

# 5-Step Buyers Guide to Multi-Cloud Management

Best practices, checklists, and resources

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▶ [GET STARTED](#)



## Introduction

Organizations are under more pressure than ever to look forward even as immediate challenges demand the attention of IT teams today. From managing in the new normal created by a global pandemic to accelerating digital transformation efforts, there's no shortage of initiatives vying for time, attention, and budget. Although the pandemic created an uncertain business environment, organizations still needed to [look ahead to drive innovation to ensure a competitive advantage in the future](#).

Today, companies are embracing a hybrid of public and private cloud services to strike just the right balance without sacrificing existing investments in apps, operations, and infrastructure. Therefore, a multi-cloud environment can be the ideal solution providing benefits, such as speeding the delivery of IT resources, increasing flexibility, enabling scalability, modernizing workloads, and improving resource utilization.

### [But, not all multi-cloud solutions are created equal.](#)

Many benefits of a multi-cloud strategy are realized by [having consistent infrastructure and consistent operations](#) across application deployment environments. Consistent operations allow organizations to use the same set of tools, workflows, configurations, and policies to operate infrastructure and applications across the data center, cloud, and edge.

Are you ready but don't know where to start? This buyer's guide features a five-step approach that will help you and your team chart a successful journey to multi-cloud success. [In Steps 1 and 2, you will evaluate your staff skills and internal processes using complementary guidance from industry leaders, while Steps 3-5 help you assess and compare technology capabilities.](#)

Use the guide to document your needs as you shift to an automated and optimized delivery of your applications, infrastructure, and IT services across private, hybrid, and multiple public clouds.

## 1 Identify Skills and Address Any Gaps

Your organization is unique, so your evaluation of skills and skill sets will be, too. The following recommendations from industry leaders will **help you** get started:



### Additional Resources

- [How We Overcame Cultural Bias and Built the “Best IT Shop in the Nation”](#)
- [Creating the Next Generation of Leaders with Active Mentoring](#)
- [Bessie Yuan: Leading with Influence](#)
- [Innovation Mindset: 4 Keys to Building a Culture of Innovation](#)
- [The Power of People: Amplifying Our Human Capacity through Technology and Community](#)
- [5 Reasons IoT Projects Fail and How to Avoid It](#)



### Educate Existing Teams

When organizations need to obtain new skill sets it can be tempting to look externally for talent. But recruiting, onboarding, and training

new resources can be costly. As the pace of change accelerates, organizations that **value and invest in continuous learning for existing teams** can truly impact a business while **reducing talent acquisition costs**. **Ask:** How can we build on the talent we already have? What skills do we need to develop to remain competitive? What programs can we put in place to ensure talent stays current?

In many cases, **building on existing talent through continuous learning and education** can close the skills gap in a cost-effective and timely manner.



### Upskill for Transformation

Tomorrow’s organizations will be digital organizations driven by AI, machine learning, big data, analytics, and next-gen technologies.

**Future-ready teams** must be able to keep up with the pace of digital change by building the skills necessary to perform in this environment. A commitment to upskilling teams and building talent will **enable you by using existing technology and expanding those skills** into the cloud.



## Focus on Driving Innovation

In the past, organizations focused time and resources

on managing, fixing, and monitoring IT infrastructure. But infrastructure alone doesn't differentiate a business, and customers don't see infrastructure – they see applications.

**Developers are key to ensuring** successful application modernization efforts, and IT must support their efforts by enabling increased agility. **The cloud redefines** how data centers are run, and automation and operational efficiency free up IT resources to focus on innovation. Cloud creates an opportunity to shift the role of IT and the skills that the team can bring to the business. By shifting IT to focus on higher-value projects, organizations can create **competitive differentiation and market advantage**.



## Actively Seek New Perspectives and Ideas

Nothing galvanizes and energizes an organization

like getting behind something big – a grand agenda, a major breakthrough, or an idea that changes the world. **Encouraging everyone** to contribute to a common purpose, and valuing diverse voices, removes bias and motivates everyone – regardless of role – **to work together toward a common goal**. In fact, **recent research from McKinsey & Company** demonstrates a positive correlation between diversity and financial performance.



## Cultivate Your Organization's Next Wave of Leaders

It's often easy to take a

short-term view when looking at organizational leadership – asking what do we need to meet our goals today rather than what will we need tomorrow? **Active mentoring** contributes to long-term organizational success, succession planning, skills enhancement, and positioning an organization for success in the long-term. The **exchange of knowledge, culture and values** not only guides the personal growth and development of team members, it also enables them to take ownership of their career paths. **Making mentorship** both an individual and corporate responsibility in an environment where IT skills are rapidly evolving, and resources are scarce, is a smart business move.



## Recognize IT Ops as Organizational Heroes

IT teams don't simply support business continuity,

they help drive business growth. **Invest in developing** IT Ops skills and offering opportunities for growth by **recognizing and encouraging** their contribution to the business.

## 2 Analyze Current Processes to Adopt New Technology

Just like your culture and staff skills, your processes are also unique. The following recommendations from industry leaders may help you [evaluate processes](#) as you adopt new technology:



### Additional Resources

- [Enterprise Sovereignty: Controlling Your Own Destiny in a Multi-Cloud World](#)
- [For This CIO, “Technology Is the Basis for Change”](#)
- [Why the Cloud Conversation Isn't About Cloud](#)
- [Improving processes with the cloud](#)



### Familiarize Yourself With the Cloud Operating Model

Whether data is stored on-premises or in the cloud, understanding the implications of moving to a hybrid/ multi-cloud model is [vital to ensuring success](#). In addition to identifying roadblocks to driving the business forward, when you appreciate the impact moving to the cloud has on your operations, you can then [develop a well-designed, cloud-based process](#) to ensure positive change. The easiest way to get started is with a [Cloud Operating Model with VMware Cloud Management](#), a hybrid/multi-cloud solution for extending on-premises environments to the cloud and edge for [consistent operations](#). Because it leverages the same interface and workflows as existing on-premises VMware infrastructure, IT can [get acclimated to the experience and prove out use cases](#). They can then extend it back on-premises with this new cloud model, minimizing investments in new tools and training.



### Identify Where to Streamline Business Processes

Moving to the cloud fosters [improved organizational collaboration](#) because it no longer matters where teams reside – everyone has access to the data and files necessary to seamlessly work together. In addition to improving collaboration, cloud can also [improve inefficient processes](#) that hinder an organization’s ability to rapidly respond to market changes, such as expense reporting, time tracking, and human resources tools. The move to cloud

### Did You Know?



#### 2 out of 3

respondents want to extend their management and operations tools and processes from the data center to the public cloud, rather than bring cloud operations tools to the data center.

VMware Research Snapshot: The State of Application Modernization and Hybrid Cloud Computing, Management Insight Technologies, January 2020, n=1206.

compels an organization to [review and evaluate](#) existing processes to identify opportunities for improvement and how cloud can support process changes.



### Cost Control of IT Spend Becomes More Important When Moving to the Cloud

Moving towards a cloud operating model means that [cost control and the ability to provide insight](#) into cloud spend become more and more important. Cloud consumers will have more freedom to deploy and consume services, which then has cost impacts because they can spin up infrastructure and not shut it off, which incurs costs. This means IT needs to be able to manage that cost and allocate the cost to whichever team is consuming those services within the organization.



### Gain Confidence in Security and Compliance in the Cloud

Security has long been one of the biggest concerns holding back organizations from moving to the cloud, but today security and compliance requirements no longer hold back IT from operating in the public cloud. While not all cloud services meet industry regulations and certifications, such as FedRAMP, SOC and HIPAA, and some also fail to guarantee the security and high availability of sensitive data and traditional applications, multi-cloud is [one way security conscious organizations move to the cloud](#) without losing visibility and control.

## 3 Assess Current Multi-Cloud Management Challenges

Before shopping around, it's important to understand the limitations of your current approach. Take a minute to review the table below, which outlines the most common IT operations challenges in hybrid/multi-cloud. If you answer yes to three or more issues, consider reviewing options for replacing your existing IT operations tools, so your organization can ensure performance while optimizing for business impact. There are solutions available now that [modernize and transform the way you manage and operate](#) on-premises, in the cloud, and in edge environments.

| Business Issues                                                                                                                                                                                                                                                                                                                                             | Present in Your Environment |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <ul style="list-style-type: none"> <li> <b>Multiple, Fragmented and Patchwork Products and User Interfaces</b><br/>           Integrated management of private, public, hybrid and multiple clouds isn't possible or is limited         </li> </ul>                                                                                                         | Yes / No                    |
| <ul style="list-style-type: none"> <li> <b>New IT Paradigms and Skills</b><br/>           New initiatives (e.g., cloud first, Kubernetes, DevOps) pressure IT to become more agile but existing tools are complex and require continuous manual intervention         </li> </ul>                                                                            | Yes / No                    |
| <ul style="list-style-type: none"> <li> <b>Shrinking Budgets to Support Business Goals</b><br/>           Apps are spread across multiple cloud providers and tools are incomplete for providing unified visibility and monitoring across on-premises data centers and public clouds, making it difficult to optimize and predict costs         </li> </ul> | Yes / No                    |
| Technical Issues                                                                                                                                                                                                                                                                                                                                            | Present in Your Environment |
| <ul style="list-style-type: none"> <li> <b>Siloed Infrastructure</b><br/>           Clouds are becoming your next silos without one solution to manage all of them         </li> </ul>                                                                                                                                                                      | Yes / No                    |
| <ul style="list-style-type: none"> <li> <b>Uncontrolled Automation</b><br/>           The consequences of automation are only available after an action has occurred, which puts your team in a difficult position         </li> </ul>                                                                                                                      | Yes / No                    |
| <ul style="list-style-type: none"> <li> <b>Unacceptable Performance</b><br/>           Existing tools make it hard to deliver just-in-time resources to assure application performance         </li> </ul>                                                                                                                                                  | Yes / No                    |
| <ul style="list-style-type: none"> <li> <b>Security Issues</b><br/>           Risks and challenges in governance and compliance are compounded by multi-cloud models         </li> </ul>                                                                                                                                                                    | Yes / No                    |

## 4 Evaluate Criteria for Modern Multi-Cloud Management

The impact of recent global events has changed the role of IT. In addition, how you evaluate multi-cloud management solutions has to change as well. Silos of products, services, and responsibilities are no longer acceptable. Organizations that simply focus on “keeping the lights on” rather than proactively preparing for the future will be at a disadvantage. And **businesses that expand the role of IT as a true business partner will create new professional growth opportunities for IT teams while contributing to strategic long-term benefits** for the organization.

When evaluating a multi-cloud management solution, look for the following critical categories of delivery automation, performance, cost, and security capabilities.







## Automate Cloud Delivery to Accelerate Organizational Agility

Digital business moves fast. Search for a solution with automation capabilities that help organizations keep up while preventing clouds from becoming new computing silos. Unlike fragmented tools, a solution with automated service delivery, APIs, and self-service consumption capabilities helps **teams work smarter and faster** across clouds.

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Priority                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Self-Service Cloud</b> <ul style="list-style-type: none"> <li>Automate provisioning across on-premises and infrastructure as a service (IaaS)-based environments.</li> <li>Give users a unified and consistent self-service catalog with content aggregated from multiple resources, platforms, and native public clouds.</li> <li>Rapidly provision resources via cloud templates, orchestration workflows, infrastructure and app pipelines, and action-based extensibility (ABX) actions.</li> </ul>                                                                  | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                 |
| <b>DevOps for Infrastructure</b> <ul style="list-style-type: none"> <li>Support GitOps-based iterative development with enterprise-ready IaC and infrastructure pipelining capabilities.</li> <li>Harden open-source technologies (such as Terraform and Ansible) for enterprise requirements around governance and collaboration.</li> <li>Offer a low-code, API-first interface to provide options across teams with different skill sets and development requirements.</li> </ul>                                                                                        | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                 |
| <b>IT Automation</b> <ul style="list-style-type: none"> <li>Get event-driven automation to detect and auto-remediate critical issues before they impact the business.</li> <li>Manage patches, orchestrate system maintenance, and enable full-scale remote execution to maintain critical business system performance and efficiency</li> </ul>                                                                                                                                                                                                                            | <p>Yes / No</p> <p>Yes / No</p>                                 |
| <b>Kubernetes Automation</b> <ul style="list-style-type: none"> <li>Enable Kubernetes cluster management, self-service, and app deployment in a mixed virtualized and Kubernetes infrastructure with a unified governance and consumption model.</li> <li>Provide the ability to manage and govern Kubernetes clusters and namespaces, as well as discover and import clusters.</li> <li>Empower developers to request Kubernetes clusters and namespaces via self-service from a catalog.</li> <li>Enable Kubernetes app deployment on clusters from pipelines.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <b>Network Automation</b> <ul style="list-style-type: none"> <li>Enable IT and users to easily deploy, configure, and manage production ready apps with network and security services from a service catalog or programmatically via API.</li> </ul>                                                                                                                                                                                                                                                                                                                        | <p>Yes / No</p>                                                 |

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                         | Priority                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <p><b>Multi-Cloud Automation</b></p> <ul style="list-style-type: none"> <li>Automate public cloud resources and integrate public cloud services in automation workflows.</li> <li>Govern private, hybrid and public cloud resources and provide guardrails to cloud consumers when deploying such services.</li> <li>Integrate multiple automation solutions but provide a common control plane for consumption.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |



### Unify Operations to Maximize Resources at Minimal Cost

Poor performance can make even the most anticipated app fall flat at deployment. Look for a solution that optimizes environments by appropriately unifying and balancing multi-cloud performance. AI, ML and self-healing capabilities are keys to consistent operations.

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Priority                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <p><b>Performance Optimization</b></p> <ul style="list-style-type: none"> <li>Unify visibility and monitoring for the entire cloud ecosystem from on-premises hardware to native public cloud services with one cloud management control plane.</li> <li>Monitor app and infrastructure health and performance across multiple regions and distributed environments.</li> <li>Automate workload balancing and placement based on business and operational intent.</li> <li>Schedule and automate rightsizing of workloads.</li> <li>Continuously optimize workloads.</li> <li>Measure SLAs and uptime to improve infrastructure performance.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <p><b>Migration Planning</b></p> <ul style="list-style-type: none"> <li>Speed up migration plans by assessing inventory and discovering app dependencies with a full view of network requirements and your security posture.</li> <li>Leverage “what if” scenarios to model future capacity needs and make decisions about where to deploy new projects, purchase hardware, or migrate to cloud.</li> <li>Provide OOTB support for native public clouds, including AWS, Azure, Google Cloud Platform, and Oracle Cloud.</li> </ul>                                                                                                                      | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                                                 |
| <p><b>Intelligent Remediation</b></p> <ul style="list-style-type: none"> <li>Monitor and troubleshoot faster with AI for actionable insights.</li> <li>Correlate metrics and logs across on-premises hardware, public clouds, and apps.</li> <li>Take action based on root causes discovered and remediate within the toolset.</li> </ul>                                                                                                                                                                                                                                                                                                               | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                                                 |

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Priority                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Kubernetes Operations</b> <ul style="list-style-type: none"> <li>Monitor infrastructure supporting both traditional and Kubernetes deployments.</li> <li>Auto-discover Kubernetes clusters, nodes and namespaces, and visualize Kubernetes cluster topologies, including namespaces, replica sets, nodes, pods, and containers.</li> <li>Monitor Kubernetes performance, get alerts and report on capacity, configuration and inventory of clusters or pods.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <b>Network Operations</b> <ul style="list-style-type: none"> <li>Securely and confidently manage your network at scale with intelligent app discovery, network optimization, analytics, and troubleshooting with assurance and verification.</li> </ul>                                                                                                                                                                                                                    | <p>Yes / No</p>                                 |
| <b>Extensibility</b> <ul style="list-style-type: none"> <li>Ability to extend the environment and integrate with other apps and infrastructure.</li> </ul>                                                                                                                                                                                                                                                                                                                 | <p>Yes / No</p>                                 |



## Simplify Financial Management to Control Cloud 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. Look for a solution that **brings together** public, hybrid, and private cloud costs in a coherent way that **drives accountability and provides opportunities** to lower your total cost of ownership.

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                | Priority                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| <b>Budget Management</b> <ul style="list-style-type: none"> <li>Learn which departments, teams, projects, or apps are accountable for driving cloud cost and usage and hold them accountable with chargeback and showback.</li> <li>Track consumption patterns over time to accurately forecast future budgets and reduce miscalculations.</li> <li>Add additional clouds to budget management by importing rate cards.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <b>Capacity Management</b> <ul style="list-style-type: none"> <li>Ease Day 2 operations, including optimizing capacity and planning across private, hybrid and public clouds.</li> <li>Get proactive alerts if you are running out of capacity with guidance on actions.</li> <li>Leverage sustainability dashboards, reclaim wasted resources, reduce waste, and locate zombies.</li> </ul>                                       | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                         | Priority                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <b>Detailed Cost Analysis and Reporting</b> <ul style="list-style-type: none"> <li>Correlate datasets for analysis and reporting against your business objectives.</li> <li>Easily build reports and dashboards across dimensions to perform granular analysis on cost, usage, and asset data.</li> <li>Conduct bill analysis to identify trends in consumption.</li> <li>Visualize costs, including ROI, TCO, potential cost savings, and more.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <b>Cost Optimization for Public Clouds</b> <ul style="list-style-type: none"> <li>Take advantage of cloud provider commitment-based discounts to reduce operational costs.</li> <li>Reduce the amount of time spent manually managing reservations and savings plans using modeling, optimization, and amortization capabilities.</li> <li>Manage discounts throughout their entire life cycle to maximize savings.</li> </ul>                              | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                 |
| <b>Cost Governance</b> <ul style="list-style-type: none"> <li>Build policies that monitor your environment for opportunities to reduce infrastructure waste and optimize costs.</li> <li>Proactively alert stakeholders when cost centers are forecasted to exceed predefined budgets or spending anomalies are detected.</li> <li>Enable automated actions to execute changes in your environment.</li> </ul>                                              | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p>                 |



### Strengthen Security and Compliance to Protect Assets and Mitigate Risk

Data breaches and regulatory non-compliance both negatively impact revenue and brand reputations. With IT staff already overburdened and malicious threats multiplying, search for a solution that provides you with additional peace of mind that your **data is protected**, and your **business is still in compliance**.

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Priority                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>Continuous Compliance and Configuration Management</b> <ul style="list-style-type: none"> <li>Define optimized, compliant software states and enforce them across your entire environment — virtual, hybrid, and public cloud — with powerful, intuitive configuration automation.</li> <li>Benchmark and enforce compliance with government and industry standards across an entire environment with intuitive configuration automation.</li> <li>Define company-specific regulatory needs with custom compliance frameworks.</li> <li>Report compliance by cloud provider type and individual teams within the company.</li> <li>Facilitate compliance audits with easy access to data history.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |

| Needed Capabilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Priority                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p><b>Multi-Cloud Search and Investigation</b></p> <ul style="list-style-type: none"> <li>• Quickly search assets and associated relationships with real-time, global search for multiple public cloud providers.</li> <li>• Discover new vulnerabilities in minutes with a query language that makes it easy to build custom rules.</li> <li>• In one view, correlate risk due to misconfigurations and threats data from third-party findings.</li> <li>• Streamline investigations by exporting security findings to other Security Operations Center (SOC) tools.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <p><b>Security Posture Management</b></p> <ul style="list-style-type: none"> <li>• Prevent unauthorized access to data and cloud accounts with real-time visibility into misconfigurations and threats.</li> <li>• Prioritize security findings based on intelligent detection and risk scoring.</li> <li>• Understand security findings with visual context that includes relationships, risk score, metadata, and activity logs.</li> <li>• Quickly resolve risky findings by alerting service owners, automating remediation, and suppressing false positives.</li> </ul>     | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |
| <p><b>DevSecOps</b></p> <ul style="list-style-type: none"> <li>• Shift-left security to proactively detect misconfigurations early in the CI/CD pipeline.</li> <li>• Automatically prevent risky misconfiguration mistakes with security and compliance guardrails.</li> <li>• Increase collaboration through flexible security interfaces for IT, DevOps, engineering, and security teams.</li> <li>• Drive business and IT outcomes by building additional integrations with DevOps, IT, and security tools using rich Application Programming Interfaces (APIs).</li> </ul>   | <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> <p>Yes / No</p> |



### Licensing and Proactive Support

Recent events have reinforced the importance of choosing solutions that will flex and stretch to meet evolving needs as you grow or migrate workloads between on-premises and the cloud. You need to be able to proactively address issues before they impact business performance to increase team productivity and the overall reliability of your environments.

| Needed Capabilities                                                                                                                                                                                                       | Priority                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <ul style="list-style-type: none"> <li>• Proactive support to identify issues before they occur.</li> <li>• Flexibility to choose deployment of on-premises or SaaS, or a combination of both, in one license.</li> </ul> | <p>Yes / No</p> <p>Yes / No</p> |

## 5 Prepare Questions for Vendors

To ensure you are comparing solutions effectively, establish a list of questions to ask all vendors delivering multi-cloud management across all your cloud environments, whether private, hybrid, or multiple public clouds. These [sample questions can help jump-start your efforts](#).



### To start, always ask these three basic questions:

- Can you provide three (3) publicly referenceable customers using your solution with links to case studies?
- Who are your top three (3) competitors and how do you differentiate from them?
- Describe your company's profitability and financial position?



### VMware Professional Services Can Help

[Learn more](#) about VMware professional services for your cloud project.

### Delivery Automation



- Will the solution help me **provision new** IT infrastructure, and quickly?
- Does the solution **offer a modern** automation platform with the highest levels of app performance, uptime, and security?
- How does the solution help me **keep up with new** releases, upgrades, and emerging technologies?
- Does the solution **offer unified** self-service provisioning and a catalog for private, hybrid, and public cloud infrastructure?
- Can the solution help me with **cloud adoption paths**, disparate tools and platforms, the demands of new intelligent workloads, and cybersecurity threats?
- Can the solution **extend self-service** automation to multiple public clouds, including Amazon Web Services, Microsoft Azure and Google Cloud Platform?
- Does the solution **integrate into** developer workflow tools, such as code repositories, CI/CD?
- Does the solution **offer** an Infrastructure as Code (IaC) platform with **support** for infrastructure pipelining and iterative development?
- Can the solution **help with inconsistent** infrastructure experiences across public and private clouds?
- Does the solution help me automate Kubernetes constructs?
- Can the solution **automate** Kubernetes cluster and namespace managements?
- Does the solution **provide integration** to common infrastructure and application resources? How does the solution **handle integration of third-party software**?

## Performance



- Does the solution **support** multiple public clouds, or just one? A hybrid of on-premises data centers and public clouds?
- What **specific capabilities** help us easily, and in an automated way, manage an environment with both on-premises data centers and public cloud deployments?
- How does the solution help us **manage and optimize** native cloud services?
- How does the solution **support and monitor** VMs and container-based workloads?
- Does the solution **provide comprehensive** data and policy-based control across the entire infrastructure, wherever we choose to run our workloads?
- How does the solution **make it easier and faster** to select cloud services, migrate workloads from on-premises to clouds, and track usage?
- Can the solution **proactively detect** performance issues before they impact my end users?
- What does the solution **include** that goes beyond reacting and manual troubleshooting?
- Does the solution **use advanced analytics** with AI and predictive analytics intelligence?
- Does the solution **support rightsizing** for both Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS)?
- Does the solution **let you create** custom scoring mechanisms to alter rightsizing recommendations?
- How does the solution **integrate** with our other SDDC components (e.g., virtual storage, networking, etc.)?
- Can we use the solution to **optimize** observable conditions against business key performance indicators (KPIs)?
- Can the solution **correlate events and discover** root-cause analysis easily and beyond a static understanding of relationships?
- Are reports and dashboards **customizable**?

## Cost



- Can the solution **support** our business as it changes, such as addressing shrinking budgets while meeting faster time-to-market and **demands** from new lines of business?
- How does the solution help us **reduce costs**?
- How will the solution **allow us to expand** beyond CapEX vs. OpEx?
- How does the solution help **ensure** we aren't needlessly wasting money on infrastructure, guessing, over-provisioning, or counting on legacy planning processes to meet SLAs and keep costs down?
- Does the solution have **capabilities to forecast** growth needs based on current usage to proactively have capacity available?
- Does the solution **provide budget** alerting and forecasting with the ability to **monitor budget** and **create** forecast projections?
- Can the solution help me with reservation management by **managing** Reserved Instance (RI) purchases and recommend modifications?
- Can the solution **provide insight** into cloud consumption? Is it able to **allocate** cost to a specific group or individual?
- Does the solution **compare costs** of private, hybrid, and public clouds?
- Is the solution capable of **providing detailed** costing reports?

## Security



- Does the solution **secure** both traditional (VMs) as well as cloud native application (container, K8s, and serverless) workloads?
- Does the solution provide **comprehensive support** for securing IaaS & PaaS services we use across different public clouds?
- How effective is the solution in **monitoring** ephemeral cloud resources?
- What is the mean time to **detect and remediate** a security violation?
- Does the solution have the **ability to create** policies based on custom criteria?
- Does the solution have the **ability to execute** actions automatically? Can authorizers be configured to approve actions?
- Can the policies be used to **identify** anomalies (cost spikes, missing tags, etc.)?
- How effective is the solution in helping us **prioritize** security alerts and reduce false positives?
- What tools does the solution provide to **understand** security context and investigate findings?
- How easy it is to **operationalize** the security workflows necessary to drive collaboration between security, operations, and developer teams?
- Will the solution scale seamlessly to **support** our anticipated cloud growth?
- Can the solution **build and enforce** compliance standards across our cloud environments?
- Can the solution **demonstrate** compliance with security regulations, laws and legislation, as applicable (e.g. SOX, HIPAA, GDPR, etc.)?
- Can the tool **support** 3rd party integrations? Are supported integrations available out-of-the-box or for an additional fee?
- What **functionality** is available via API? Provide a link to your API documentation.

## Service and Support



- How often do you **release** new or updated product enhancements? How are these communicated?
- Do you **provide** a dedicated account team for ongoing support?
- Is **proactive intelligence** included in this solution, or is it available at additional cost?
- Does this solution provide **support and management** integration, with proactive issue avoidance, troubleshooting and automated workflows in a unified experience?
- Does this solution **speed support** request time to resolution?

## Licensing



- Does the solution allow me to **migrate** to cloud at my own pace of adoption?
- Will this solution **re-use** existing tooling and minimize divestment?
- What **licensing options** are available?





### VMware Cloud Operating Model ([Blog](#))

A VMware Cloud Architect's blueprint for cloud service delivery.

#### People

- Consumers
- Stakeholders
- Service delivery teams

#### Process

- Delivery: IT operations
- Consumption: DevOps and agile

#### Technology

- Cloud platform
- Cloud management

## Drive Your Cloud Operating Model with VMware

No matter where your organization is on your cloud journey, a cloud operating model rolled out with a modern, comprehensive, multi-cloud management solution will bring **consistency to managing** all types of clouds and allow you to adapt, respond, and innovate on the fly.

You can **build VMware Clouds and unify multiple clouds**, consistently managing and maintaining any cloud, infrastructure, and application on-premises or as a service with one VMware solution and license.

Only organization 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.

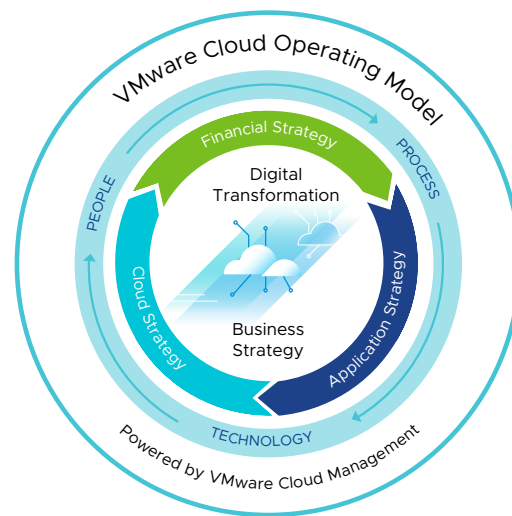


See the [Cloud Operating Model](#) strategy discussed by a VMware executive



#### Build VMware clouds

Transform IT Ops  
Cloud experience out-of-the-box



#### Unify multi-cloud

Align Cloud Ops  
Extensive capabilities for public clouds

[Learn More](#)



VMware Cloud Management features a common control plane to empower IT leaders and developers to unlock innovation, maximize efficiency, control cloud spend, and minimize risk when building a VMware Cloud or embracing public clouds, including:

**Build A VMware Cloud**

- VMware Cloud Foundation
- VMware Cloud™ on AWS
- Microsoft Azure VMware Solution
- Google Cloud VMware Engine
- Oracle Cloud VMware Solution
- 200+ VMware Cloud Provider Program partners offering VMware Cloud Verified services on the same VMware platform

**Embrace Public Cloud**

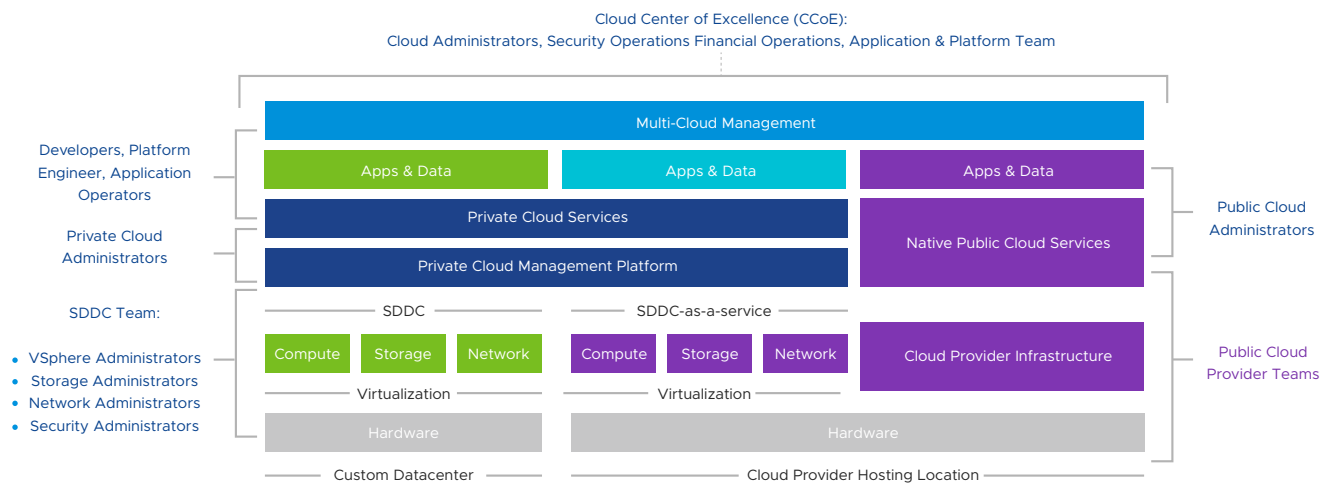
- Amazon Web Services
- Microsoft Azure
- Google Cloud Platform
- Oracle Cloud
- IBM Cloud

## A Common Control Plane 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 common control plane. What that ensures there's a **unified understanding** of every app and every system, and there's **security and intelligence** built-in to safeguard data and connect insights.

With a common control plane, 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, one management solution with a common control plane provides visibility, remediation, planning, optimization, automation, security, and governance **to properly manage and operate systems and apps** across multi-cloud environments.



## Discover Multi-Cloud Management from VMware

It takes effective multi-cloud management to optimize and sustain a competitive advantage.

That's why your organization needs a solution that makes multi-cloud complexity invisible through consistent operations from a unified control plane, which provides automated delivery, performance, cost, and security. With a prescriptive approach to implementing a control plane, a Cloud Operating Model can help you [build a VMware Cloud or unify multiple public clouds](#).

VMware Cloud Management is available on-premises or as a service (SaaS) with the vRealize Cloud Universal licensing model that gives you the [flexibility to combine](#) both on-premises and SaaS subscription under one license for [budget predictability and flexibility](#).

Be sure to ask about VMware Cloud Management when you're evaluating multi-cloud management solutions to help you [reduce your cloud complexity](#).



### Start Building a Business Case

Calculate your estimated return on investment with the vRealize Cloud Universal ROI tool and get a free [Total Cost of Ownership](#) comparison report in minutes.

[Learn More](#)