# 4 Principles Drive Multi-Cloud Success

How VMware Aria optimizes your multi-cloud strategy

Get Started

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# The Rise of Multi-Cloud Computing

Business is transforming before our eyes. From manufacturing prototypes to digital twins, in-store shopping to online/curbside experiences, and in-person visits to virtual healthcare, cloud computing is underpinning modernization everywhere.

Yet only those enterprises speeding cloud-native apps and overcoming cloud complexity with optimized cloud management will achieve the full benefits of multi-cloud computing and digital transformation.

Will your business be one of them?

This ebook examines the four key capabilities—delivery automation, performance, cost, and security—organizations on a multi-cloud journey need in a cloud management solution to drive successful business outcomes.

# Top Transformation Priorities

The pandemic created new urgency for enterprise digital goals, most notably, increasing the pace of app modernization and accelerating cloud adoption. Recent research reveals IT leaders and developers now concentrating on:

## App Modernization

**76%**
of **app initiatives** focused on modernization[1]

**68%** of developers plan to increase their use of modern application frameworks due to the panedemic[2]

**65%** of respondents are running Kubernetes in production[3]

## Cloud Modernization

**73%**
of enterprises currently leveraging **multiple public clouds** today[2]

**81%** of enterprises expect to be Multi-Cloud by 2024[2]

**+80%** expected growth in total apps of organizations with 3 or more public clouds, 2021-2024[2]

The goals of both enterprise application and cloud transformation initiatives are clear:

**Goal 1:** Deliver modern apps at the speed the business demands

**Goal 2:** Operate across any cloud, with the flexibility to run apps in the data center, at the edge, or in any cloud

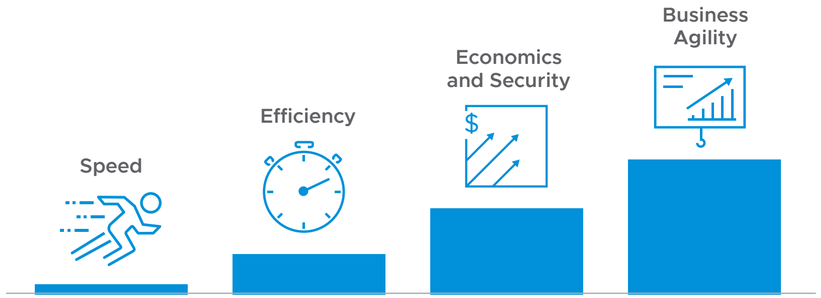
**Goal 3:** Drive rapid business transformation while delivering enterprise-level resiliency, security and operations

1. VMware Market Insights Study, March 2021, based on research of 1,200 organizations globally
2. VMware FY22 H2 Benchmark: Digital Momentum; N=557 Enterprise (5000+ employee) Technology Decision Makers
3. The State of Kubernetes 2021, May, presented by VMware

# Correlating Cloud and Business Evolution

In most organizations, cloud adoption began a few years ago with an individual or team seeking to go faster. Today, cloud strategies are company-wide mandates driving business agility.

## The rise of multi-cloud computing



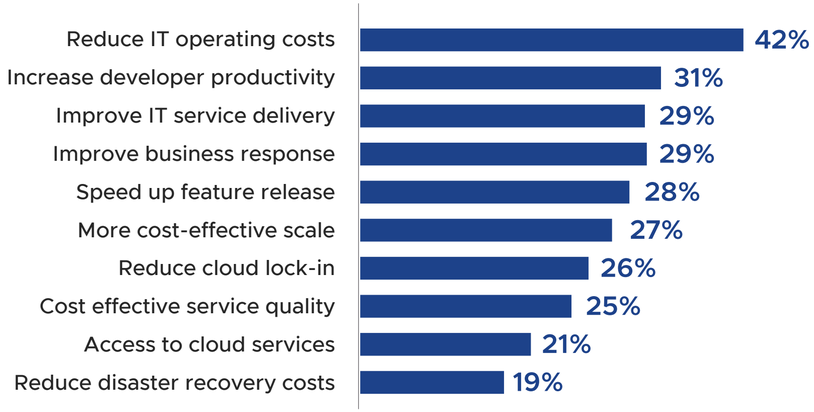

**Ad Hoc**
Individuals or teams establish various cloud contracts, several ephemeral use cases, often managed by a Line of Business.

**Departmental**
Departments leverage best practices and standardize on cloud services.

**Cloud-Specific Center of Excellence**
IT teams create cloud-specific centers of excellence for department support.

**Multi-Cloud Center of Excellence**
Business establishes company-wide cross cloud services, infrastructure, and best practices.

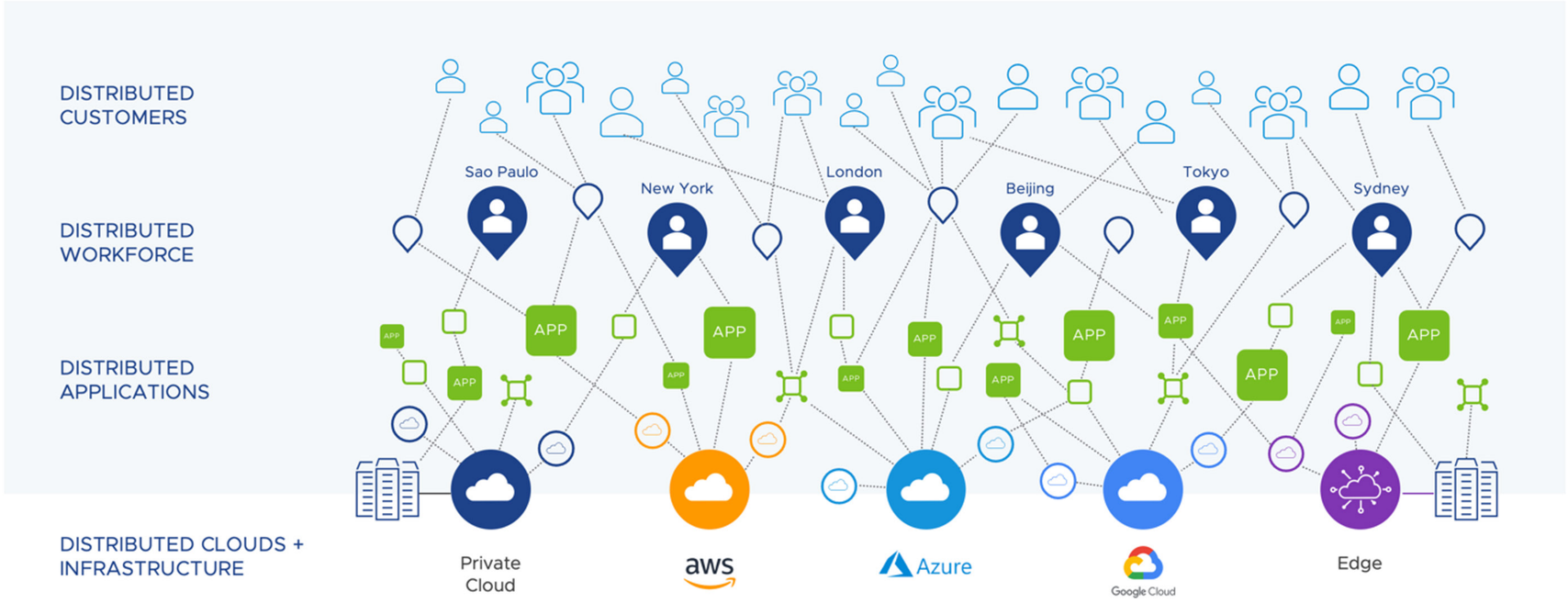
Yet whether organizations successfully navigate from ad hoc cloud contracts to multi-cloud centers of excellence largely depends on their cloud operating model and the cloud management solutions they choose. That's because a single cloud management approach leads to significant business outcomes, including helping:




SOURCE: Management Insight Technologies, commissioned by VMware. "The State of Application Modernization and Hybrid Cloud Computing. North America," February 2020.

# Multi-Cloud Challenges

A primary reason organizations today aren't achieving the full benefits of multi-cloud computing is complexity. Teams simply aren't empowered to build and operate trusted apps anywhere because they encounter too much friction and too many silos. And the complexity is only getting worse with more distributed customers, employees, applications, and clouds than ever.




Lack of standardization and visibility stemming from disconnected cloud management simply makes it harder for IT leaders and developers to support business transformation. Instead, they're dealing with:

- **Decreased agility**—Silos and manual processes that lead to app refactoring and migrations to the cloud taking years instead of months
- **High costs**—Inefficiencies and limited visibility that requires teams to sink up to a million dollars into moving 1,000 workloads between clouds
- **Increased risk**—Disconnected systems plus cloud skillset shortages that lead to more vulnerabilities and disjointed operations

# Single Platform Cuts Through Multi-Cloud Complexity

The key to achieving an optimized multi-cloud environment that drives successful business outcomes lies in adopting a cloud management solution with a single platform and a common control plane and data model. What that ensures is there's unified understanding of every app and every system and there's security and intelligence built-in to safeguard data and connect insights.

With a single platform, teams can adjust operations to deliver automated services, performance, cost, and security most efficiently and consistently for maximum competitive advantage—across distributed teams and apps as well as private, hybrid, and public clouds.

In practice, a single platform with a common control plane and data model provides visibility, remediation, planning, optimization, automation, security, and governance to properly manage and operate systems and apps across multi-cloud environments. With consistent operations, teams can be confident their cloud investments are continuously optimized, effectively governed, and highly secure.

VMware Aria features a single platform with a common control plane and data model, delivering four key capabilities that optimize business outcomes:

| | Key Capability | Business Outcome |
|---|---|---|
| 1 | Delivery automation | Accelerate agility |
| 2 | Performance | Maximize efficiency |
| 3 | Cost | Control investment and spend |
| 4 | Secure Config | Manage risk and streamline compliance |

A closer look at each capability category reveals how VMware Aria empowers IT leaders and developers to unlock innovation while maximizing efficiency and minimizing risk.

# 1. Automate Delivery to Accelerate Agility

Digital business moves fast. Automation capabilities in VMware Aria cloud management help organizations keep up while preventing clouds from becoming new computing silos. Unlike fragmented tools, VMware service delivery automation, APIs, and self-service consumption capabilities help teams work smarter and faster across clouds.

Delivery automation capabilities in VMware Aria empower organizations to:

- **Unlock app innovation** by automating the provisioning of infrastructure, platform, and app services faster—cloud-native or not
- **Boost speed and agility** using automation to detect possible issues while better managing patches, orchestrating system maintenance, and enabling full-scale remote execution to maintain critical business system performance and efficiency
- **Empower teams** with Infrastructure as Code (IaC) capabilities and Git-based infrastructure pipelining plus iterative development features while enabling automated self-service delivery and consumption of K8s infrastructure

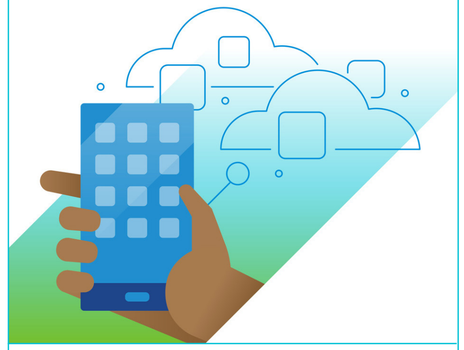
With VMware Aria delivery automation, organizations are achieving a measurable market advantage—one-week faster deployment for end-user environments, according to the most recent Forrester Total Economic Investment™ (TEI) study of the value of VMware vRealize Automation.[4]

"With VMware Cloud on AWS and vRealize Automation Cloud, we can provision and manage infrastructure the same way, whether it's on public cloud or private cloud. That's enabling us to fundamentally transform how we run IT."

— KORY GRINBERG, DIRECTOR OF INFRASTRUCTURE AND AUTOMATION, IHS MARKIT

## Delivery Automation

Unlock innovation by speeding up delivery of infrastructure, applications, and services



## Accelerate

**1 week**

faster deployment for end-user environments

4. Forrester. "The Total Economic Impact™ of VMware vRealize Automation," July 2019.

# 2. Optimize Performance to Maximize Efficiency

Poor performance can make even the most anticipated app fall flat at deployment. VMware Aria optimizes environments by appropriately unifying and balancing multi-cloud goals for scale, governance, security, and costs with performance. Intelligence and self-healing capabilities are keys to consistent operations.

Performance optimization features in VMware Aria enable organizations to:

- **Maximize efficiency** by automating the balancing and placement of workloads based on business and operational intent at minimal cost
- **Proactively plan** by achieving complete visibility into full stacks to optimize performing resources with intelligent operations
- **Align with sustainability commitments** by lowering workload carbon footprints through infrastructure reductions, energy-efficient operations, and renewable energy-powered data centers and speed migrations to better align spend with innovation initiatives

With VMware Aria performance optimization, organizations are achieving measurable business outcomes. The most recent Forrester TEI study reports a 93% reduction in unplanned downtime with VMware Aria Operations (formerly VMware vRealize Operations).[5]

> "It used to take me around a year and a half just to place an application in production. With VMware cloud management, I now do it within months. It's a game changer."
>
> — NÉSTOR RODRÍGUEZ, DIRECTOR OF TECHNOLOGY AND CHANGE, PROVIDENT MEXICO

## Performance

Maximize efficiency by delivering end-to-end intelligent operations at minimal cost while managing sustainability

## Optimize

**93%**
reduction in unplanned downtime

5. Forrester. "Forrester TEI of VMware vRealize Operations," 2021.

# 3. Monitor Costs to Control Investment and Spend

Cloud costs are still surprising leadership teams, especially chief financial officers. Without reliable cost data about on-premises infrastructure and apps, teams struggle to provide comparisons to newly adopted public clouds and SaaS services. VMware Aria brings together public, hybrid, and private cloud costs in a coherent way that drives accountability and provides opportunities to lower TCO.

Cost capabilities in VMware Aria allow organizations to:

- **Control spend** by better managing cloud vendors and service commitments as well as discounts and reservations to maximize savings
- **Simplify financial management** with reporting and dashboards for granular analysis of cost, usage, and asset data for better forecasting
- **Drive accountability and clarity** by tracking what departments, teams, projects, and apps drive cloud costs and usage, then automatically monitoring and charging for services, as needed

With VMware Aria cost optimization, organizations streamline financial management and boost accountability. A Fortune 50 Information Technology company using the solution is achieving 35% average savings on compute costs.[6]

In total, Experian has already seen about $1.7 million in savings opportunities. “The real value is how we recognize these savings opportunities and act on them.”

— VINAY RUDRAPPA, DIRECTOR OF CLOUD ENGINEERING SERVICES, EXPERIAN

## Cost

Simplify financial management by driving cost accountability and governing cloud spend

## Control

**35%**

average savings on compute costs

6. VMware. “How CloudHealth Enabled VMware to Regain Control and Optimize Public Cloud Spend,” 2019.

# 4. Secure Configurations to Manage Risk and Streamline Compliance

Data breaches and regulatory non-compliance both negatively impact revenue and brand reputations. With IT staff already overburdened and malicious threats multiplying, VMware Aria provides organizations with additional peace of mind that their data is protected and their business is still in compliance.

VMware Aria security and compliance capabilities allow organizations to:

- **Lower risk** by better protecting infrastructure and assets, including detecting threats in real time and preventing unauthorized access
- **Streamline compliance** by defining configurations and best practices as well as monitoring for non-compliance with industry and business policies
- **Strengthen security postures and reduce misconfigurations** by establishing security rules and custom guardrails for clouds and applications

With VMware Aria security and compliance capabilities, teams see less than six seconds from change notification to risk detection for 95% of security findings.[7]

> "CloudHealth Secure State not only identifies any potential issues, but it also ranks them in order of risk. It means we're more effective in focusing our attention on the most critical risks."
>
> — JOHN MARAIS, SENIOR PLATFORM SERVICES MANAGER, DISCOVERY HOLDINGS

## Security

Manage risk by strenthening security posture and automating governance

## Protect

**<6 seconds**

from change notification to risk detection

7. CloudHealth by VMware. "CloudHealth Secure State Platform Telemetry," 2022.

# Drive Your Cloud Operating Model with VMware Aria

By taking advantage of the embedded delivery automation, performance, cost, and security capabilities in VMware Aria cloud management, you can drive your business further and faster with a single cloud operating model.

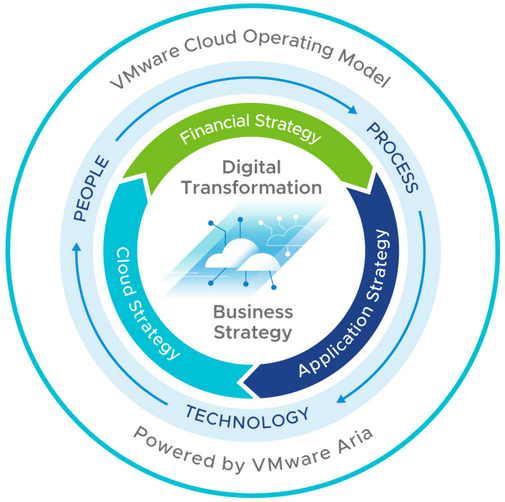
You can both build VMware Clouds and unify multi-clouds, consistently managing and maintaining any cloud, infrastructure, and application on-premises or as a service with one VMware solution and license. That gives you freedom of choice, which has rewarded other enterprises with a 112% return on investment.[8]

Learn more about the VMware Cloud Operating Model

**Build VMware Clouds**

Transform IT Ops

Cloud experience out-of-the-box




**Unify multi-cloud**

Align Cloud Ops

Extensive capabilities for public clouds

Only organizations speeding cloud-native apps and overcoming cloud complexity with optimized cloud management will achieve the full benefits of multi-cloud computing and digital transformation.

Be one of them.

8. VMware Realize Cloud Universal ROI tool license upgrades.

## Learn more about VMware Aria

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