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-rocket 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.

VMware Aria Automation for partners consists of VMware Aria Automation Assembler (formerly VMware Cloud Assembly), VMware Aria Automation Consumption (formerly VMware Service Broker) and VMware Aria Automation Pipelines (formerly VMware Code Stream). Aria Automation 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 (IaC) 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.

Define, Build, Deploy and Manage Across Clouds
VMware Aria Automation - Functional Overview

<table>
<thead>
<tr>
<th>Aria Automation Consumption</th>
<th>Aria Automation Assembler</th>
<th>Aria Automation Pipelines</th>
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<tbody>
<tr>
<td>Aggregates native content from multiple clouds &amp; platforms into single catalog with role-based policies</td>
<td>Orchestrates and expedites infrastructure and application delivery in line with DevOps principles</td>
<td>Speeds software delivery and streamlines troubleshooting with release pipelines and analytics</td>
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Aria Automation Consumption: Multi-Cloud Catalog & Policy Definitions
Aria Automation Assembler: Cloud API & Declarative Blueprints
Aria Automation Pipelines: Continuous Delivery

Edge | Data Center | Managed Data Center | Public Cloud
VMware Aria Automation Assembler

VMware Aria Automation Assembler is VMware’s approach to building a declarative blueprinting and automation solution-enabling, infrastructure-as-Code first experience between public (AWS / VMware Cloud 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 Aria Automation Assembler is primarily focused on providing an ‘administrator’ view of the platform.

Aria Automation Consumption

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 Aria Automation Assembler and Amazon CloudFormation templates. Its interface is focused on the ‘User’ view of the platform.

Aria Automation Pipelines

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. Aria Automation Pipelines 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
VMware Aria Automation Enables Automation of the Multi-Cloud Experience

**VMware Aria Automation – Challenges Addressed**
Different teams, with different expertise, using different environments and tools

- Low Visibility, Increased Spend
- Inefficient / Over-Provisioning
- Security and Compliance
- Performance Inconsistencies
- Diversity and Scale

**SOLUTION**
VMware Aria Automation Cloud Services Provider - SaaS Route to Market

VMware Aria Automation is a policy-driven app catalog for end customers’ self-provisioning. Partners can leverage the benefits of VMware Aria Automation 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 Partner Navigator.

**VMware Aria Automation – CSP-SaaS Route to Market**

- Custom Blueprints
  - Create Custom Blueprints with Infrastructure-as-Code
- Custom Multi-Cloud App Catalog
  - Curate Policy Driven Custom Catalog
- Resource Governance
  - Maintain Governance and Control to Prevent Resource Sprawl

**Custom Blueprints with Infrastructure-as-Code**

Partners can 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 Aria Automation Assembler, 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**

Partners can 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 Aria Automation Assembler 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 Aria Automation Pipelines CI/CD pipeline for E2E dev infra support. Enables connection to public and private cloud endpoints.

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

### Why VMware Aria Automation

<table>
<thead>
<tr>
<th>What’s in it for Partners?</th>
<th>What’s in it for End Customers?</th>
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<tbody>
<tr>
<td>• Facilitate hybrid cloud consumption with self-service applications</td>
<td>• Contain risks and costs by managing their clouds centrally</td>
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<tr>
<td>• Provide prepackaged content (e.g., blueprint catalog, workflows)</td>
<td>• Expedite time-to-value with prepackaged services and ease of sharing</td>
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<td>• Enhance platform ecosystem with additional integrations</td>
<td>• Innovate faster with rich access to native public cloud services</td>
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<tr>
<td>• Administrate the VMware Aria Automation content and life cycle for their end customers</td>
<td>• Future-proof their management strategy with SaaS form factor monthly feature updates and additions</td>
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<tr>
<td>• Consistency and familiarity of VMware technologies for managing private and public clouds</td>
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<tr>
<td>• No data center investment or maintenance</td>
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<td>• Global scale and reach</td>
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<td>• Be their customer’s trusted advisor for their cloud strategy</td>
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<tr>
<td>• Own customer end to end and open up new monetization opportunities with value added services</td>
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### USE CASES

Below are some of the use cases for VMware Aria Automation on Cloud Partner Navigator:

- **Cloud Services Providers - SaaS** control what services and tiles are exposed to their tenants, so they can enable services according to the delivery model they decide.
- **Cloud Services Providers - SaaS** manage all infrastructure accounts and endpoints available to their tenants, so they can dictate which resources are utilized for specific applications and deployments.
- **Cloud Services Providers - SaaS** 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 Aria Automation Pillars

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

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VMware Aria Automation Enables Automation of the Multi-Cloud Experience
VMware Aria Automation 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**

VMware Aria Automation 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**

VMware Aria Automation 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. VMware Aria Automation provides an accessible and comprehensive route to DevOps adoption. Unlike legacy continuous integration tools, Aria Automation Pipelines 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. Aria Automation Assembler with IaC, API-first approach, completes the picture and allows customers to follow modern delivery principles throughout the build-release cycle.

**Kubernetes Workloads**

VMware Aria Automation 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**

VMware Aria Automation is a fundamental value pillar for any Cloud Services Provider - SaaS. 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 Partner Navigator. The Cloud Services Provider - SaaS route to market under the VMware Partner Connect 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.