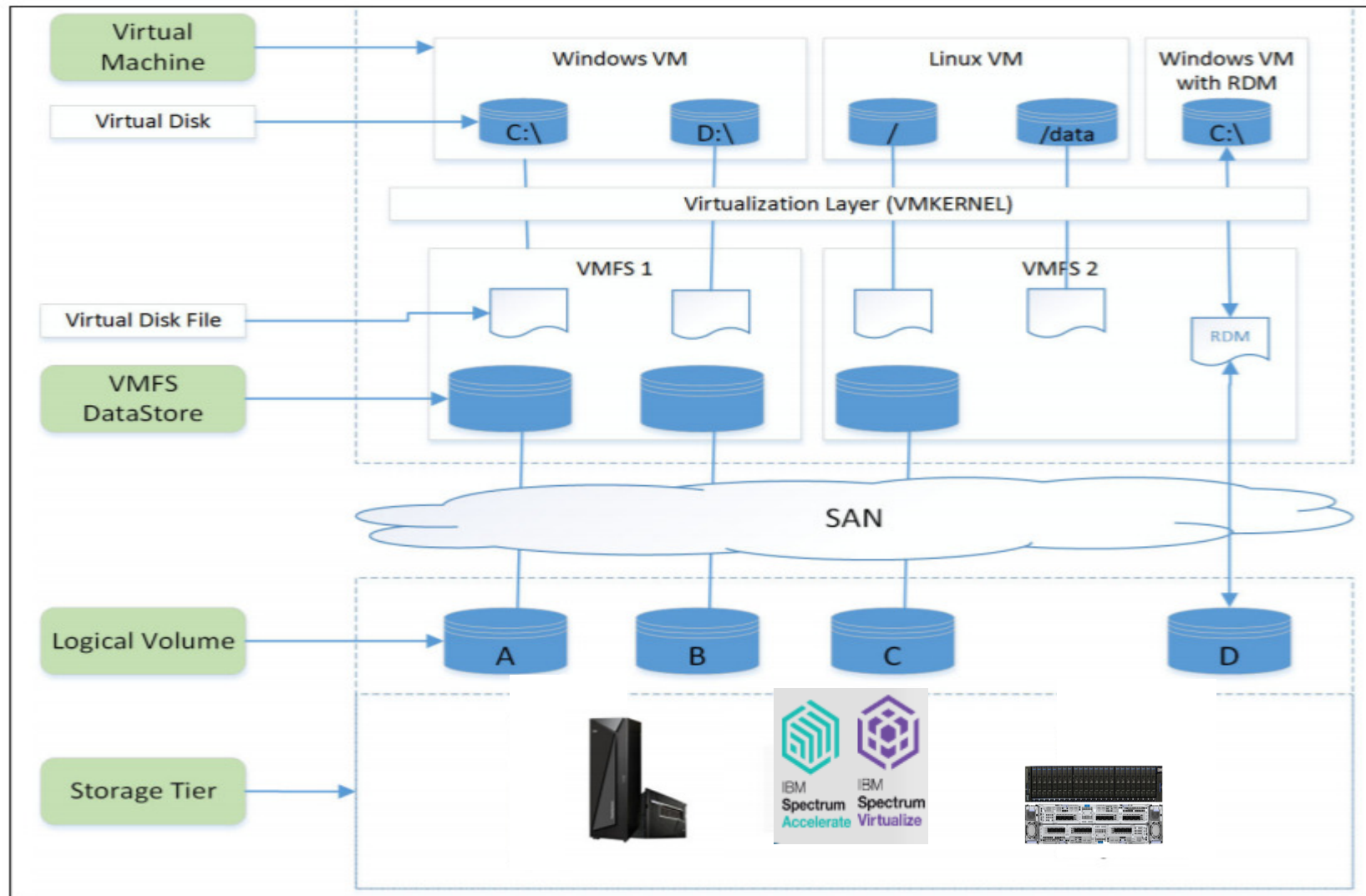
ORACLE®

Microsoft®
SQL Server®

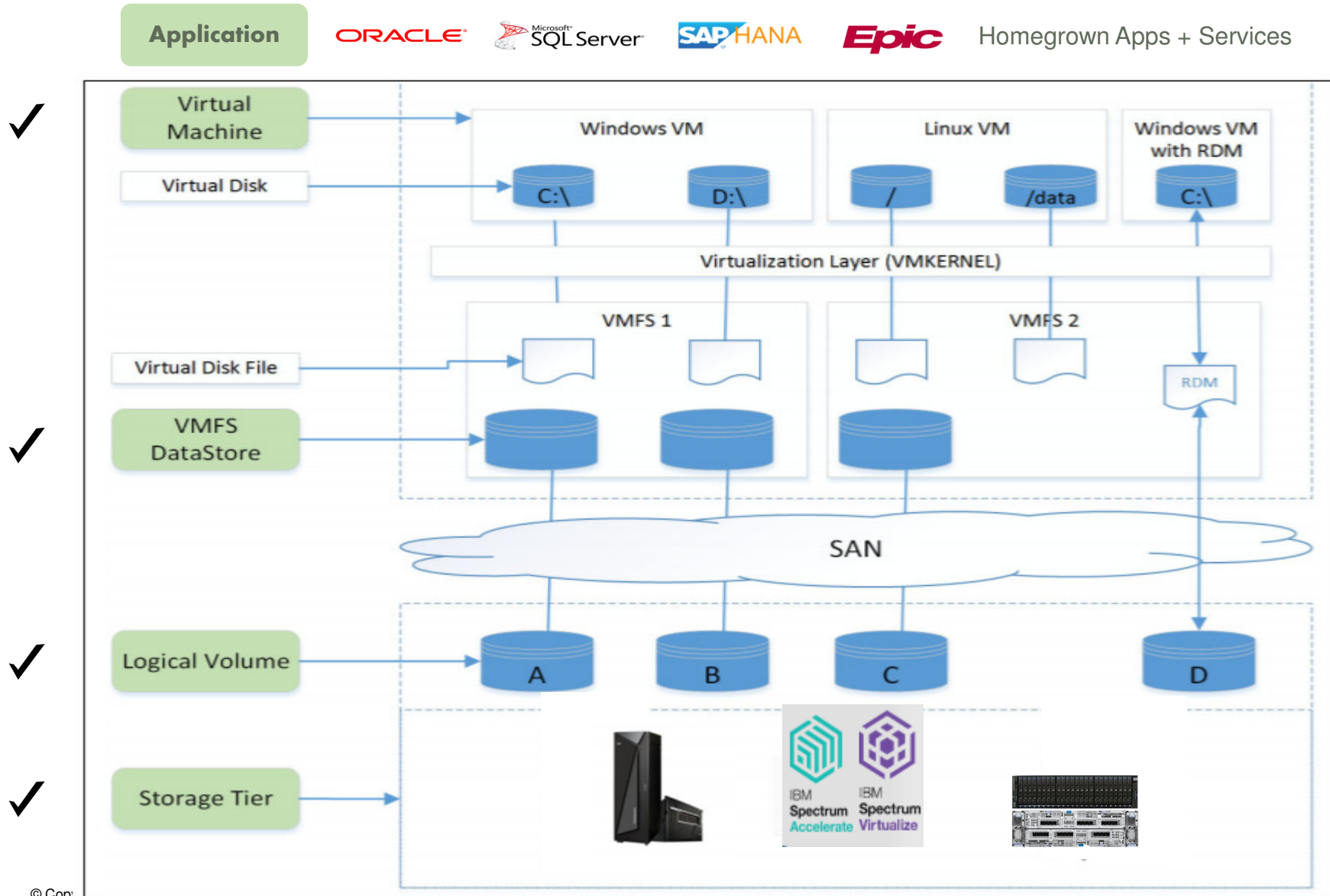
SAP HANA

Epic

Homegrown Apps + Services



CDM Enables the Ability to Snap at all Levels of the Stack



CDM Enables the Ability to Snap at all Levels of the Stack



Application

ORACLE®

Microsoft®
SQL Server®

SAP HANA

Epic

Homegrown Apps + Services



Virtual Machine

Virtual Disk

Windows VM

Linux VM

Windows VM
with RDM

C:\

D:\

/

/data

C:\

Virtualization Layer (VMKERNEL)

VMFS 1

VMFS 2

Virtual Disk File

VMFS
DataStore



Logical Volume

SAN

A

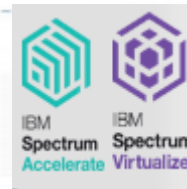
B

C

D

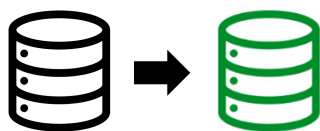


Storage Tier



FlashCopy Data Lifecycle Management

Create Copies



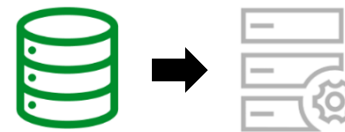
Snapshots, Clones,
Replication with
Application Awareness

Track Copies



Catalog, Audit

Use Copies



Spin up Clones
Spin up Systems

Refresh Copies



Automated DR and
Dev-Test refresh

Transition Copies



Move from Test to
Production and back

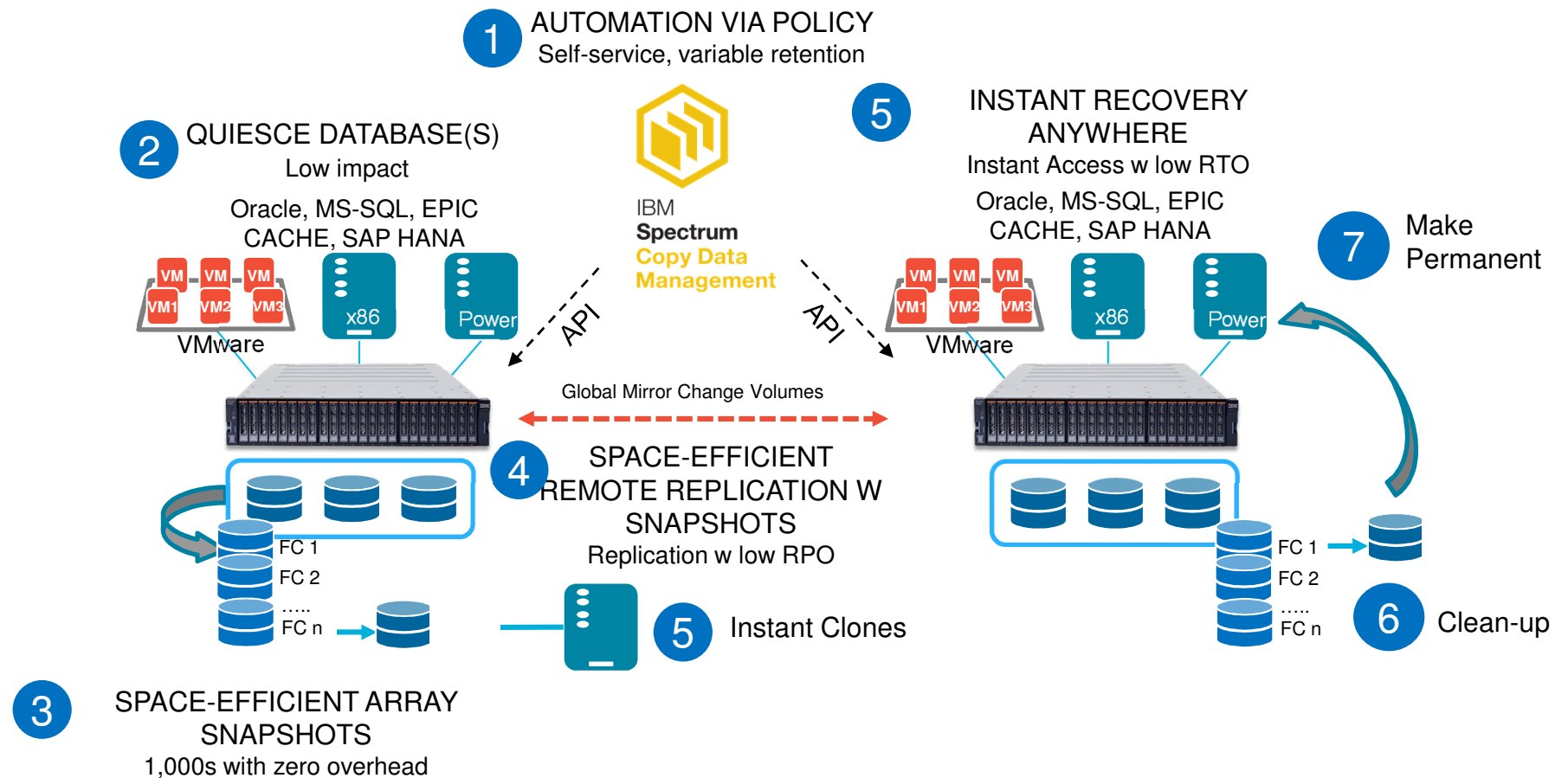
Delete Copies



Clean Up

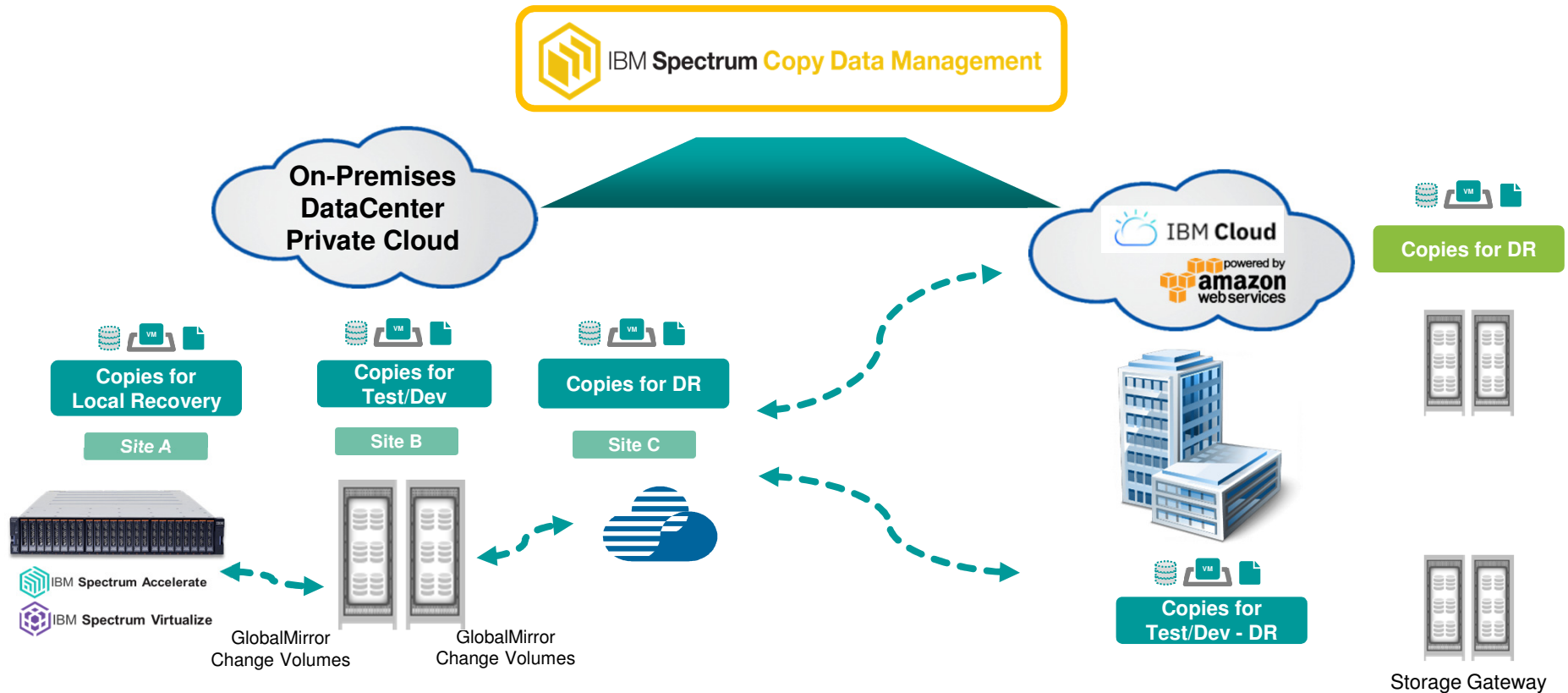
All Automated

Quiesce Applications Before Each FlashCopy



Application Aware FlashCopies

Multi-Cloud Integration Capabilities Increasing Air Gap from PROD

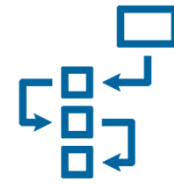


Automatically Store FlashCopies Off-Site

Financial Services Binary Trading Company Located in the Northeast



Test/Dev



DevOps

Customer Demands Quick Access to Data Clones for Better ROI

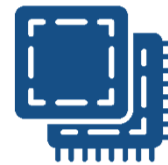
- Test
- DevOps
- Reporting / Analytics
- Patch Management
- Instant Recovery or Disaster Recovery



Reporting



Analytics



Patch Management



Recovery
Disaster Recovery

OR

Involves any use case where someone in the organization needs access to copies of data fast...

A Ton of Use Cases

“Demo Time!”



Backup slides

IBM Systems Flash Storage Offerings Portfolio



Storwize V50100E / V7000F



Entry / Mid-Range

FlashSystem 9100 Models 9110, 9150



Enterprise Class,
NVMe accelerated
Multi-Cloud Enabled

FlashSystem A9000



Cloud Service
Providers

FlashSystem A9000R



High End
Enterprise

IBM Elastic Storage Server



Big Data

Consolidate file &
object workloads
Faster data analysis
Global sharing

DS888xF



Business Critical

z/OS / AIX
Power HA
Power i HA

Business critical,
deepest integration
with z Systems
Superior
performance and
reliability
Three-site / Four-site
replication
DS8884F, DS8886F,
DS8888F

Scale-out clustering
Simplified management
Flexible consumption model
Virtualized, enterprise-class, flash-optimized, modular storage
Enterprise class heterogeneous data services and selectable data reduction

Simplified management
Flexible consumption model
Large Grid scale
Full time data reduction



IBM FlashCore™ Technology Optimized

SVC

Enhanced data storage functions,
economics and flexibility with
sophisticated virtualization

NVMe FlashCore Module

Superior endurance & better performance

- FIPS 140-2
- Hardware Compression



FlashSystem 900

Application acceleration

- Extreme performance
- Hardware Compression
- Targeting database acceleration

