Spotlight

VMware Cloud Foundation Automation Accelerates Modernization Across Infrastructure, Applications, And Security

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Broadcom commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying VMware Cloud Foundation Automation (formerly called VMWare Aria Automation).[1] This abstract will focus on how organizations can use VMware Cloud Foundation Automation to modernize their infrastructure, applications, and security, and the value the solution delivers to their IT teams and internal customers.

For this abstract, Forrester conducted interviews with seven representatives from organizations using VMware Cloud Foundation Automation:

- Cloud and system administrator at an oil and gas organization that operates in Africa.
- IT architect at a government organization that operates in Europe.
- IT executive director at an education organization that operates in North America.
- Principal engineer at a media organization that operates in North America.
- DevOps cloud engineering manager at an insurance organization that operates in North America.
- Infrastructure lead at a financial services organization that operates in North America.
- Senior director of engineering at an insurance organization that operates globally.

As a component of VMware Cloud Foundation, VMware Cloud Foundation Automation is a cloud infrastructure automation solution that delivers a self-service private cloud. The solution empowers users with self-service consumption of Kubernetes and modernized cloud infrastructure-as-a-service (IaaS) capabilities, allowing organizations to harness the power of a private cloud-native ecosystem. VMware Cloud Foundation Automation also supports organizations that are looking to new technologies (e.g., Kubernetes, open-source software, multiple clouds) and different operating models and practices (e.g., DevOps, platform engineering).

The interviewees reported that VMware Cloud Foundation solutions provide their organizations with a comprehensive automation platform to manage private cloud infrastructure, modern applications, and security across diverse environments. This adoption allowed IT teams to standardize deployments, reduce manual errors, accelerate provisioning, and streamline network infrastructure, which provided developers and internal customers with faster, more reliable access to the services they need.

Interviewees highlighted that VMware Cloud Foundation Automation played a pivotal role in enabling self-service infrastructure, streamlining operational workflows, and supporting security and compliance initiatives.

Moreover, they said the solution's capabilities directly supported their organizations' objectives across three key modernization use cases:

- **Infrastructure modernization:** Accelerating private cloud deployment; optimizing infrastructure and operations; and extending the data center to edge, public, and sovereign clouds.
- **Application modernization:** Enabling self-service infrastructure and cloud services for application teams while improving the build, run, and management of Kubernetes, modern applications, and private AI workloads.
- **Security modernization:** Strengthening compliance, hardening infrastructure, bolstering lateral security and intrusion detection, and accelerating recovery from ransomware or other disasters.

The interviewees explained that by enabling self-service, automation, and centralized governance, VMware Cloud Foundation Automation helps their organizations accelerate innovation, reduce operational risk, and improve efficiency across infrastructure, application, and security modernization initiatives.

Investment Drivers For Infrastructure, Application, And Security Modernization

Before adopting VMware Cloud Foundation Automation, the interviewees' organizations struggled with several challenges across the three use cases:

Infrastructure modernization. Interviewees said their organizations faced significant manual effort in managing virtual machines and workloads, which slowed provisioning and limited agility.

- **Manual VM deployment and configuration.** Engineers had to manually provision virtual machines (VMs), configure networking, and decommission old VMs. The principal engineer from the media industry explained: "Previously, the entire deployment process would usually take from 2 to 3 hours to a full day. VMware Cloud Foundation Automation has streamlined that process to approximately 15 minutes, [and] we can now do full decommissioning."

  The senior director of engineering at an insurance organization explained: "Provisioning was our biggest issue. Each time we wanted to do it, we'd have to get a PO (purchase order), put it into a project, find a resource to go do it, test it out, and then finally deploy it. It could take months to do that effectively. Now it only takes minutes, which is great, and then we can scale up or scale down as needed."
- **Inefficient scaling and resource provisioning.** Deploying new workloads consumed significant labor hours, which created bottlenecks in application rollouts and delayed operational responsiveness. VM deployments often required repeated manual oversight, which increased the risk of errors and impacted service availability. The IT executive director in the education industry noted how their organization's prior physical computing environments faced a large amount of overhead because they required highly manual management processes. They said, "The fixed number of machines was one thing, but if we [were to] grow the footprint, our management was going to increase by [two headcount for every 30 machines]."

Application modernization. Developers experienced delays due to limited self-service infrastructure and inconsistent processes.

- **Limited self-service capabilities for developers.** Interviewees said that in their organizations' prior environments, developers had to rely on IT to manually fulfill VM requests, configure networking, and create deployment templates. These processes were inconsistent across teams and environments, and that often led to misconfigurations, errors, and rework. The manual nature of these tasks slowed application delivery, introduced operational risk, and constrained developer productivity, which ultimately limited the organizations' ability to scale infrastructure or accelerate innovation
- **Delays in application deployment.** Developers wasted valuable time waiting for infrastructure provisioning, which impacted time to value for modern applications, Kubernetes workloads, and private AI projects. Interviewees emphasized that these delays hindered developers' ability to quickly innovate and iterate on application development. The DevOps cloud engineering manager in insurance said: "[Before using VMware Cloud Foundation Automation], our application and engineering teams had to rely on a single team to manually provision infrastructure, which created dependencies and delays. Now, with self-service access to Kubernetes, CI/CD (continuous integration and continuous delivery) pipelines, and the ability to select the right compute and storage, they have the flexibility to pick and choose what they need based on their use case. They can deploy and be operational in no time."

Security modernization. Interviewees said their organizations struggled to maintain compliance and manually enforce security policies.

- **Manual compliance and governance.** Role-based access, patching, and domain name system (DNS) enforcement required hands-on effort, and engineers had to track configuration compliance individually, which increased the likelihood of errors. The IT architect in government explained that in their organization's prior environment, there was a significant workload associated with correcting manual errors: "With automation, we don't have human mistakes. That's the major difference. … You don't have to troubleshoot what is wrong afterwards."
- **Fragmented visibility and troubleshooting.** IT teams relied on multiple vendors and siloed platforms, which made it cumbersome to identify misconfigurations or potential security gaps. Infrastructure, network, and security teams struggled to collaborate efficiently, leading to delayed issue resolution and higher operational risk. The cloud and system administrator in the oil and gas industry explained that this was a key reason for their organization's investment in VMware Cloud Foundation Automation: "It [allows] us to respond to the requests faster and more efficiently with better communication between the teams because when we are all using the same platform, our communication is better."

> *"Before, anytime you wanted a new VM, you had to fill out a ticket ... and then it would come to my team, and I would vet it. So, a lot of that delay came from me just vetting tickets for wrong information. Now, it's all built-in automation."*
>
> **Principal engineer, media**

VMware Cloud Foundation Features

The interviewees' organizations selected VMware Cloud Foundation Automation for its ability to:

- Optimize technology management and associated costs.
- Stabilize and improve system availability.
- Improve the ability to scale while eliminating manual processes.
- Streamline and accelerate operational support.
- Serve as a trusted partner in governing technology systems.

Key Results For Infrastructure, Application, And Security Modernization With VMware Cloud Foundation Automation

The results of the investment for the interviewees' organizations include:

- **Accelerating infrastructure modernization and VM deployment.** Interviewees said VMware Cloud Foundation Automation significantly accelerated provisioning and standardized VM deployments, which ultimately reduced manual effort and operational errors. They reported the following outcomes:
- **Faster and more reliable VM provisioning.** Interviewees shared that automated deployment of VMs and templates reduced deployment time from several hours or days to just minutes. The IT architect in government said their organization scaled its provisioning capacity as a result of these time savings: "We can provision 50 systems today. Three years ago, it was one or two systems per day. It's a huge difference when you put automation in place because everything is standardized. That means [customers] can choose things from the service catalog and they are automatically provisioned in our system."

50%

Reduction in time to deploy new VMs

- **Labor savings and operational efficiency.** Automating repetitive tasks such as IP creation, VM decommissioning, and network configuration allowed teams to streamline VM provisioning and reduce manual effort. Developers and IT staff gained the ability to leverage self-service catalogs to deploy and manage VMs directly, which increased speed and reliability while freeing capacity for higher-value modernization initiatives. The cloud and system administrator in oil and gas said: "[My organization uses it to] configure IT services. Authentication naming is done through the portal. We enforce a naming policy, so you cannot name your services as you like. ... The DNS is preconfigured in the images, and it's configured with the main active directory of the company, so you cannot create a VM and leave it out of domain. ... There is [also] a monitoring integration, [so] the final users who provision the services are able to monitor their own services."

  The infrastructure lead at the financial services organization highlighted: "Operational overhead was a big concern [before using VMware Cloud Foundation Automation] because things were scattered, which made it difficult to have a single view and maintain business continuity. [Having] this centralized and automated infrastructure has made us very agile. We know exactly where the capacities for every data center that we have are and what they cost to keep things optimized."

7,900 hours

Avoided unplanned FTE downtime

- **Error reduction and reliability.** By standardizing templates, automating workflows, and eliminating manual intervention in provisioning, decommissioning, and configuration processes, interviewees' organizations were able to significantly reduce misconfigurations, minimize human error, and increase overall infrastructure reliability. These improvements not only reduced operational risk, but they also freed IT teams to focus on higher-value tasks and strategic initiatives. The principal engineer in media noted: "That [full VM decommissioning] was surprising because we ... thought there was going to be some type of manual intervention. ... So, when all that worked, we were pretty flabbergasted."

Enabling application modernization through self-service and workflow automation. Interviewees said VMware Cloud Foundation Automation allowed their organizations' IT teams to provide developers with self-service access to infrastructure and faster application deployment. They reported the following outcomes:

- **Self-service catalog.** Interviewees said that by leveraging VMware Cloud Foundation Automation, their organizations automated infrastructure workflows and standardized deployment processes, which allowed developers to provision VMs, Kubernetes clusters, and storage through a self-service catalog. This eliminated bottlenecks and reduced reliance on IT for routine tasks. As a result, internal teams experienced fewer delays, minimized errors, and accelerated application rollout and innovation cycles. The principal engineer in media explained: "The great thing is that it doesn't involve me. It doesn't involve my team. It doesn't involve anybody. Now, almost everything is automated. After we defined how the final landscape looks like for our customers, we have almost everything automated because we are offering them standardized services."

  The DevOps cloud engineering manager in insurance shared: "We've seen a reduction in the number of service requests because provisioning has become much easier. There are fewer steps involved because we have more automation in place, which gives developers and engineers a better chance to build more products and services much sooner at scale. This also gives us the flexibility of scaling out the infrastructure in a much easier way [by leveraging] the benefits of different types of VMware options and expanding the infrastructure when needed."

  The infrastructure lead at the financial services organization explained: "We've seen a 90% efficiency improvement for our developers. We were working in a non-agile, slow environment because our infrastructure was not robust. It was a legacy infrastructure and everything was segregated, so our teams were experiencing a lot of delays due to clustering issues and CPU storage issues, especially during times when the business was growing. It's become much less time-consuming [with VMware Cloud Foundation Automation]."

60%

Reduction in infrastructure-related help desk tickets

- **Faster application delivery.** Interviewees explained that VMware Cloud Foundation Automation standardized infrastructure workflows and enabled self-service provisioning to allow developers to request VMs, Kubernetes clusters, and storage without waiting for IT to manually fulfill requests. They said this automation reduced bottlenecks, minimized errors, and accelerated time to market for new applications. The IT architect in government highlighted: "Because we are very fast in provisioning our services, the developers have more flexibility to run their service on the infrastructure. ... That means that the deployment of applications is faster and more flexible in combination with VMware Cloud Foundation Automation."

  The infrastructure leader in financial services said: "We are currently building between eight to 10 apps right now because we now have that scalability that we previously didn't. We can speed up the app building without worrying about whether that infrastructure is going to have the capacity to support it and ensure it's rigorous, robust, and compliant."
- **Integration with modern workloads.** Interviewees' organizations leveraged VMware Cloud Foundation Automation to deploy Kubernetes clusters and modern applications more reliably, while standardizing management across multiple operating systems and streamlining operational workflows. The principal engineer in the media industry shared: "By going to VMware Cloud Foundation Automation, we are going to be able to handle more versions of operating systems. ... At the end of the day, being able to onboard and maintain more versions is going to help us between application teams and vendor support on more specialized systems or more systems [in general, along with] simplifying and maintaining additional titles. ... We have one standardized system with our VMware Cloud Foundation Automation orchestration behind it that we put all of our scripts into."

Strengthening security modernization and compliance. Interviewees said VMware Cloud Foundation Automation addressed challenges related to governance, security, and compliance, which reduced manual oversight and operational risk. They reported

the following outcomes:

- **Automated compliance and patching.** Interviewees reported that role-based access controls, license enforcement, and automated patching reduced human error and improved security postures. The principal engineer in media explained: "It's allowed us to enforce standards. Every group has access to its VMs based off of its RBAC group policy. … It can set [everything according to] the group policy roles. With that, we have complete security compliance when it's done deploying. It's joined to the domain. It's joined to patching. It's patched. It's joined to our management structure … and it's on the right subnet in the right IP space in each one of those data centers."

  The DevOps cloud engineering manager in insurance shared: "We've seen a 30% efficiency increase in patching workflows for our critical environment. In the past, patching took a lot of time and effort. But now we can schedule patches on demand within a defined window and avoid outages. With VMware Cloud Foundation Automation, the process is centralized and streamlined. We follow a consistent cadence that's helped us significantly reduce manual overhead."
- **Centralized visibility and troubleshooting.** Interviewees said VMware Cloud Foundation Automation consolidated infrastructure management across multiple vendors and silos, which made it easier to identify misconfigurations and enforce policies. The cloud and system administrator in the oil and gas industry pointed to the large number of resources required to troubleshoot: "When you had a problem, you needed to engage many people, you had different vendors, and so on. But when you have the same platform from the same vendor with everything virtualized, you have the compute virtualized, the network, and the security. … We all work on the same platform. We all see the changes [if] somebody changed something [without telling you]."
- **Reduced operational risk.** Interviewees explained that by automating critical infrastructure tasks (e.g., DNS configuration, network provisioning, access control policy enforcement), their organizations minimized human error that previously led to service disruptions or security vulnerabilities. This automation not only improved system stability and compliance, but it also allowed IT teams to focus on proactive monitoring, optimization, and strategic initiatives rather than reactive firefighting. The IT architect in government explained: "Over the past five years, I would like to say our system has had less than 2 hours of outages. … And when we migrated VMware Cloud Foundation Automation onto our system, we experienced much better performance. There are no outages, and everything is planned and structured."

  The DevOps cloud engineering manager in insurance explained: "We've seen much faster response times to outages, spikes, and malicious activities. [VMware Cloud Foundation Automation] has made us better prepared to fix any [interruptions] as soon as possible."

73%

Reduction in unplanned downtime attributable to VMware Cloud Foundation Automation

TOTAL ECONOMIC IMPACT ANALYSIS

For more information, download the full study:

"The Total Economic Impact™ Of VMware Cloud Foundation Automation," a commissioned study conducted by Forrester Consulting on behalf of Broadcom, July 2024.

Study Findings

While the value story above is based on seven interviews, Forrester interviewed four representatives at organizations with experience using VMware Cloud Foundation Automation and combined the results into a three-year financial analysis for a composite organization. Risk-adjusted present value (PV) quantified benefits for the composite organization include:

- $2.4M benefits PV
- 73% improvement in network availability
- 60% increase in deployment capacity
- 50% reduction in time to deploy new VMs

$2.4M

Benefits present value (BPV)

50%

Reduction in time to deploy new VMs

Appendixes

APPENDIX A

Endnotes

[1] Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists solution providers in communicating their value proposition to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of business and technology initiatives to both senior management and other key stakeholders.

Disclosures

Readers should be aware of the following:

This study is commissioned by Broadcom and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in VMware Cloud Foundation Automation.

Broadcom reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Broadcom provided the customer names for the interviews but did not participate in the interviews.