COHESITY

Version 1.1

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Enable Self-Service Operations with Cohesity and the vRealize Suite

Reduce Complexity with Seamless Infrastructure Automation

ABSTRACT

Automation in IT operations has moved from an add-on feature to a critical requirement. With the VMware vRealize suite, you can automate workflows, gain real-time operations visibility, and improve IT productivity. Cohesity integrates with vRealize Automation and Orchestration to help you orchestrate and automate operations in your modern IT organization. Cohesity's integration with the vRealize suite delivers data protection at VM deployment and management.

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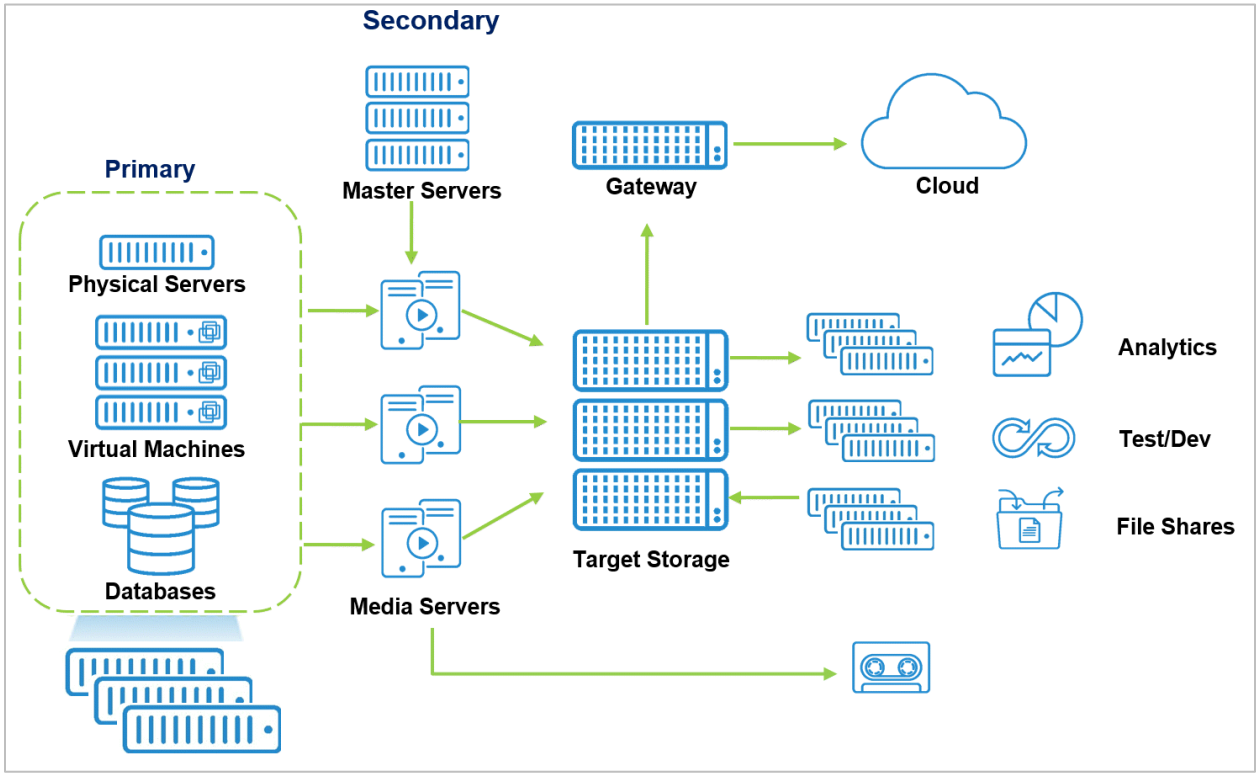
Complexity in the Modern Data Center

The modern data center is complex, with a gamut of undesirable effects, including increased costs, reduced agility, and even downtime. Virtualization and hyperconvergence have addressed many of those challenges, reducing complexity and increasing efficiency. Efficiency can be taken a step further by integrating key workflows in your infrastructure, not just its physical components.

Figure 1: The Modern Data Center, with a Spectrum of Siloes, Layers, and Tools



In the typical modern data center, different tools orchestrate workflows to and from servers, storage, backups, and applications. The result: fragmentation, in every sense of the word. Not only is data siloed, but the workflows—and the tools to manage them—are fragmented, as well. Among other factors, management complexity arises from:

- A plethora of management tools and applications for unstructured data.
- SLAs that are not updated to suit the needs of your organization.
- A lack of self-service capabilities for common, frequent IT workflows.
- A steep learning curve in managing key elements of infrastructure.

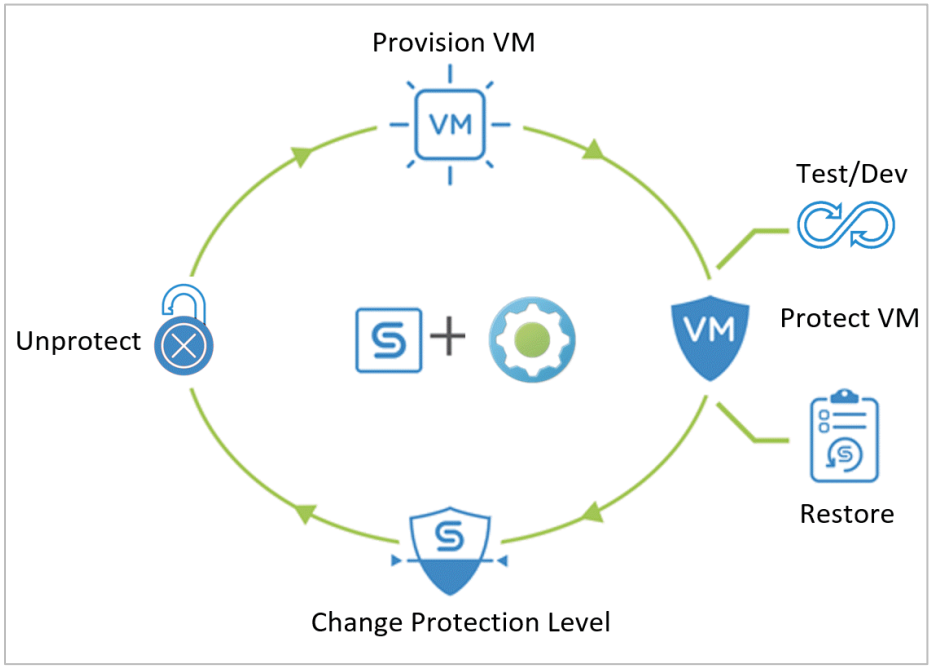
Without a single workflow-management interface, complexity in the data center grows exponentially, rather than incrementally. With every additional application or workflow, the management overhead increases. Every application is a new application to manage, and a new dialect to learn.

Cohesity Addresses Management Complexity

Cohesity is based on an API-first architecture, valuing automation, consumable-APIs, and self-service capabilities from the get-go. The businesses of today rely on automation and APIs to speed IT delivery and Cohesity understands this. Users can enjoy error-free consistency and self-service manageability that extends the capabilities of individual applications and enables IT to spend less time with management, and more time with ambitious, value-oriented projects.

As illustrated in Figure 2 below, using Cohesity's plugin for vRealize Suite to add Cohesity to your data infrastructure strategy immediately simplifies data protection, workflow automation, and self-service data management for your VMs, applications, and more.

Figure 2: The Cohesity Plugin for vRealize



Cohesity simplifies secondary data protection and works in concert with other popular cloud management platforms; Cohesity's API-first architecture exposes functions including backup recovery, test and dev, and file and object services. Cohesity integrates with existing orchestration tools such as VMware vRealize, and ServiceNow, and also enables teams to create homegrown custom portals for automation, reporting, and monitoring.

API-First Architecture: Simplicity as a Foundation

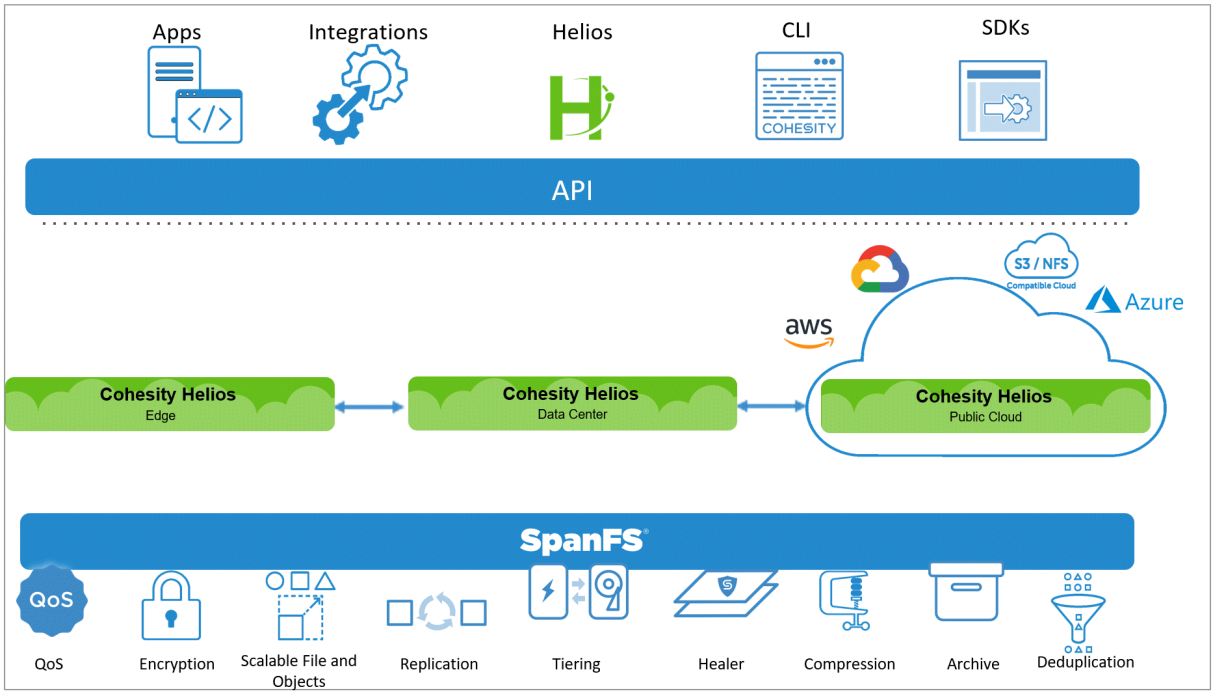
A well-designed platform echoes the notion of simplicity and extensibility. Among other factors, a well-designed and effective platform has these traits:

- Easy to manage
- Easy to extend
- Easy to integrate with

The ethos of API-first architecture and design revolves around the idea of putting the interests of target developers and consumers first. Core functions are viewed as the foundation of the system and can be extended to interface with new services that address new opportunities. A nimble organization starts with the underlying infrastructure; having an API-first approach as an undercurrent promotes rapid and cost-effective application development and deployment.

Cohesity has all three traits of a well-designed platform, keeping manageability, extendibility, and integrability central to the design process throughout, rather than as an afterthought. Adhering to OpenAPI specifications and API-first design principles, every interface, component, and integration is built on top of Cohesity's REST API.

Figure 3: Cohesity's API-first Architecture



Cohesity supports integrations with the tools your team already uses. Support for numerous orchestration and automation tools already includes ServiceNow, Ansible, and the vRealize suite. As a corollary, homegrown, custom tools can be integrated with Cohesity, allowing teams to move infrastructure rapidly to meet their evolving business and IT needs.

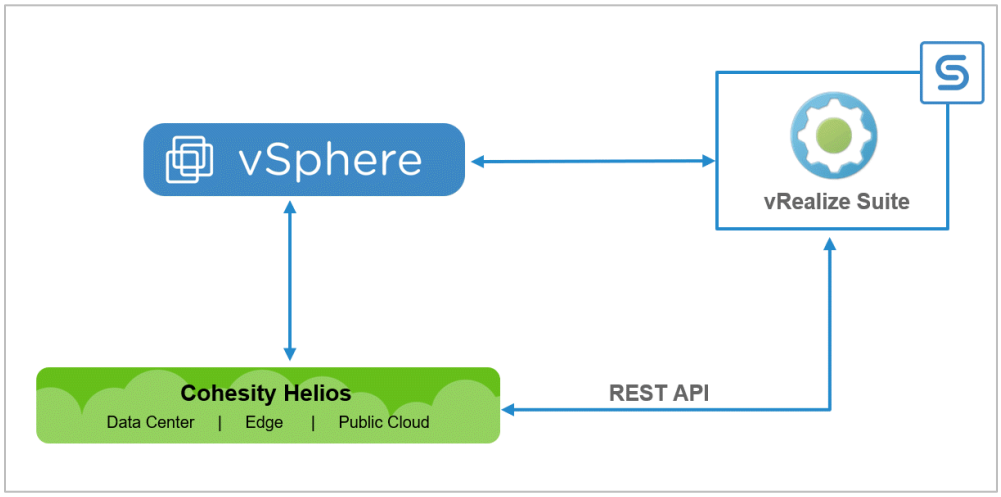
Integration with vRealize Automation and vRealize Orchestrator

Automation in IT operations has moved from an add-on feature to a critical requirement. The vRealize suite of tools facilitates automation. vRealize Automation (vRA) has capabilities to build out blueprints for infrastructure resources, and the ability to create integrations with major on-premises and cloud-based industry infrastructure endpoints. The Cohesity vRealize Orchestrator (vRO) plugin, developed using the vRO SDK, integrates with vRO and vRA and enables you to monitor and manage Cohesity.

Solving Provisioning and Management Challenges

vRA can address the management of a variety of infrastructure components, bringing agility and flexibility as byproducts. The vRealize suite helps address Day One challenges, such as the provisioning of resources, and Day Two challenges, involving the ongoing management of infrastructure resources.

Figure 4: Cohesity integration with vRA and vRO



vRA addresses:

- The provisioning of virtual machines (VMs), a common task in the enterprise IT organization, now able to be managed via standardized blueprints.
- Ongoing management of VMs and VM resources through a self-service mechanism.
- Workload optimization through established policies with vSphere VM Storage Policy Based Management (SPBM), when integrated with vRA Service Catalog.
- VM provisioning process optimization, by defining standard storage profiles, which eliminates the need to provision VMs on a case-by-case basis.

vRO Plugin Capabilities

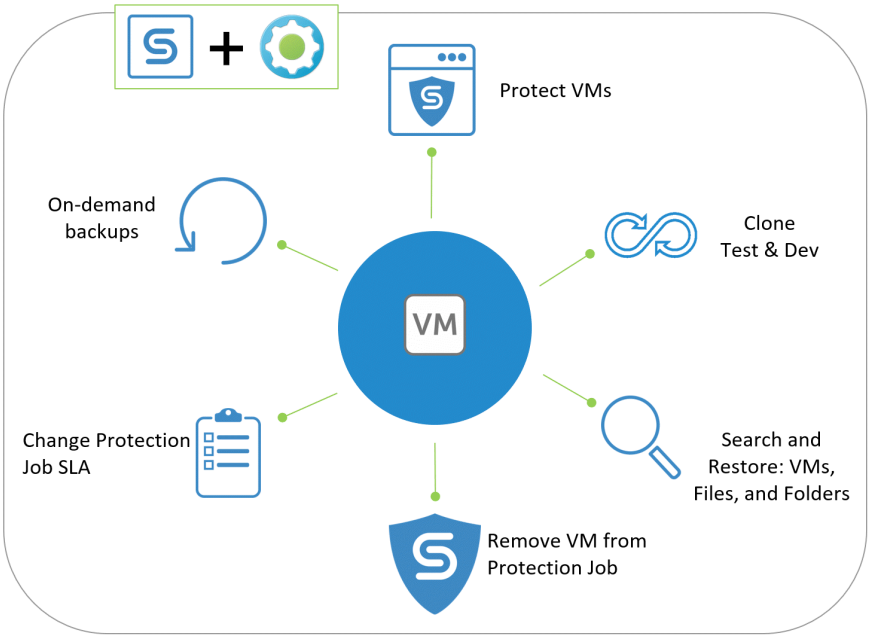
The vRO plugin from Cohesity provides an inventory of objects that you can access on the Inventory tab of the Orchestrator client. The plugin contains packages of workflows and actions that you can run on objects in the inventory to automate typical use cases. As a result, you can perform Cohesity operations that are integral to your organization— data protection and test & dev, for example—directly from vRA.

With vRO, you can take this integration to the next step and collate different workflows, and automate them. Critical data management and protection workflows can run smoothly and dynamically, adapting to the needs of your organization. Workflow packages are developed using the Orchestrator client in vRO. You can systematically automate workflows, from VM provisioning to SLA management.

The Cohesity vRO plugin allows you to:

- Protect VMs.
- Search and recover VMs, files, and folders.
- Move VMs to different Protection Jobs.
- Change the SLA of a Protection Job.
- Remove VMs from a Protection Job.
- Back up and recover on demand.
- Clone and restore objects.
- Manage multiple Cohesity clusters.

Figure 5: Cohesity's vRO Plugin

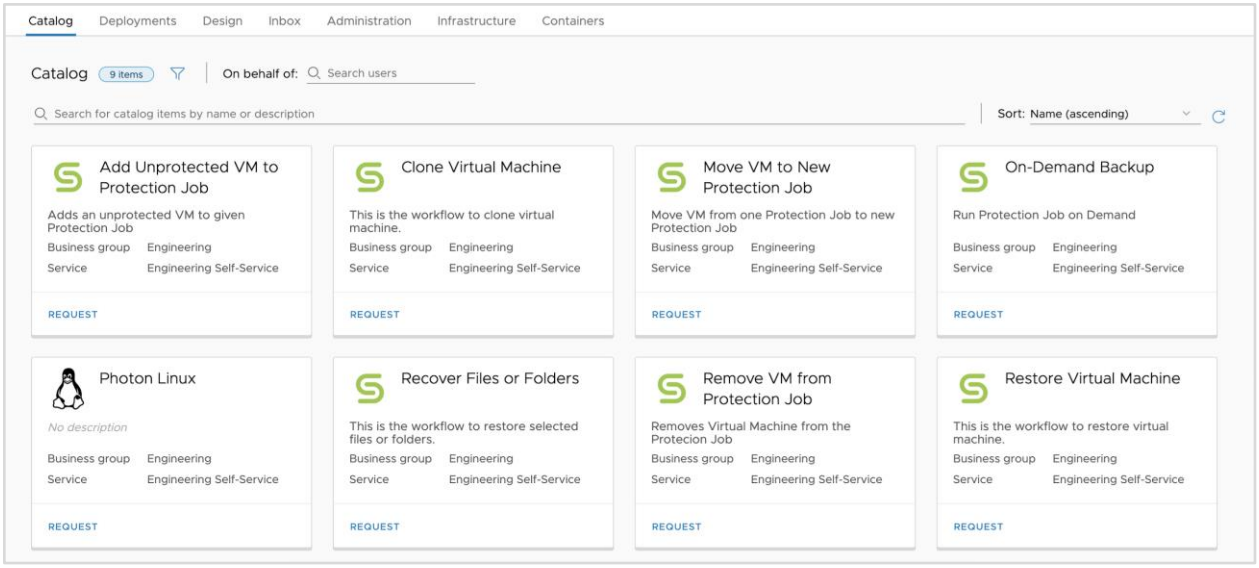


Enable Data Protection for the Entire Lifecycle of a VM

Cohesity complements vSphere VM SPBM by leveraging VMware VADP APIs to integrate data protection for provisioned VMs. Backup, retention, and replication can be deeply coupled with virtual machine blueprints.

Cohesity's integration with vRA and vRO is applicable for the entire lifecycle of a VM, enabling data protection at VM deployment, management, and deprovisioning. With Cohesity's vRO plugin, you can view and request data protection services directly from the vRealize Service Catalog.

Figure 6: Access Data Protection Services from vRealize Service Catalog

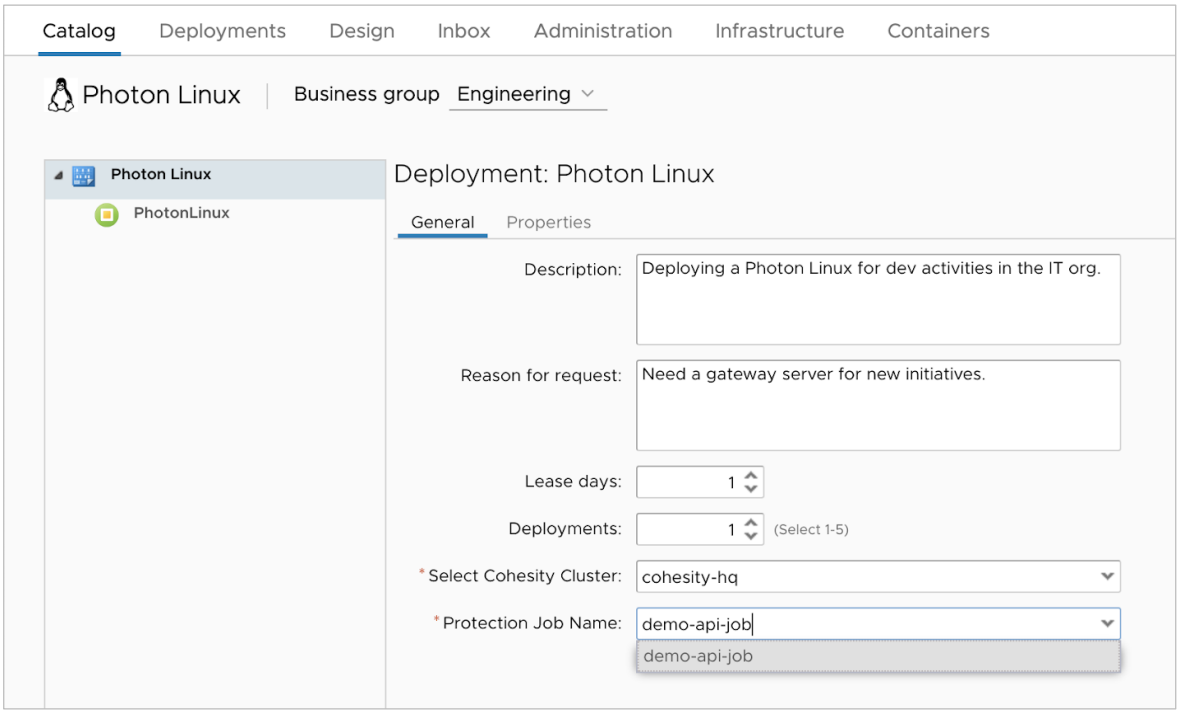


Provisioning

With Cohesity, you can start protecting VMs before deploying them; by leveraging Cohesity APIs in vRO, blueprints are automatically presented with a list of available Cohesity Protection Jobs that the VM can be assigned to. As a result, data protection is not an afterthought, but a seamless part of deploying resources in your infrastructure.

As Figure 7 below illustrates, you can start assigning VMs to Protection Jobs during the time of provisioning.

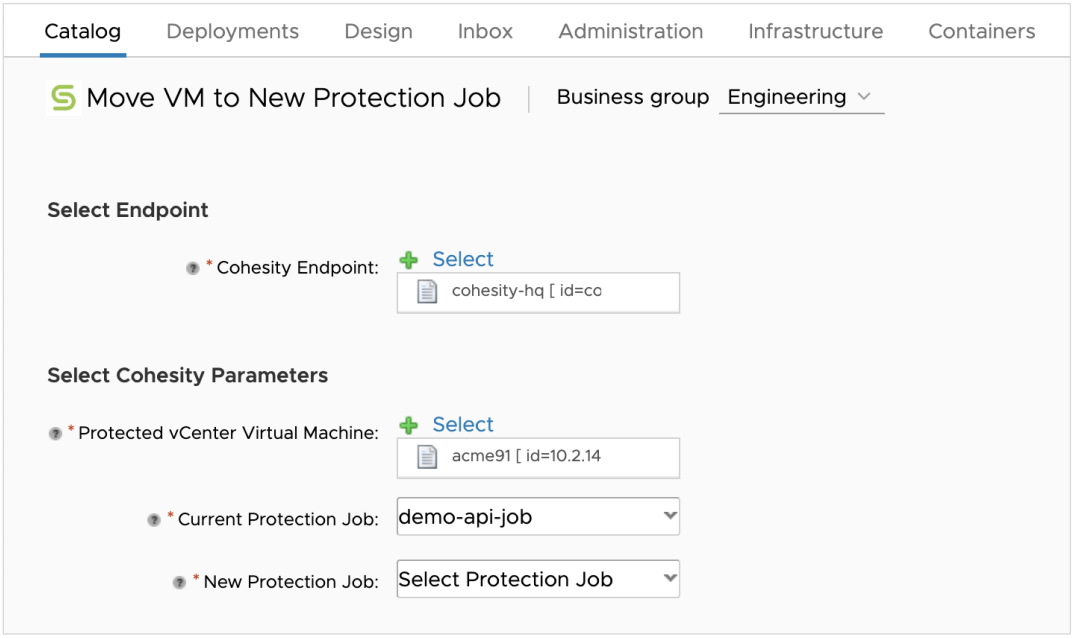
Figure 7: Assign VM to a Protection Job



Management

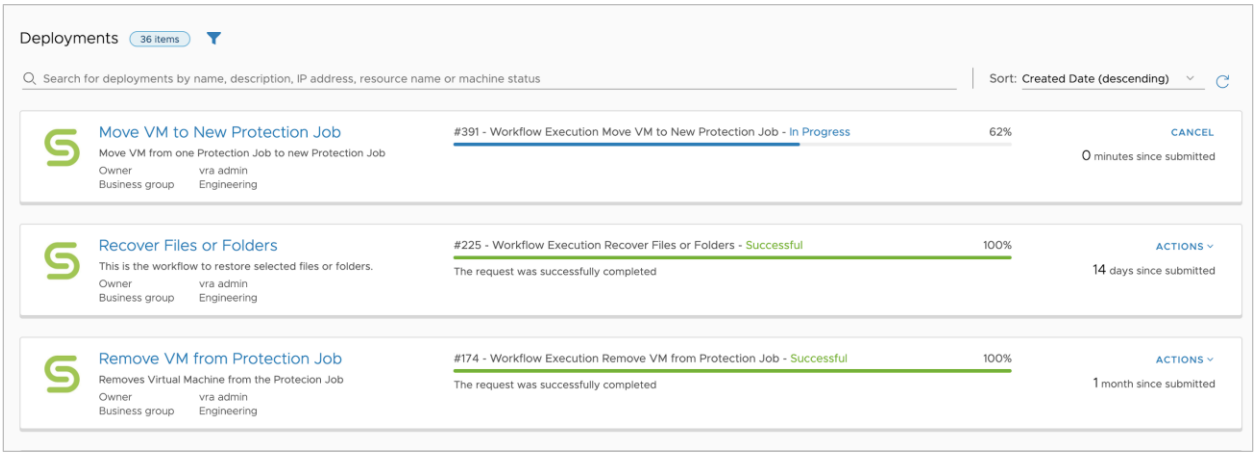
Today's business needs are dynamic, changing quickly. Cohesity promotes infrastructure flexibility by enabling users to change data protection requirements. If an application grows in criticality, the data Protection Policy needs to echo this. Cohesity's integration with vRO allows users to move VMs from one Cohesity Protection Job to another and change SLAs, helping you automate compliance management.

Figure 8: Moving a VM from one Cohesity Protection Job to Another



This integration provides a self-service mechanism not just to allocate resources, but to manage them according to changing business needs. Users can move VMs to new Protection Jobs and recover VMs, files, and folders, all from a self-service catalog of IT services.

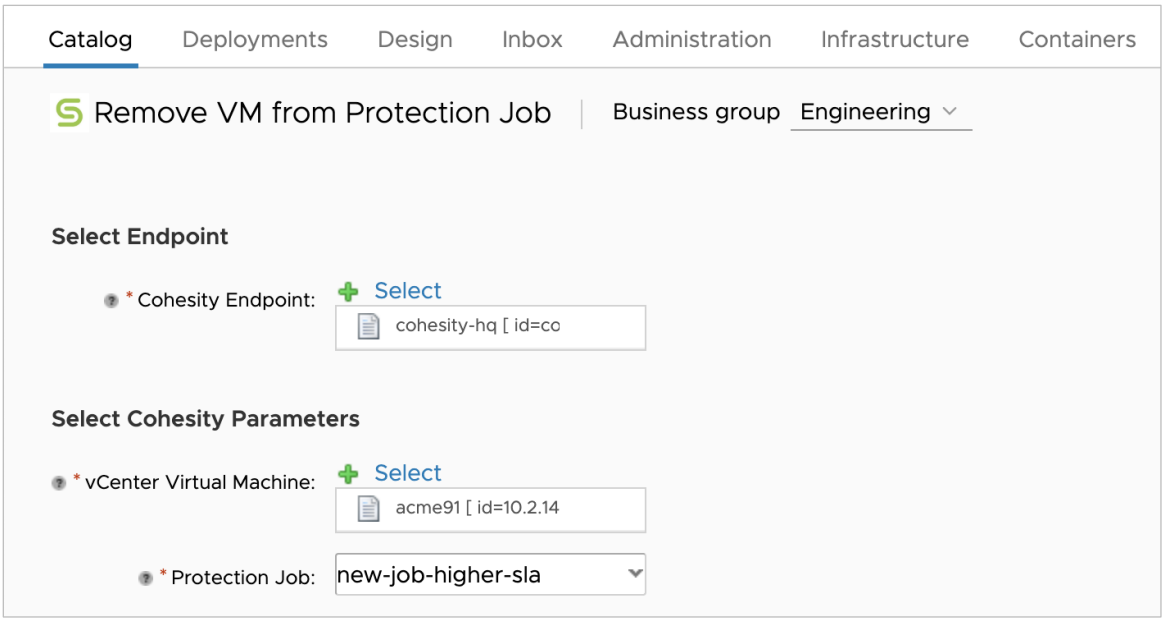
Figure 8: Manage Cohesity Data Protection Workflows from vRealize Suite



Deprovisioning

Cohesity's vRO integration also addresses the end of a VM's lifecycle. When a VM reaches the end of its lifecycle, deprovisioning that virtual machine will remove it from vCenter management, as well as from the Cohesity Protection Job.

Figure 9: Deprovisioning VM



Get Started with the Cohesity Plugin for the vRealize Suite

The Cohesity plugin for vRA and vRO is certified by VMware, with a VMware Ready certification, the highest level of endorsement by VMware for products and solutions created by its certified partners.

To get started with the Cohesity plugin for the vRealize Suite, get it from the VMware Marketplace.

Learn More About Cohesity Automation and APIs

Cohesity enables agility, speed, and self-service. With deep integrations with numerous infrastructure solutions and an API-first architecture, Cohesity brings flexibility to infrastructure, allowing customers to do more and adapt to changing business needs.

For more information on Cohesity's automation and integration solutions, see https://www.cohesity.com/solution/automation/.

To understand how to work with our API-first architecture and take a closer look at the available APIs, see https://developer.cohesity.com/.

Your Feedback

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About the Author

Srini Sekaran is a Product Marketing Manager at Cohesity, focusing on data protection and API integrations.

Document Version History

VERSION	DATE	DOCUMENT HISTORY
1.0	May 2019	First draft
1.1	Nov 2021	Rebranding updates

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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