

Version 1.2

July 2024

Convert & Deploy VMs to Cloud Using Cohesity CloudSpin

Seamless Digital Transformation to the Cloud

ABSTRACT

Adopting a cloud-first approach is a cost-effective and flexible way for enterprises to improve business agility and keep pace with the competition. Built with native cloud integration, Cohesity CloudSpin enables enterprises to transform their applications to cloud in a simple, refined, and efficient way.

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Cohesity CloudSpin Converts & Deploys VMs to the Cloud

Enterprises embrace a digital transformation strategy to build cloud-native applications and migrate their existing platforms to the cloud. However, moving existing on-premises applications to the cloud is both complex and challenging. What's more, there is a growing need for rapid access to the cloud's production data for dev/test purposes to improve operational efficiency.

Built with native cloud integration, Cohesity offers enterprises an easy and straightforward way to transform into the cloud. With Cohesity CloudSpin, a solution built to consolidate and simplify application mobility across hybrid cloud environments, you can now run virtual machines (VMs) on public clouds from on-premises environments.

With these capabilities, Cohesity CloudSpin solves many business needs, including:

- **Accelerate dev/test initiatives in the cloud.** Quick access to high-quality production data is fundamental in accelerating the dev/test cycle, as is a consistent management approach for both on-premises and cloud backups. Cohesity CloudSpin delivers the ability to provision VMs instantly and spin them up in the cloud-native format for development and test teams.
- **Planned migration to the cloud.** Moving your applications to the cloud has its own set of challenges. The native format requirement for *each* cloud provider leads to operational overhead, additional cost, and presents a serious obstacle to cloud migration. By converting the applications to compatible formats across on-premises and the cloud, Cohesity CloudSpin makes this process smooth and seamless, delivering the application mobility you need.
- **Consolidate Data Center.** When large enterprises scale through acquisitions, they take a measured approach to consolidating data centers. In many cases, due to regulatory & compliance purposes, or even as a conservative approach, the data and services must be retained for an extended period. Using Cohesity CloudSpin to convert virtual machines (VMs) to either the Azure or AWS format, enterprises have a cloud retention solution.

Use Cohesity CloudSpin for Your Digital Transformation

Cohesity CloudSpin solves the challenges in moving data from on-premises environments to public clouds without compromising security and integrity. To address the various possible usage scenarios, Cohesity employs two different workflows, namely [On-demand CloudSpin](#) and [Policy-based CloudSpin](#).

A few of the most important of these usage scenarios are:

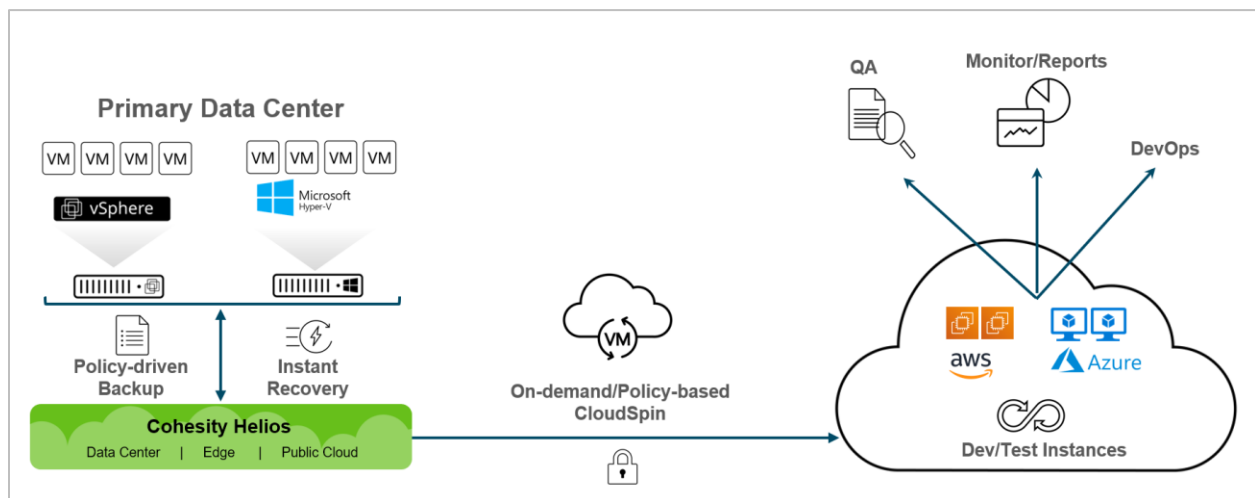
- [Accelerate Test & Development](#)
- [Migration to Cloud](#)
- [Data Center Consolidation](#)

Accelerate Development & Test

The leading challenge enterprises try to solve is to bring parity between the dev/test and production environments, and have high-quality data available for teams in a timely and secure fashion. This parity helps to resolve the challenges they face in certain phases such as,

- Development & Test
- Data & Log Analytics
- DevOps Testing

Figure 1: Accelerate Development & Test with Cohesity CloudSpin



Using CloudSpin, you can easily convert and spin up on-premises VMs to native formats on leading public cloud environments. Managing the cloud instances is simple, with a single user interface to launch and tear down the instances. What's more, you can protect cloud instances natively with Cohesity's [Cloud Snapshot Management](#).

With this Integration, it is now possible to have:

- A holistic data management solution for protection and dev/test.
- Easy access to production data.
- Protect the dev/test environments in the cloud.

Depending on the use case, you can launch the instances on demand in the cloud or refresh the instances on a regular schedule.

Using On-demand CloudSpin for dev/test Instances

Development and test teams can instantly spin up a specific backup of a VM as a dev/test cloud instance on demand. Launched from the **Test & Dev** section of the Cohesity interface, the on-demand method copies and converts the VMs and launches them as native cloud compute instances.

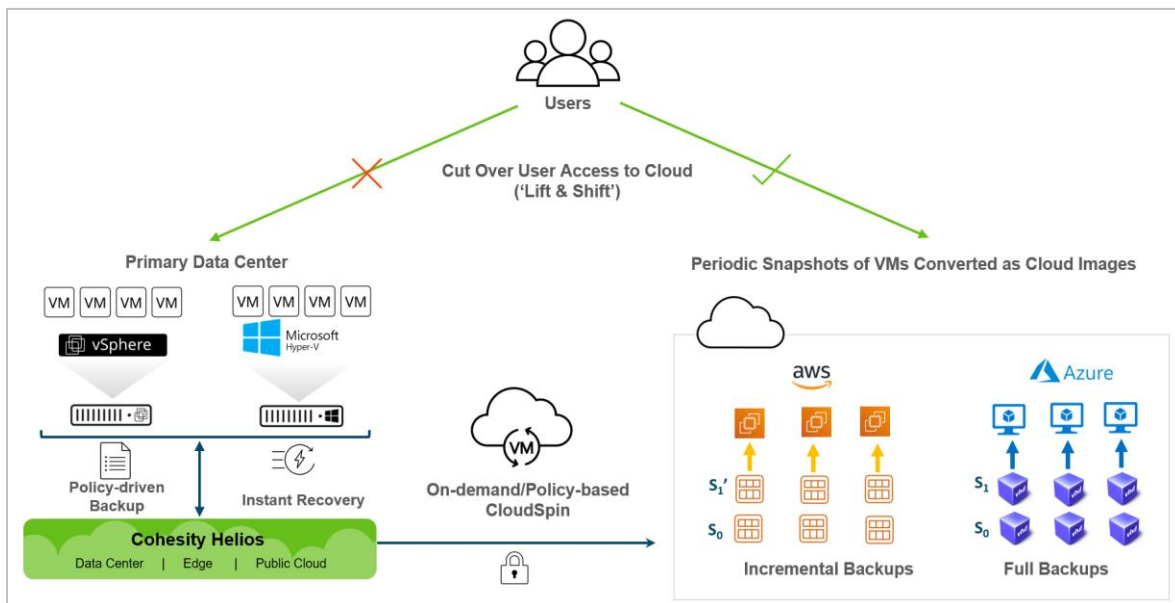
Using Protection Policy-based CloudSpin for dev/test Instances

Analytics and DevOps teams require data to be refreshed frequently for analysis and staging. Cohesity's Protection Policy-based method allows a protected VM to be staged as native cloud images periodically. The images are not launched as native cloud compute instances.

Migrate to Cloud (Lift & Shift)

Migration (Lift & Shift) to the cloud is complex and error-prone with many manual steps and application dependencies. Cohesity CloudSpin simplifies this process, enabling you to migrate all your on-premises VMs to native cloud formats and cut over user access from on-premises to the cloud.

Figure 2: Migration to Cloud Using Protection Policy-based CloudSpin



Migration to Cloud Using Policy-based CloudSpin

Configured on a schedule, Policy-based CloudSpin periodically converts the on-premises VMs to cloud-native images and stores them in the cloud. You can select and launch any specific snapshot version of the image as a cloud instance.

Along with enabling the synchronization of changes to images and cut over to the cloud, Policy-based CloudSpin also helps reduce the downtime or maintenance window and ensures a quick, consistent, and smooth migration to the cloud.

In addition, Cohesity CloudSpin offers certain unique features, like:

- **Zero-touch migration.** Automates the whole process without relying on homegrown scripts or manual intervention.
- **Quick synchronization.** Periodically updates the images without requiring a manual trigger.
- **Easy validation.** Validate your applications quickly before migrating them.

Data Center Consolidation & Retention in the Cloud

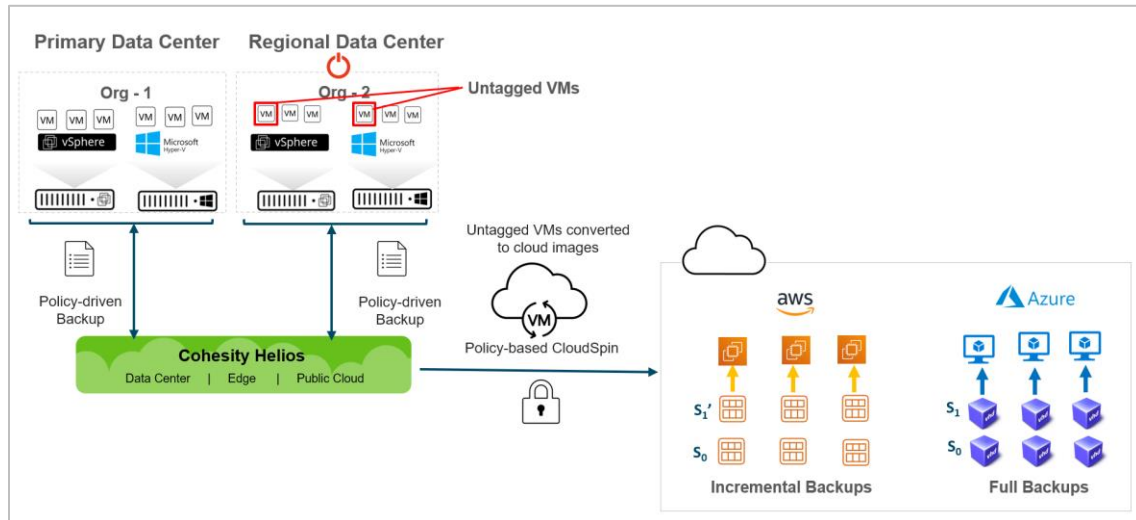
A vital part of any company's growth strategy is to innovate and expand via strategic acquisitions. With the fragmented IT landscape, many enterprises address this by re-architecting their applications to be more cloud-native.

Taking a cloud-native approach for innovation or expansion involves a unique set of IT challenges:

- **Unclassified applications:** When acquiring other companies, organizations often take a measured approach to ensure a smooth transition over to a centralized server and then continue to use their regional data centers until the change is complete. In this process, some servers can become obsolete, ghosted, or not classified accurately. In such cases, the organizations end up having to preserve these servers for an extended period.
- **Retiring old servers:** When enterprises modernize their applications to be more cloud-native, they consolidate operations to run from a single cloud region or a data center. As a result, the existing applications are shut down and retired. The preferred approach here is to retain them as dormant images for an extended period, in case the old application is needed for debugging or troubleshooting.
- **Compliance & audit:** Enterprises are often required to retain old applications for long periods to meet compliance and audit requirements.

The most common and effective solution to all these challenges is to preserve the applications in the cloud and spin them up only when the need arises. [Policy-based CloudSpin](#) solves this use case efficiently by converting on-premises VMs to cloud-native images and storing them as dormant images in the desired cloud region.

Figure 3: Data Center Consolidation with Policy-based CloudSpin



In this way, it is now possible to:

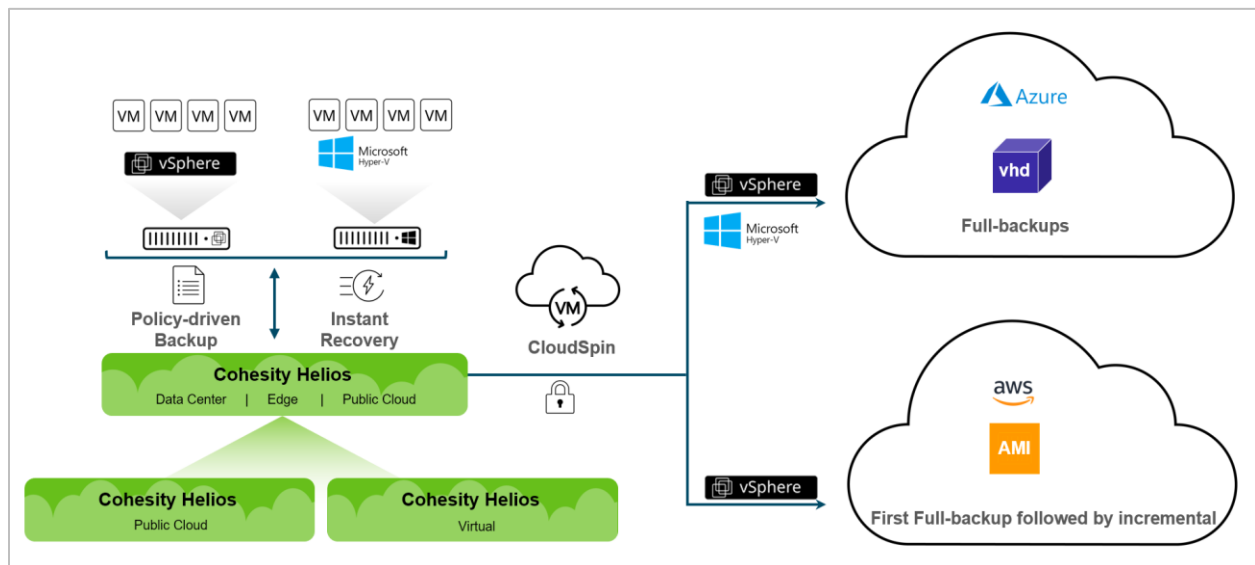
- Save costs by decommissioning servers faster and shutting down the data centers in a short span.
- Maintain reliable retention in the cloud, ensuring no data loss.
- Retrieve data quickly when needed by spinning up the images as VMs on the cloud.

Cohesity CloudSpin Deployment Options

Cohesity's CloudSpin capability can replicate your backup data and convert your on-premises VMs to appropriate cloud formats, which enables application mobility.

First, register a supported cloud source with Cohesity, and configure a Protection Group to capture the snapshot of the VMs. When you initiate a CloudSpin operation, you will use the configuration specifics (such as resource group, compute type, etc.) for the user to create the cloud resources. Your data is then copied from your on-premises Cohesity cluster to the cloud storage and converted into the appropriate cloud-native format, ready for use.

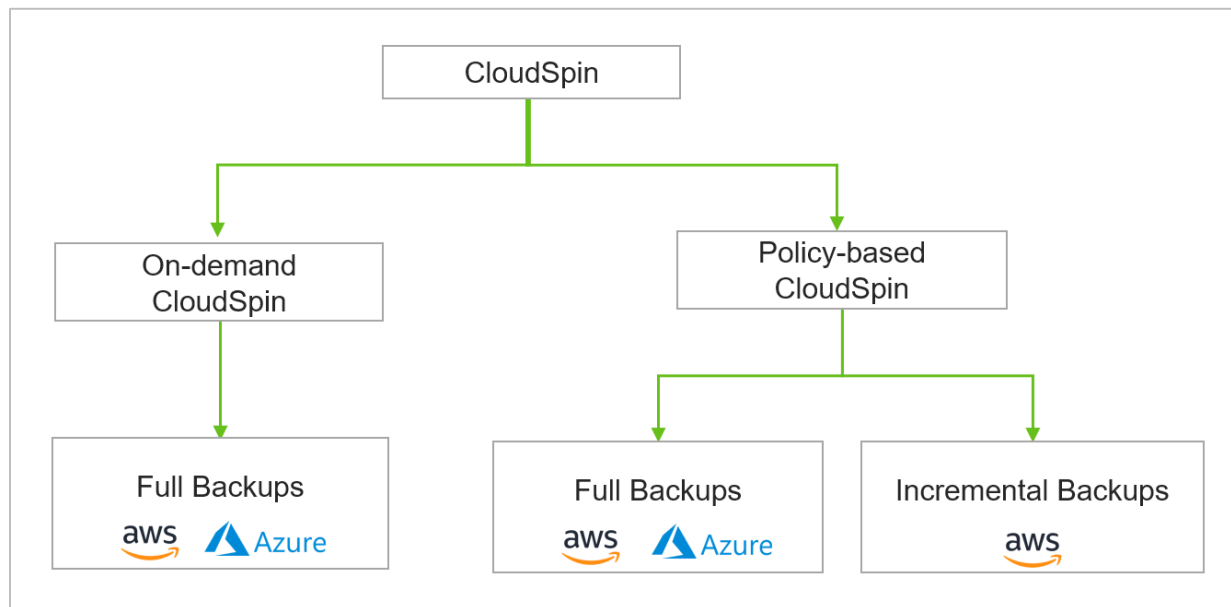
Figure 4: Cohesity CloudSpin Deployment Options — Azure & AWS



To handle a variety of user scenarios, Cohesity CloudSpin supports two workflows:

- [On-demand CloudSpin](#)
- [Policy-based CloudSpin](#)

Figure 5: Cohesity CloudSpin Supported Workflows



On-demand CloudSpin

The ability to access production data as dev/test instances helps shorten the product development cycle. On-demand CloudSpin enables you to launch VMs as native cloud compute instances. The on-demand method uses the cloning capabilities of Cohesity to convert and deploy VMs in the cloud.

The VMs are launched on demand through the Test & Dev dashboard in Cohesity, giving the user an option to choose the right snapshot to use immediately. By default, the on-demand operation uses the most recent backup, unless a different recovery point is selected.

CloudSpin copies the data to a registered cloud source and converts the VMs and launches them as native cloud instances.

Policy-based CloudSpin

If you're migrating your applications to the cloud, the right approach is to store the VMs as native images in the cloud. Policy-based CloudSpin helps you stage native images in the cloud and then launch them as compute instances in the cloud when you need them.

In this workflow, you use a Protection Policy to add CloudSpin to a Protection Group. During the Protection Run, the CloudSpin task copies the data to the registered cloud target and converts the VMs to cloud-native images. The cloud images are not launched as cloud instances automatically; you manage the instances (spin-up and teardown) through Cohesity.

Your Feedback

Was this document helpful? [Send us your feedback!](#)

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Document Version History

VERSION	DATE	DOCUMENT HISTORY
1.0	Mar 2020	First release
1.1	Aug 2021	Cohesity rebranding update
1.2	July 2024	Republished

ABOUT COHESITY

[Cohesity](#) radically simplifies data management. We make it easy to protect, manage, and derive value from data -- across the data center, edge, and cloud. We offer a full suite of services consolidated on one multicloud data platform: backup and recovery, disaster recovery, file and object services, dev/test, and data compliance, security, and analytics -- reducing complexity and eliminating [mass data fragmentation](#). Cohesity can be delivered as a service, self-managed, or provided by a Cohesity-powered partner.

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