VMware Aria Hub

Powered by VMware Aria Graph

At a glance

VMware Aria Hub™ is a multi-cloud management platform with integrations across the VMware Aria™ portfolio. VMware Aria Hub enables IT organizations to address and solve end-to-end problems that cut across management disciplines and clouds without the need for heavy custom integrations and workflows. VMware Aria Hub is powered by VMware Aria Graph™, a graph-based datastore that captures the resources and relationships of a multi-cloud environment. Designed for the operational challenges of cloud native applications and environments, VMware Aria Graph provides a single source of truth that is updated in near real time.

Managing cloud native apps and multi-cloud assets

More organizations are delivering applications across public clouds and at the edge, and they're increasingly using Kubernetes to manage and scale their modernized and cloud native apps. However, managing infrastructure and apps in a multi-cloud and multi-technology environment is complex. With multi-cloud realities taking hold, managing overall cloud spend, resource utilization, and application performance, security and compliance across different clouds can be difficult and, consequently, can lead to overspending, inefficiencies and increased risk. Teams must control costs, ensure performance, and manage consistent security policies across these diverse and distributed environments.

While multi-cloud provides significant benefits, it also introduces new complexity— tens of thousands of objects, services, containers and apps across hundreds of projects and potentially thousands of users. This introduces new, increasingly complex management challenges that are hard to address with current approaches. By relying on disparate tools for each management discipline and cloud environment, siloed, disconnected teams struggle to manage processes that often span multiple clouds. A new approach is required to address such challenges that cut across management disciplines and cloud platforms.

VMware Aria Hub

VMware Aria Hub is a multi-cloud management platform with integrations across the VMware Aria portfolio. It provides centralized views and controls to manage your entire multi-cloud environment. The platform helps you discover cloud resources, including applications, users and configurations, and understand the associated dependencies. It also provides centralized administration, helping you manage applications, accounts, roles, projects and workflows across multi-cloud and Kubernetes environments through a single interface.

The multi-cloud management platform also serves as a foundation for a new set of value-added solution services that customers can leverage to support strategic use cases across clouds. End-to-end solutions reside on VMware Aria Hub, and provide workflows integrated with multiple tools and domains.

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Key benefits

- Multi-cloud visibility and insights – Pull relevant, correlated data from any source for quicker application analysis and debugging, while providing complete visibility into cost, performance and configuration of applications and workloads across clouds.

- Multi-cloud security and control – Help ensure environments and apps are more secure, apps are performing and available, and costs are optimized across clouds.

- Multi-cloud workflow automation – Accelerate and simplify common workflows, such as automating the assessment, planning and execution for app migration, as well as automating the creation of standardized, compliant public cloud landing zones for multi-cloud governance.

- Multi-cloud collaboration and alignment – Align multiple teams and solutions on a common understanding of resources, relationships, historical changes, applications and accounts, enabling teams to address complex multi-cloud use cases.

VMware Aria Graph

VMware Aria Graph is a graph-based datastore that captures the resources and relationships of a multi-cloud environment. The technology is highly scalable, scaling up to hundreds of millions of nodes plus related objects (around 1 billion graph entities). Expressly designed for the operational challenges of cloud native applications and environments, VMware Aria Graph provides a single source of truth that is updated in near real time.

The datastore captures the many-to-many relationships for dependency mapping. It also enables viewing of configurations, critical for root-cause analysis. VMware Aria Graph also provides event-based collection, supporting a high rate of change. The datastore captures change events at a granular level whenever they happen.

Based on a federated and modular architecture, the graph-based datastore enables aggregation of data from any source. The plug-and-play approach allows you to layer in data from third-party tools. This helps align operational data on a single, holistic source of truth, enabling teams to make better decisions and work more efficiently.

VMware Aria Graph collects inventory from each provider service (e.g., AWS, VMware Aria Operations™ for Networks, VMware vCenter®, Kubernetes, etc.) and constructs a non-opinionated model of the cloud inventory. It normalizes the data models from different providers and merges the views obtained, joining together into a common entity in the graph-based datastore.

VMware Aria Graph also provides a unified GraphQL API, simplifying consumption by both developers and IT ops teams. It establishes a single, developer-friendly, consistent interface to multi-cloud environments. The precise GraphQL queries provide lightning-quick, extremely efficient access to data.

End-to-end solutions

The VMware Aria Graph technology anchors all core VMware Aria multi-cloud management solutions, including VMware Aria Cost™ powered by CloudHealth®, VMware Aria Operations, and VMware Aria Automation™. It also powers a set of end-to-end multi-cloud management solutions for use cases such as multi-cloud governance (VMware Aria Guardrails™), application migration (VMware Aria Migration™), and troubleshooting (VMware Aria Business Insights™), all enabled via the unified experience and workflows of VMware Aria Hub.

VMware Aria Guardrails

VMware Aria Guardrails[1] is a multi-cloud governance service that enables organizations to scale end-to-end policy enforcement across clouds and Kubernetes. IT admins can consistently enforce standards that help regulate cost, reduce risks, and optimize performance across clouds, Kubernetes and hosts.

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1. VMware Aria Guardrails is in initial availability.

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VMware Aria Hub powered by VMware Aria Graph unifies cost, performance, configuration and delivery automation in a single platform with a common control plane and data model for any cloud, any platform, any tool, and every persona.

VMware Aria Migration

VMware Aria Migration[2] helps you understand whether it's better to migrate some applications or workloads to a different cloud. It accelerates and simplifies the multi-cloud migration journey by identifying and migrating applications to the optimal cloud based on your organization's goals for security, performance, cost and time.

VMware Aria Business Insights

VMware Aria Business Insights[3] discerns relevant insights from full-stack event correlation, leveraging AI/machine learning (ML) analytics. It helps to eliminate business downtime, reduce mean time to recovery (MTTR), and prevent future issues.
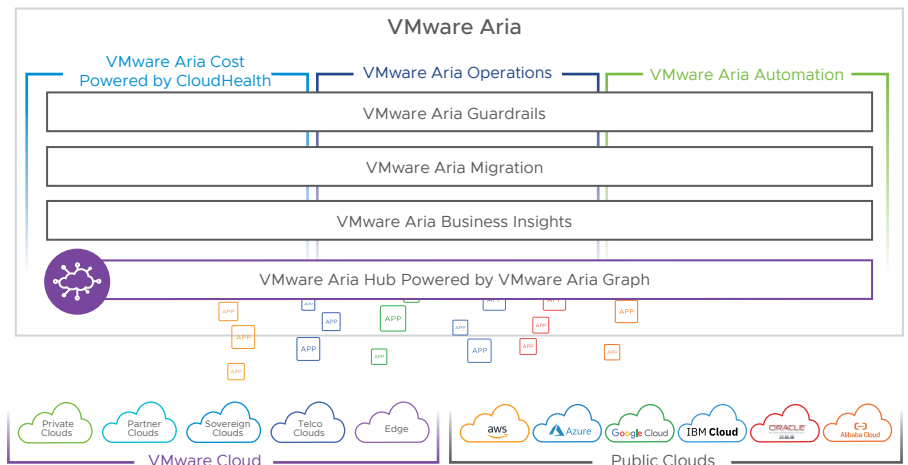

Figure 1: The solution vision of VMware Aria Hub powered by VMware Aria Graph is for the platform to serve as a foundation for a new set of value-added solution services IT organizations can leverage to support strategic multi-cloud use cases.

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2. VMware Aria Migration is in initial availability. This initial release provides free migration assessment for an on-premises VMware vSphere® environment to VMware Cloud™ on AWS.

3. VMware Aria Business Insights is in beta availability.

Resources

- Visit the VMware Aria Hub powered by VMware Aria Graph product page for more information, or contact your VMware representative.

- Connect with a VMware expert for a tailored multi-cloud management platform demo for you and your team.

- Visit the VMware Cloud Management blog to read more about VMware Aria Hub and VMware Aria Graph.

- Follow us on Twitter @vmwarearia.

How to get started

Register now for the free tier[4] of VMware Aria Hub. The free tier of VMware Aria Hub enables you to inventory, map, filter and search resources from up to two of your native public cloud accounts, including Amazon Web Services, Microsoft Azure, and Google Cloud. The free tier allows you to understand the relationships of their resources to other resources, policies and other key components in their cloud environments. You also gain visibility into the performance and topology of your Kubernetes environments. Additional free functionality includes landing zone policy templates, configuration drift management, visibility into Center for Internet Security (CIS) benchmark violation data coming from VMware Aria Guardrails, and visibility into the aggregate cost of your accounts and list price costing for some resources coming from VMware Aria Cost. With the free tier, you can also discover and curate applications to better understand their dependencies and relationships to other business applications.

Discover a true multi-cloud management platform

VMware Aria Hub enables true multi-cloud management based on comprehensive, near real-time visibility into your application and infrastructure environments. It was designed to support cloud native apps and public cloud assets, including the large scale of objects, the high rate of change, the fragmentation of operational data, and the proliferation of APIs across clouds. The core technology of VMware Aria Hub is planned to extend beyond public clouds to VMware Cloud environments, bringing application-aware management to private/hybrid clouds in addition to native public clouds.

Visit the VMware Aria Hub powered by VMware Aria Graph product page to learn how you can gain visibility and control across your cloud native applications and multi-cloud assets with a central multi-cloud management platform powered by cloud-scale, graph-based datastore technology.

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4. See the product page for limitations.

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