



PURESTORAGE®

Uncomplicate Data Storage, Forever



Frictionless vVols Replication with Pure Storage vSphere Client Plugin

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Your Speakers



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Agenda




Pure Storage Intro



vSphere Plugin and vVols Primer



Virtual Volumes Replication Manager



Bringing it all Together



Pure Storage At A Glance



FY23 Annual Guidance

\$2.75 B

26% Y/Y Growth



Pure Product Portfolio⁽¹⁾

Up to **80%**

Customer Energy Savings



Customer

11,000+

*

Global Customers



Satisfaction

85.2 NPS⁽²⁾

Top 1% of B2B Companies



Q3 FY23 Revenue

\$676 M

20% Y/Y Growth



Q3 FY23 Subscription Annual Recurring Revenue (ARR)⁽³⁾

\$1.03 B

30% Y/Y Growth



Q3 FY23 Non-GAAP Operating Margin⁽⁴⁾

15.9%

+3.6 pts Y/Y



Q3 FY23 Total Cash & Marketable Securities⁽⁵⁾

\$1.47 B*

(*) As of the end of Q3 FY23

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(1) For details refer to our 2021 ESG report released in March 2022.

(2) Per Audited NPS customer score as of December 2021.

(3) Subscription ARR is a key business metric that refers to total annualized contract value of all active subscription agreements on the last day of the quarter, plus on-demand revenue for the quarter multiplied by four.

(4) See GAAP to Non-GAAP reconciliation in the appendix.

(5) Consists of cash in banks, cash equivalents (highly liquid investments with an original maturity of three months or less), and available-for-sale securities.

Uncomplicate Data Storage, Forever



Pure Storage #1 Most Deployed Platform for Virtual Volumes

Our partnership with VMware has helped make vVols a success. And now Pure Storage FlashArray is the #1 array for vVols deployments.

vSphere Client Plugin and Virtual Volumes

vSphere Client Plugin

Manage Pure Storage from vSphere

Configure Cluster Access
Automatically

Create/Delete/Modify Datastores
VMFS and vVOLS

Create/Delete Volume Snapshots
VMFS and vVols

Run/Schedule UNMAP on VMFS

The screenshot displays the vSphere Client interface with the Pure Storage plugin. The left sidebar contains navigation options such as Home, Shortcuts, Hosts and Clusters, VMs and Templates, Storage, Networking, Content Libraries, Workload Management, Global Inventory, Policies and Profiles, Auto Deploy, Hybrid Cloud Services, Developer Center, Administration, Tasks, Events, Tags and Customization, Site Recovery, vCloud Availability, vRealize Operations, and Pure Storage. The main content area is divided into two sections. The top section, titled 'PURE STORAGE', shows a list of arrays with columns for Array Alias, Array URL, and Pure1 Tags. The bottom section, titled 'Array Load', shows a graph of load over time, with a red line indicating the current load level. The interface is titled 'vSphere Client' and 'PURE STORAGE'.

Array Alias	Array URL	Pure1 Tags
flasharray-m50-1	https://flasharray-m50-1.purecloud.com	cody001 test0013 owner cody pwhTest cody pwhTest2 cody test test
flasharray-m50-2	https://flasharray-m50-2.purecloud.com	owner cody ramesh ramea ramesh ramesh ramesh ramesh
sn1-405-c12-21	https://10.21.88.116	owner alex pwhTest cody pwhTest2 cody
sn1-m20-c09-33	https://10.21.88.24	pwhTest cody
sn1-m20-c12-25	https://sn1-m20-c12-25.purecloud.com	owner alex pwhTest cody pwhTest2 cody pwhTest3 cody
sn1-m20-e05-28	https://10.21.186.50	

Array	Status
flasharray-m20-1	Connected
flasharray-m20-2	Not Configured
flasharray-m50-1	Not Configured
flasharray-m50-2	Not Configured
flasharray-x50-1	Possible connection issue
flasharray-x50-2	Not Configured
sn1-m20-b12-33	Not Configured
sn1-m20-c08-17	Not Configured

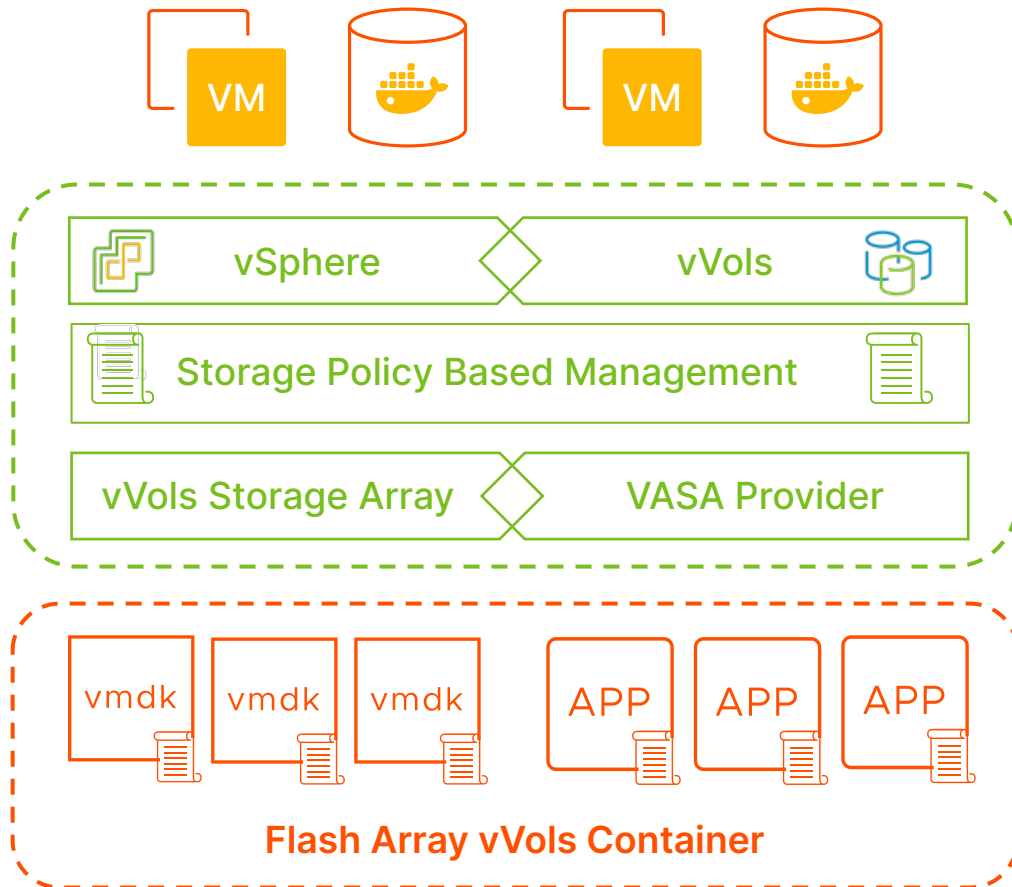


FREE
GIFT

With Every Order

What Are Virtual Volumes

The Quick Overview



vVols = Well-orchestrated system of RDMS

No filesystem (VMFS/NFS)

No more pre-provisioning

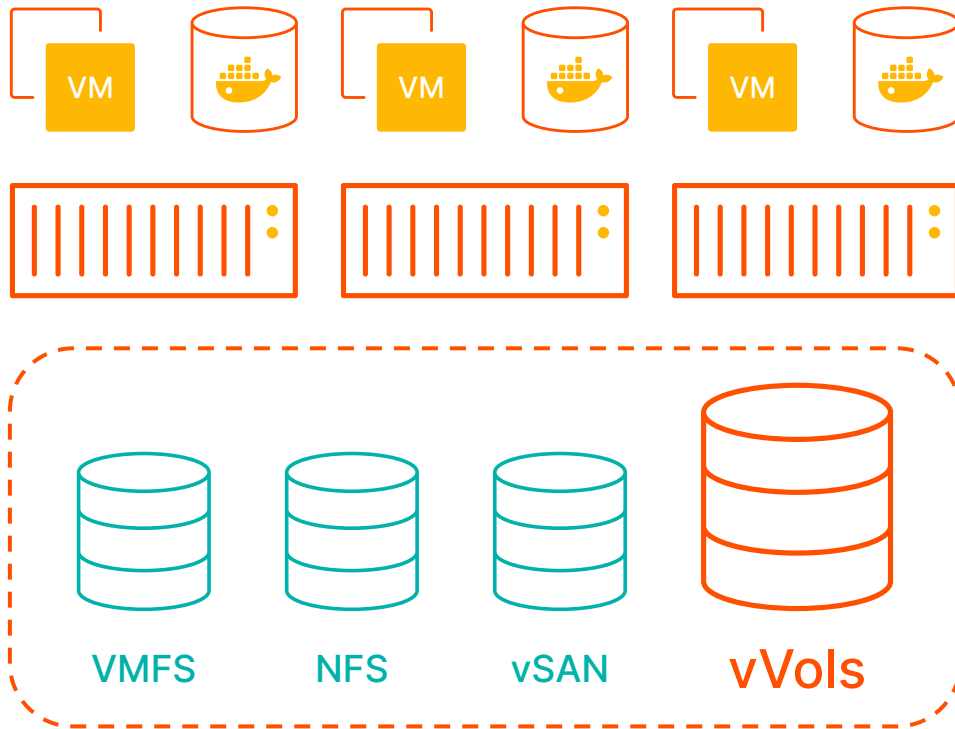
Storage Policy Based Management (SPBM)

Integrated replication management

Pass through UNMAP

Use vVols In Your Existing Environment

You Can Use vVols with NFS, VMFS, and vSAN



vVols can coexist with other datastore types

Allow for testing without replacing

Can exist on the same array

VM migration via storage vMotion

Virtual Volumes Replication Manager

What is Replication Manager

Drive Additional Value from Virtual Volumes



Simplification of Management



Augment Existing BC/DR
Strategies



Provide Automation
and Orchestration



vVols Replication Manager Harbor Tour



4 Common Deployment Scenarios

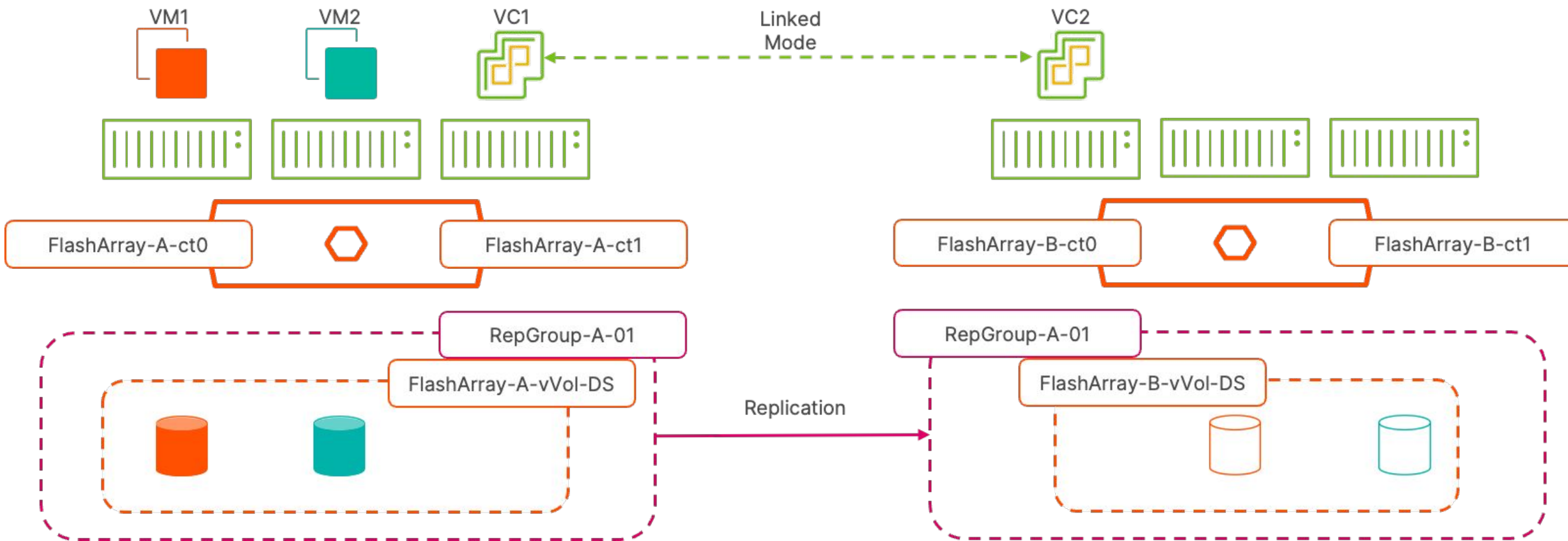
Single and Multi vCenter Server and FlashArray Deployments

- 1 Multiple vCenters Servers - Linked-Mode, single FlashArray source, single FlashArray target
- 2 Single vCenter Server - Single FlashArray source, single FlashArray target
- 3 Single vCenter Server - Single FlashArray source, single FlashArray target
- 4 Multiple vCenter Servers - Linked-Mode, multiple FlashArrays, multiple source and targets



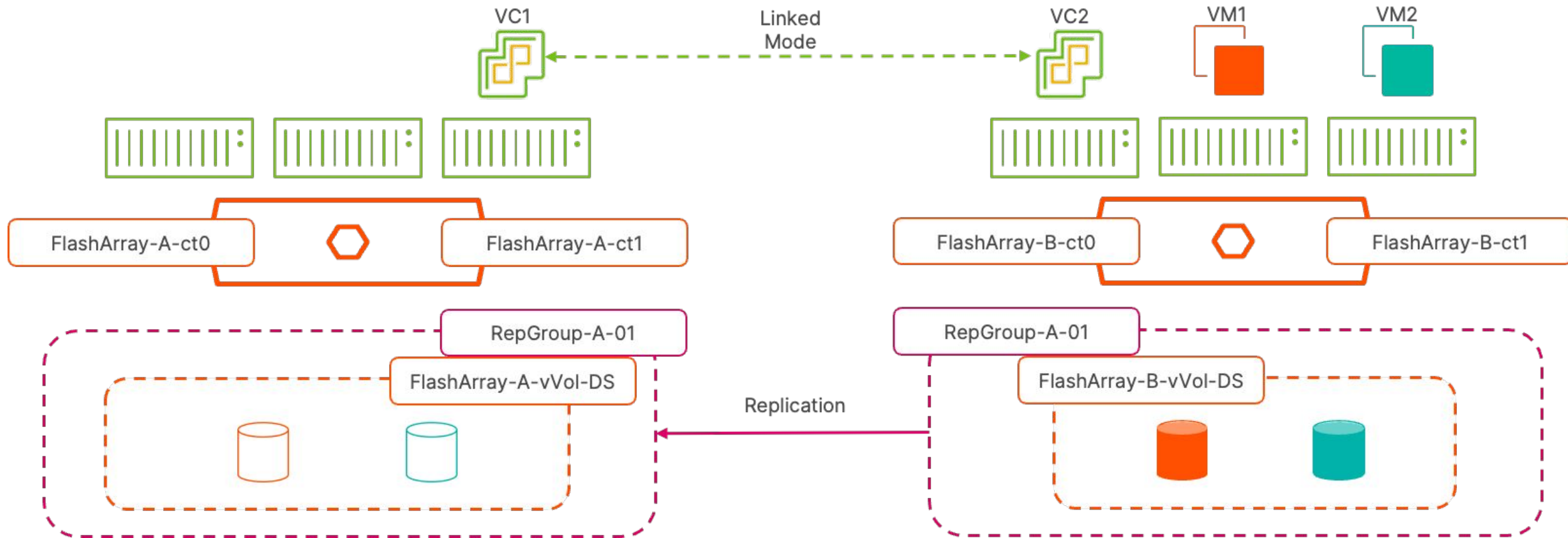
Deployment Scenario One

Two vCenters in Linked Mode, each with single array



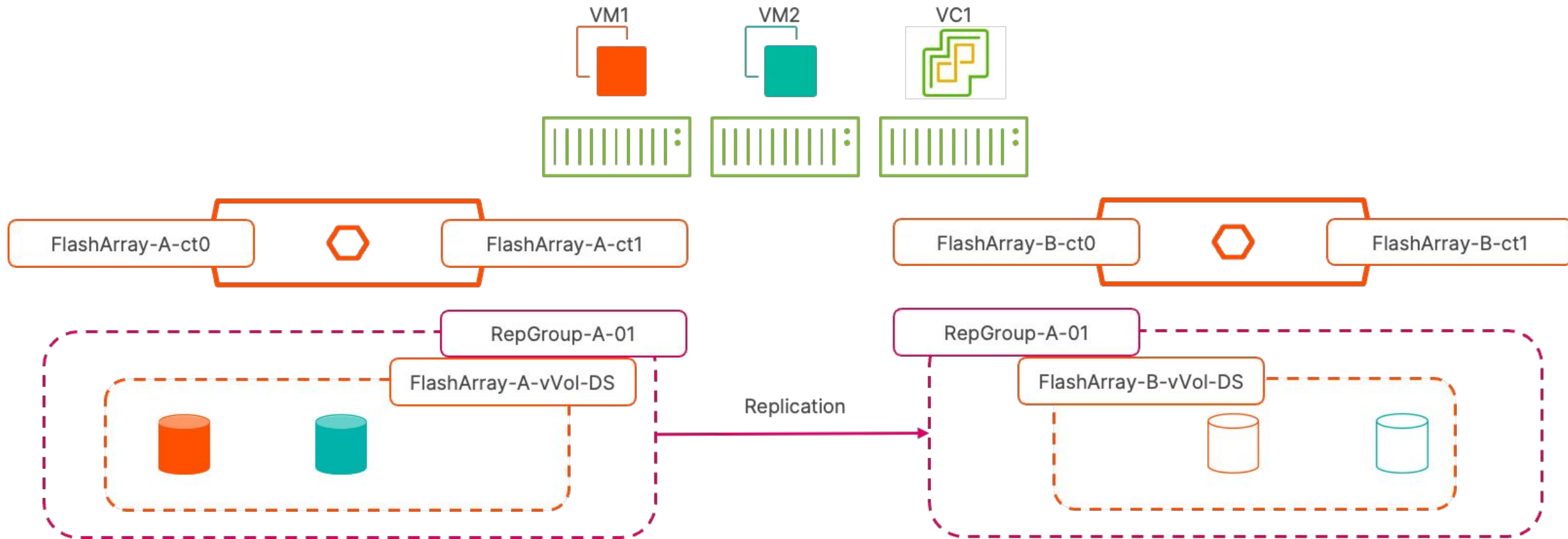
Deployment Scenario One - FAILOVER

Two vCenters in Linked Mode, each with single array



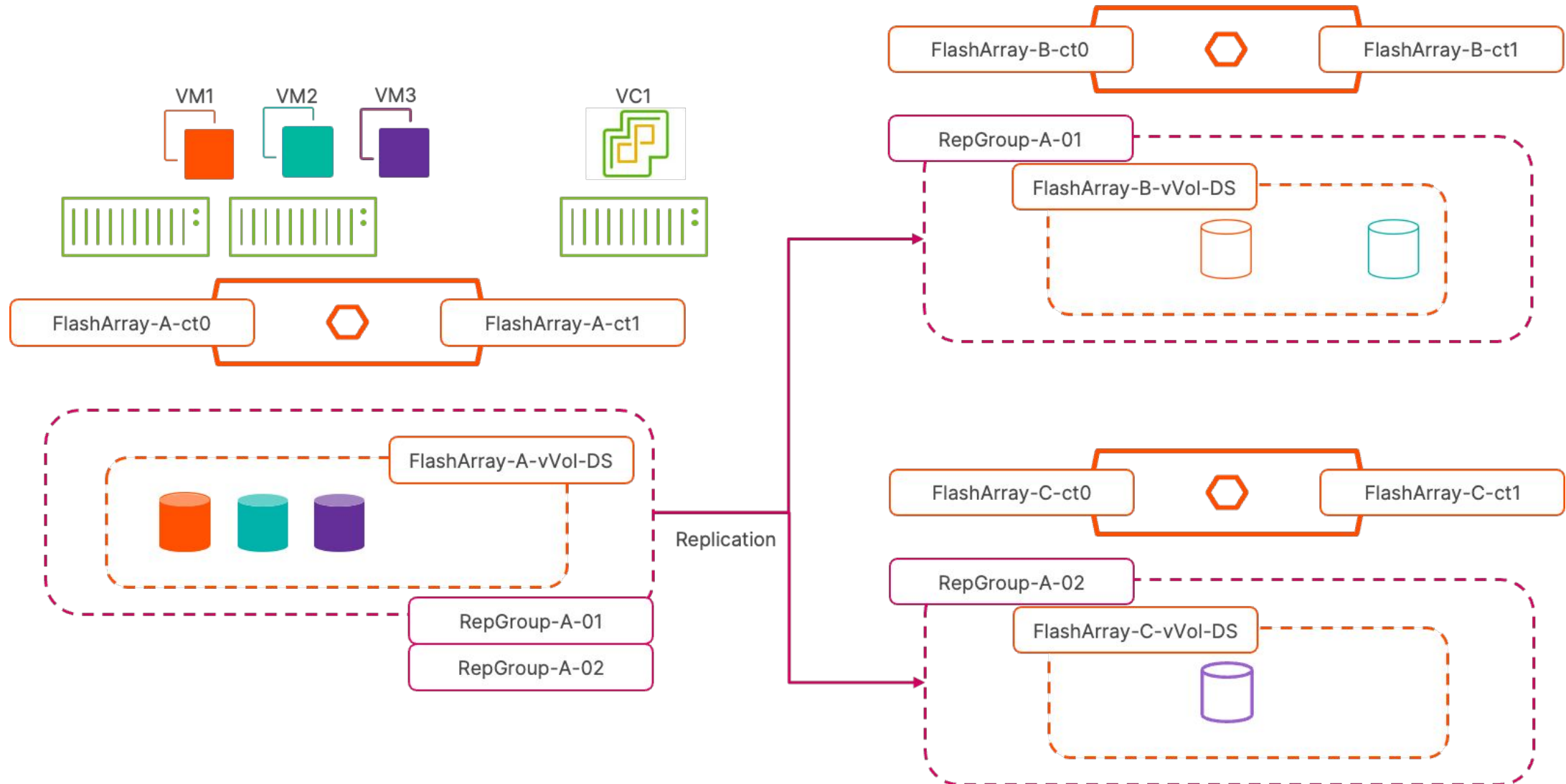
Deployment Scenario Two

Single vCenter and multiple FlashArrays; single source single target



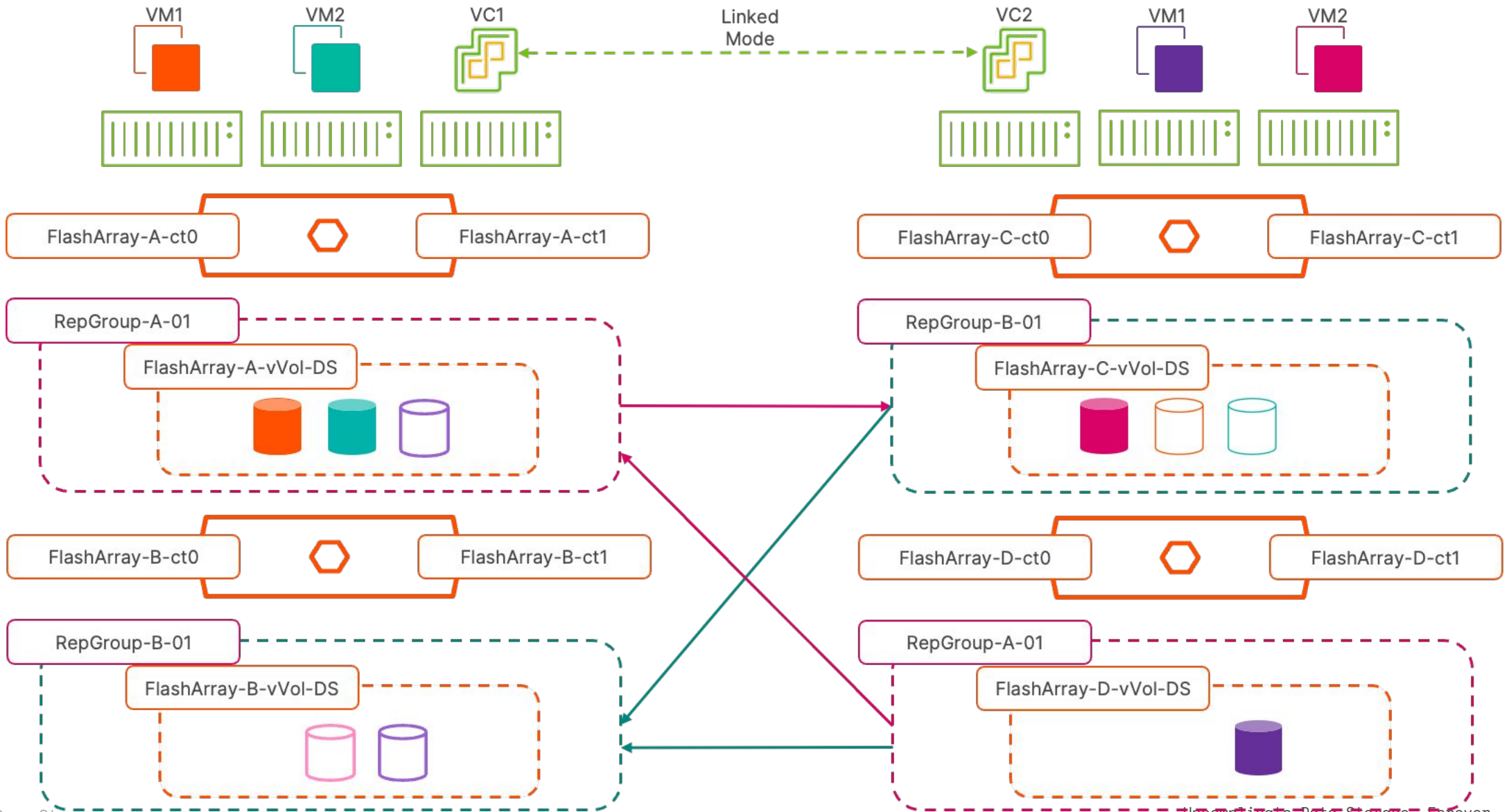
Deployment Scenario Three

Single vCenter and multiple FlashArrays with single source replicating to multiple targets



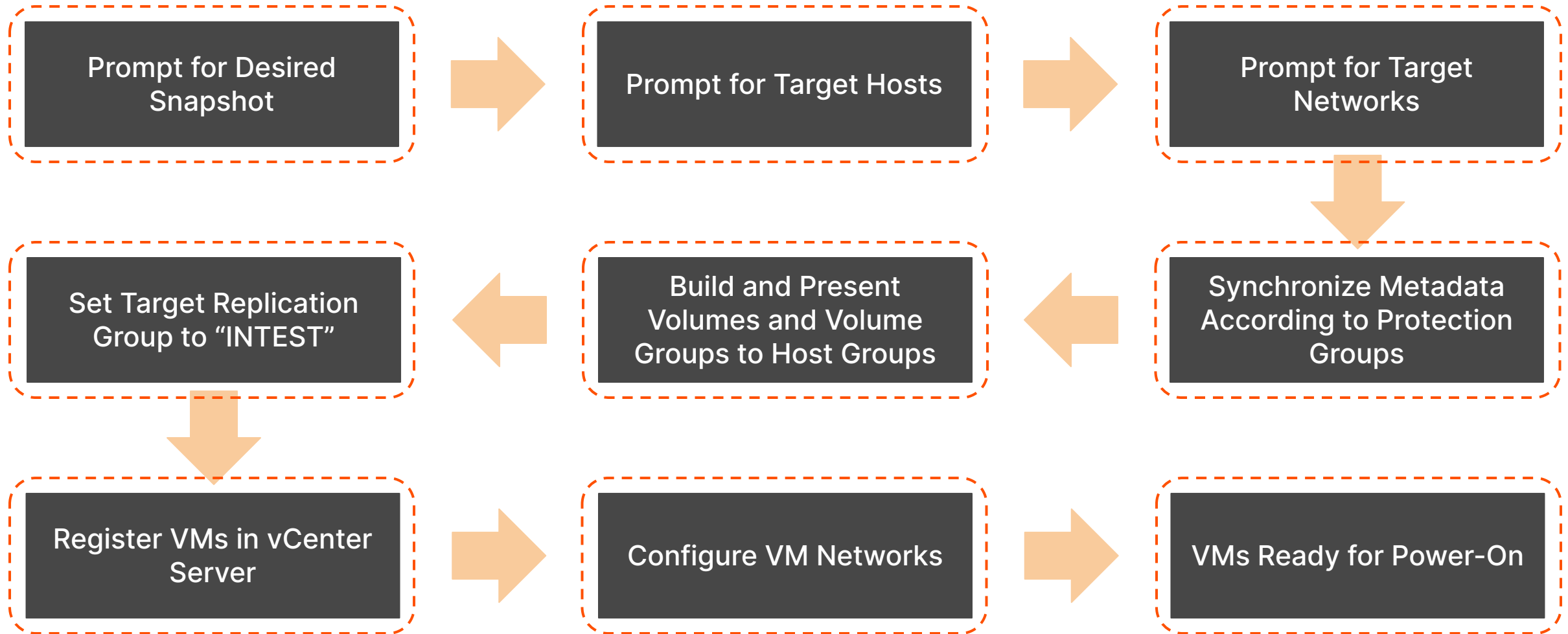
Deployment Scenario Four

Two vCenters in Linked Mode, multiple arrays at each, mixed sources and targets

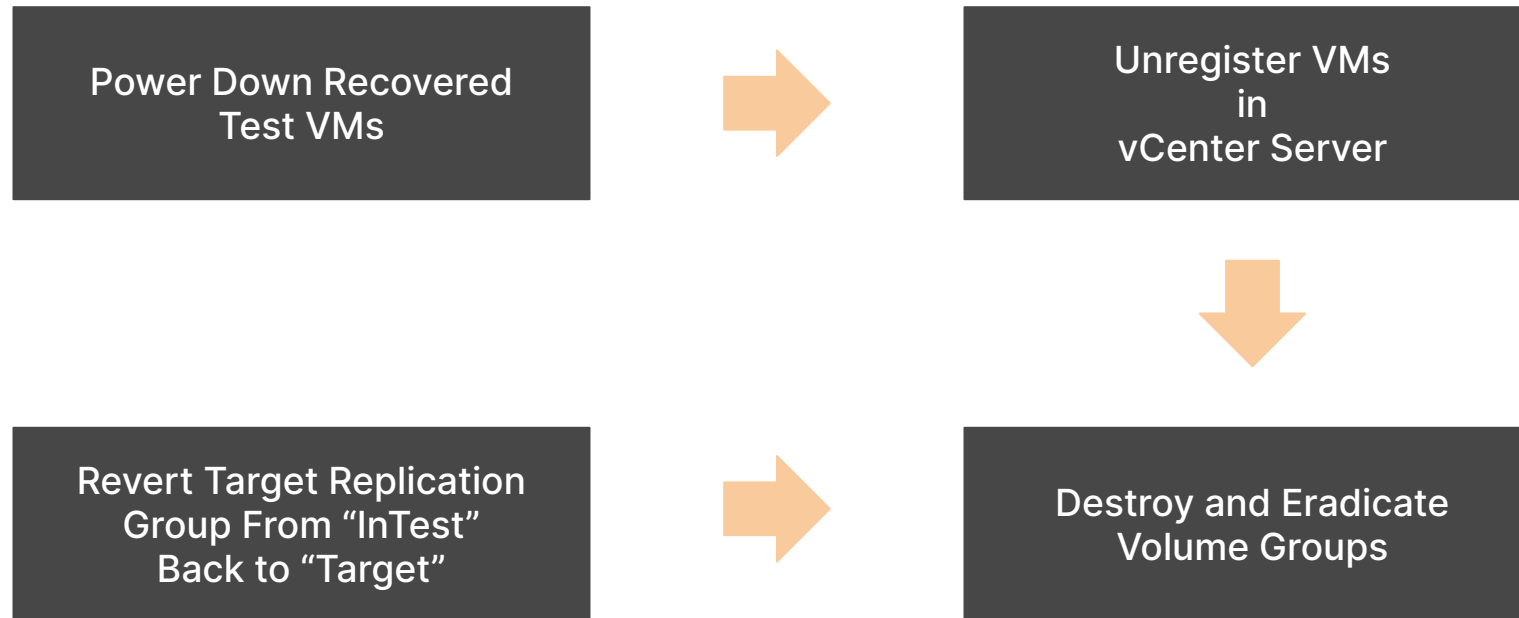


Operational Workflows

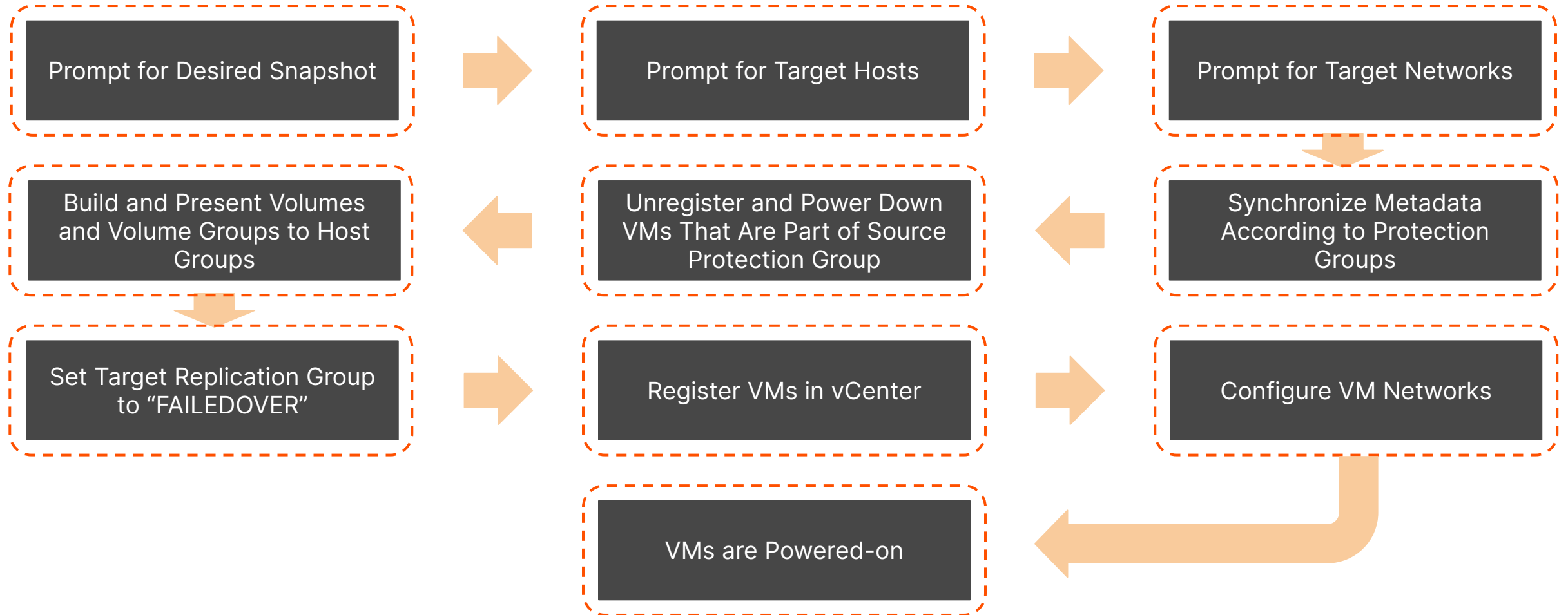
vVols Replication Manager - TEST



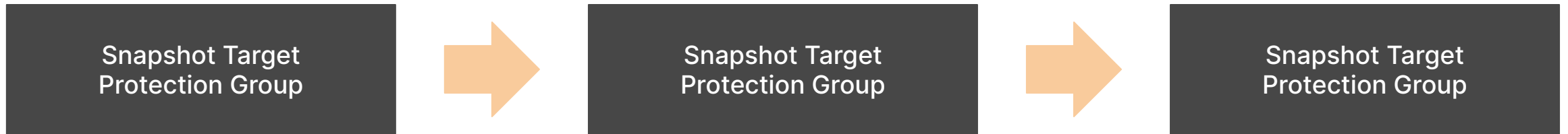
vVols Replication Manager - TEST CLEANUP



vVols Replication Manager - FAILOVER



vVols Replication Manager - REPROTECT



Note - This workflow does not re-apply storage policies (SPBM) or assign replication groups in vCenter Server

In order to complete the re-protect process, users will need to reset the storage policy to **vVols No Requirements** and then apply the storage policy on the new protected site and the correct replication group

Mapping Technical and Business Value

Capability	Technical Value	Business Value
Manage Protection Groups from the vSphere Client	<ul style="list-style-type: none"> Reduce the number of management interfaces Extend access to data management services beyond storage team 	<ul style="list-style-type: none"> Automated data services to support business SLAs Reduce requirements for specialized technical skills
Migrate or Failover Workloads at a Granular Scale	<ul style="list-style-type: none"> Target workloads at the VM level, not the Datastore level Adapt and change protection on the fly 	<ul style="list-style-type: none"> Improve recoverability of business-critical applications Protect LOB applications from costly downtime
Perform Test Failovers and Validate Recovery Plans/Operations	Validate BC/DR operations without impacting production workloads	Provide proof of recovery capabilities to auditors and key stakeholders
Non-Disruptive Testing	Test recovery plans without impacting “active” replication schedules	Eliminate business risk associated with workload migrations
Failover and Failback Operations	Easily reprotect workloads after failover	Maintain application and data availability with increased workload mobility
Customer Network Service Mappings	<ul style="list-style-type: none"> Prevent IP conflicts during failover or migration Support a variety of network topologies 	Support business flexibility by increasing portability of critical lines of business



Whatcha Need and Need to Know

How to Get Started

- Pure Storage FlashArray
- Pure Storage vSphere Client Plugin - v5.2.0 or higher
- If using multiple vCenter Servers, they need to be in Enhanced Linked Mode
- If using a single vCenter Server and multiple FlashArrays, the vCenter Server must be connected to each of the arrays
- Replication Groups can not be shared across vCenter Server instances



Find Out More!

Deep Dive on Array Based
Replication with vVols



Pure Storage Replication
Manager Page



Questions and Comments



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