vRealize Automation Cloud (vRA Cloud) for Service Providers

vRA Cloud enables automation of the multi-cloud experience for tenants and delivery of a policy-driven catalog

KEY BENEFITS

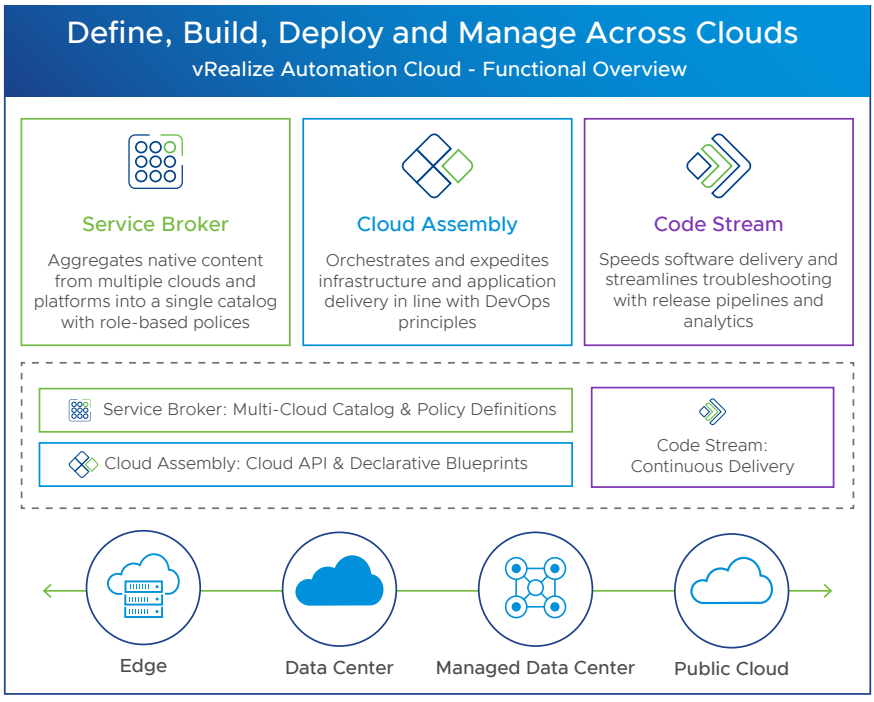
- Allows end customers to take advantage of multi-cloud resources to deploy applications with minimal friction
- Facilitates DevOps and automation across end customers
- Helps maintain governance and control to prevent resource sprawl
- Streamlines application delivery, enables cloud flexibility and choice, and controls costs
- Facilitates collaboration and increases agility between traditionally siloed groups, helping to further accelerate business innovation
- Accelerates time to market for cloud providers
- Enables data-driven insights so providers can base their strategy on customer satisfaction and use patterns

INTRODUCTION

Big enterprises are heterogeneous and different teams use different tools. The skills and knowledge required to manage each 'toolset silo' are very different. And while each team should be allowed to choose the tools that make them the most productive, every additional cloud account becomes an extra challenge for the IT operations team. Complexity increases exponentially, the cloud bill sky-rockets and the company finds itself exposed to security and operational risks. Someone needs to keep tabs and establish the guardrails that will get this situation under control.

vRealize Automation Cloud (vRA Cloud) for partners consists of VMware Cloud Assembly, VMware Service Broker and VMware Code Stream. vRA Cloud makes it easy and efficient for IT developers to get what they need to build and deploy applications.

It provides a unified management solution across clouds, whether VMware-powered or public. Based on modern Infrastructure-as-Code and DevOps principles, it empowers agility and collaboration across tenant teams and functions while supplying providers with checks and controls to contain cost and risk exposure. It offers capabilities on service brokerage, cloud governance, workload orchestration, topology composition, workflow automation and CI/CD pipelines for infrastructure and application delivery.



Cloud Assembly

It is VMware's approach to building a declarative blueprinting and automation-enabling, Infrastructure-as-Code first experience between public (AWS / VMC on AWS, Azure, GCP) and private (vSphere) cloud endpoints. It is designed to act as a conduit to consuming services from multiple cloud environments, with public cloud given more priority within the platform. Its interface for Cloud Assembly is primarily focused on providing an 'administrator' view of the platform.

Service Broker

It enables providers to aggregate native content from multiple clouds and platforms into a single catalog with role-based policies. It is focused on exposing service provisioning to end users: primarily blueprints from Cloud Assembly and Amazon CloudFormation templates. Its interface is focused on the 'User' view of the platform.

Code Stream

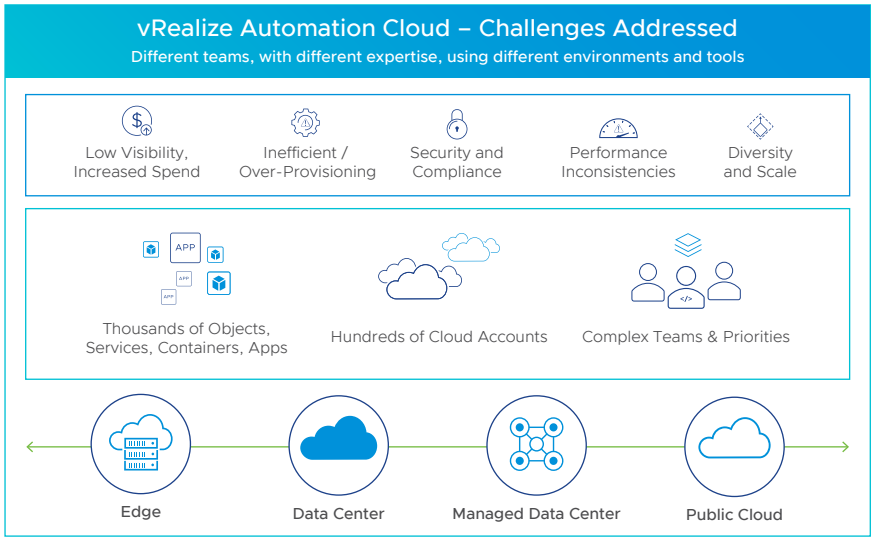
It allows providers to help tenants speed software delivery and streamline troubleshooting with release pipelines and analytics. They can integrate development tools and automate code release. There are many possibilities to interact with virtually any system to make advanced pipelines for application and infrastructure delivery. Code Stream is mainly focused on the SRE/DevOps lead use cases.

CHALLENGES

Teams face several multi-cloud challenges that must be solved to achieve faster time-to-market and improved customer satisfaction, as well as increased throughput and business innovation capabilities. These challenges include*:

- **Application and infrastructure automation:** The proliferation, integration and growth of a distributed development footprint of traditional and modern applications across clouds as well as growth in the use of software-defined infrastructure
- **Multi-cloud service brokering:** The ability to manage services that originate from various cloud environments into a single, unified view; pre-existing compliance requirements and growing global security threats that seek entry points across large multi-cloud environments
- **CI/CD problem identification and resolution:** Streamline problem identification across the automated CI/CD pipeline with analytics

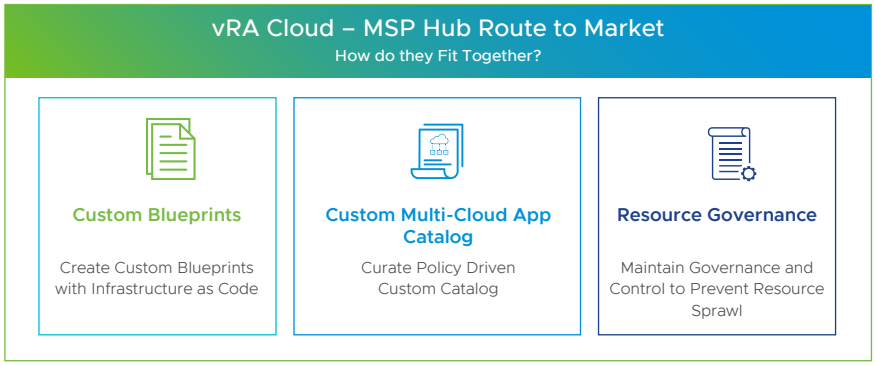
*Source: IDC Technology Spotlight sponsored by VMware - *Reduce Multi-Cloud Costs and Risks Through SaaS Automation and Management Capabilities*



SOLUTION

vRA Cloud MSP Hub Route to Market

vRA cloud is a policy-driven app catalog for end customers' self-provisioning. Partners can leverage the benefits of vRealize Automation Cloud to provide their end-customers with access to self-service provisioning of development resources and templates, while simultaneously easing the complexity of managing multiple tenants with Cloud Provider Hub.



Custom Blueprints with Infrastructure-as-Code

Develop custom blueprints that can utilize components and services across multiple clouds (AWS, Azure, GCP, etc.) with versioning and support for cloud-agnostic components. Using the intuitive blueprinting engine in Cloud Assembly, providers can create custom blueprints for tenant application deployment, using components specific to each cloud endpoint (e.g., Lambda, RDS, etc.).

Custom Multi-Cloud App Catalog

Develop and curate a custom catalog of applications for tenants with support for third-party cloud templates (e.g., AWS CloudFormation templates). Partners can build a custom catalog by pulling the custom blueprints created in Cloud Assembly and housing them alongside third party templates like AWS CFTs, ARM templates, etc.

Resource Governance

Partners can apply resource governance and lifecycle management policies across clouds for tenants. Lease and Day-2 policies can also help providers dictate how long deployments live, and which users can terminate them. They can allow tenants to use a catalog of apps, deploy resources in a self-service manner, and provide them with the Code Stream CI/CD pipeline for E2E dev infra support. Enables connection to public and private cloud endpoints.

Why vRA Cloud

Value Proposition – MSP Program for vRA Cloud

What's in it for Partners?

- Facilitate hybrid cloud consumption with self-service applications
- Provide prepackaged content (e.g., blueprint catalog, workflows)
- Enhance platform ecosystem with additional integrations
- Administrate the vRA Cloud content and lifecycle for your end customers
- Consistency and familiarity of VMware technologies for managing private & public clouds
- No data center investment or maintenance
- Global scale and reach
- Be their customer's trusted advisor for their cloud strategy
- Own customer end to end and open up new monetization opportunities with value added services

What's in it for End Customers?

- Contain risks and costs by managing your clouds centrally
- Expedite time-to-value with prepackaged services and ease of sharing
- Innovate faster with rich access to native public cloud services
- Future-proof your management strategy with SaaS form factor monthly feature updates and additions

USE CASE #1:

Dictating cloud accounts and VMware Cloud on AWS SDDCs utilized by tenants, and controlling resource sprawl and spend

USE CASE #2:

Adding custom blueprints to a master catalog, and adding policy based access for tenants to selected resources

USE CASE #3:

Providing my end-customer with an end-to-end development infrastructure to help accelerate their enterprise agility

USE CASES

Below are some of the use cases for vRA Cloud on Cloud Provider Hub:

- MSPs control what services and tiles are exposed to their tenants, so they can enable services according to the delivery model they decide.
- MSPs manage all infrastructure accounts and endpoints available to their tenants, so they can dictate which resources are utilized for specific applications and deployments
- MSPs provide a specific catalog of blueprints for each of their tenants, so they can provision the appropriate infrastructure resources for their development work in a configuration-free manner

Key Cloud Automation Pillars

vRA Cloud – focus areas

Self-Service Hybrid Cloud	Multi-Cloud Automation with Governance	Delivery with DevOps	Kubernetes Workloads
Evolve your VMware datacenter into a true Hybrid Cloud	Apply consistent orchestration & lifecycle across clouds	Deploy infrastructure and applications continuously	Manage K8s clusters and container apps

vRealize Automation cloud helps companies define, build, deploy and manage workloads across any major cloud. It is designed to address four core use cases:

Self-Service Hybrid Cloud

vRealize Automation Cloud helps customers create an internal IT experience at par with hyperscalers' clouds. It provides the self-service consumption interface that bridges the Infrastructure/Operations side with the end-users seamlessly. Best-in-class support for VMware-based infrastructure, brownfield workload support, policy engine, integrations with common ecosystem tools and custom extensibility workflows with vRO and ABX are some of the key capabilities that empower this use case.

Multi-Cloud Automation and Governance

vRealize Automation Cloud abstracts the cloud heterogeneity without discounting the native cloud richness. It applies a unified approach for orchestrating, consumption and governance across all major clouds. Some of the most critical features for this use case are the cloud agnostic blueprints, deep support for native public cloud services, native cloud template brokerage (e.g., AWS CFTs) and common policy and lifecycle management engine across clouds.

Delivery with DevOps

Infrastructure as Code (IaC) and continuous delivery are at the forefront of any enterprise DevOps initiative. vRealize Automation Cloud provides an accessible and comprehensive route to DevOps adoption. Unlike legacy continuous integration tools, Code Stream provides a combination of OOTB integrations, dashboards, container deployments and progressive delivery (canary, blue green, automated rollback) that makes pipeline modeling and monitoring easier than ever. Cloud Assembly with IaC, API-first approach, completes the picture and allows customers to follow modern delivery principles throughout the build-release cycle.

Kubernetes Workloads

vRealize Automation Cloud enables management, monitoring, discovery and request of Kubernetes clusters and namespaces. Out-of-the-box integration with PKS and Red Hat OpenShift are currently supported for enterprise use cases.

SUMMARY

vRealize Automation Cloud is a fundamental value pillar for any MSP. Policy-based workload provisioning, governance, lifecycle management, custom content and integrations are some of the capabilities that make this solution a natural fit in the Cloud Provider Hub. The MSP model under the VMware Cloud Provider Program empowers partners to build their businesses. Irrespective of the size or ambition of a customer, VMware Cloud on AWS enables cloud providers to offer a wide range of solutions and a painless transition of their on-premises environment.