

Top 5 Challenges of Building a Modern Infrastructure

And how to overcome them with VMware Cloud Foundation

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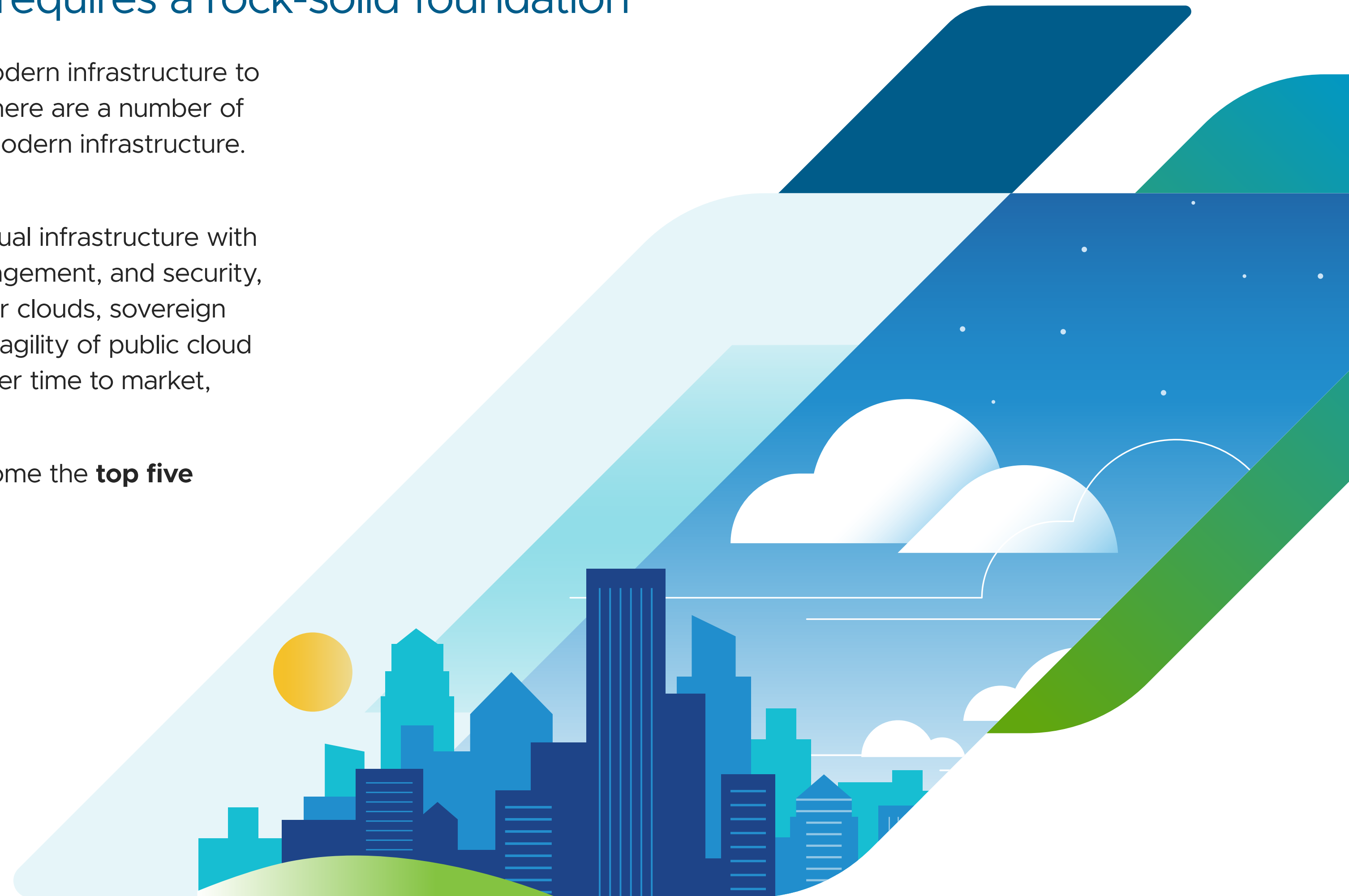


Introduction: A modern infrastructure requires a rock-solid foundation

In today's rapidly evolving digital world, organizations rely on modern infrastructure to stay competitive and deliver accelerated innovation. However, there are a number of significant challenges when it comes to successfully building a modern infrastructure. That's where VMware Cloud Foundation™ (VCF) comes in.

VCF is a comprehensive private-cloud platform that delivers virtual infrastructure with integrated, enterprise-class compute, networking, storage, management, and security, spanning across on-premises, private cloud, public cloud, partner clouds, sovereign clouds, edge, and colocation facilities. It combines the scale and agility of public cloud with the security and performance of private cloud, enabling faster time to market, increased innovation, and lower TCO.

In the following pages, we'll take a look at how VCF helps overcome the **top five challenges of building a modern infrastructure**.



Legacy system integration

Integrating your siloed infrastructure components can be a complex, time-consuming, and costly process. On top of that, building a new modern infrastructure that seamlessly integrates with your existing systems adds yet another layer of complexity.

What your organization needs is a flexible infrastructure that supports traditional as well as modern workloads.

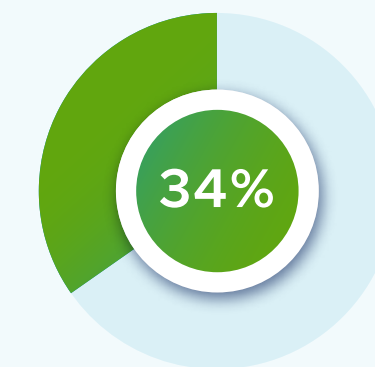


of infrastructure and operations staff that currently work in siloed infrastructure groups will move to infrastructure platform teams by 2028.¹

How VMware Cloud Foundation solves it

VCF delivers comprehensive, integrated, enterprise-class compute, networking, storage, management, and security all packaged together, enabling you to complete your private-cloud infrastructure deployment within hours instead of months or years.

What's more, VCF provides an AI-ready infrastructure with integrated Kubernetes runtime, so you can deploy and run traditional VMs as well as modern AI/ML and containerized workloads on a single platform.



lower infrastructure costs were realized by customers with VCF compared to their legacy infrastructure.²

1. Gartner, Inc. "Gartner Predicts 2024: Mind the Gap Between Infrastructure and Infrastructure Platforms." Jonathan Forest, Dennis Smith, Philip Dawson, Jeffrey Hewitt, et al, 17 October 2023.

2. IDC. IDC White Paper, sponsored by VMware by Broadcom. "The Business Value of VMware Cloud Foundation", doc #US52312224. August 2024.

Lack of consistency, scalability, and flexibility with existing infrastructure

Having inconsistent infrastructure across different endpoints—data centers, colocation facilities, public cloud and edge locations—complicates management, integration, and automation across environments. And when your business needs change, legacy infrastructure isn't easily scalable to adapt to your new requirements.

Plus, the vendor lock-in associated with your infrastructure limits flexibility and innovation while creating interoperability challenges, leading to rigid and complex IT environments.



How VMware Cloud Foundation solves it

VCF delivers a consistent, scalable private-cloud platform that can be extended across on-premises, public clouds, partner clouds, sovereign clouds, edge and colocation facilities. And with the built-in availability of VCF Operations HCX, it enables seamless workload migration across any of these endpoints.

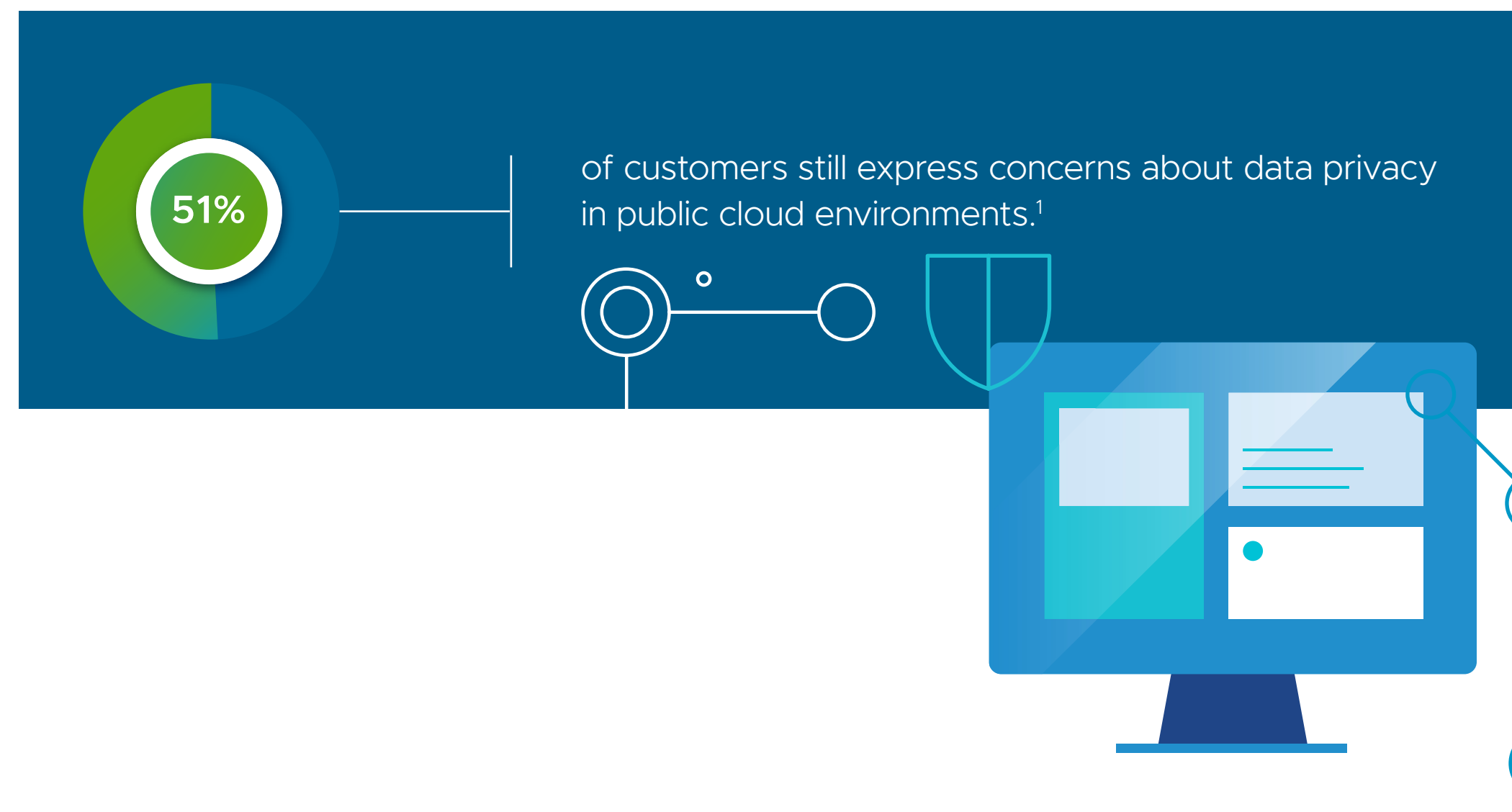
“VMware Cloud Foundation has transformed our business in an impressive way, supporting 2,600 transactions per second. In fact, we can support up to 10,000 transactions per second without sacrificing system performance. This is because our team can scale our infrastructure as needed.”

Niwat Kanwaseth

Assistant Managing Director, Platform Ops Department, National ITMX Company.

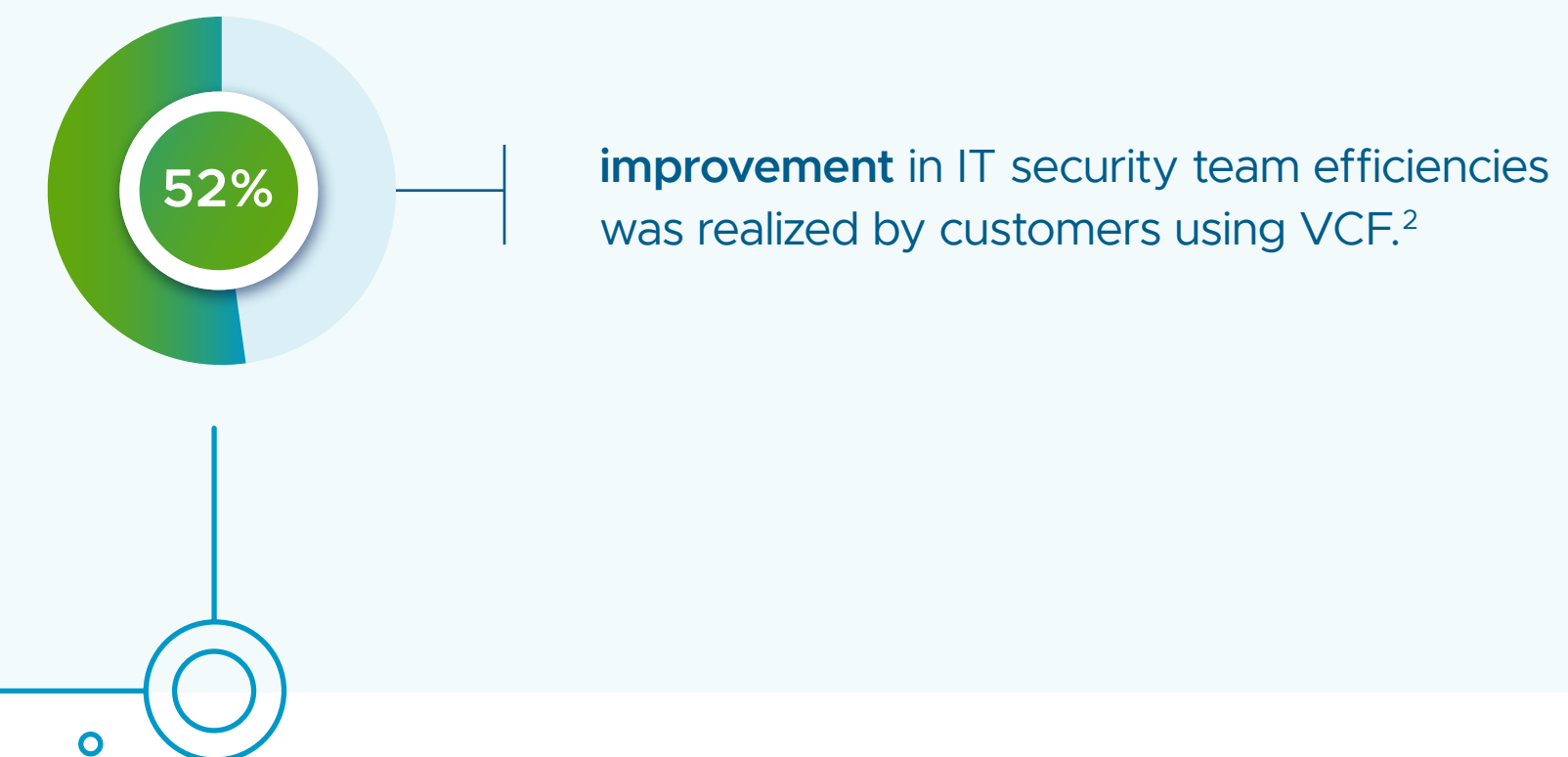
Security and compliance

In a modern infrastructure setup, managing consistent security policies and ensuring compliance with various regulations (GDPR, HIPAA, etc.) is easier said than done. Adopting security practices like data encryption and identity management while maintaining compliance in a distributed infrastructure can be exceedingly cumbersome and complicated.



How VMware Cloud Foundation solves it

VCF helps you protect your data and maintain compliance with advanced security features such as microsegmentation, data-at-rest and data-in-transit encryption, identity and access management (RBAC), data governance, constraints-based management, auditing and monitoring capabilities, advanced threat detection capabilities, and regulatory compliance enforcement.

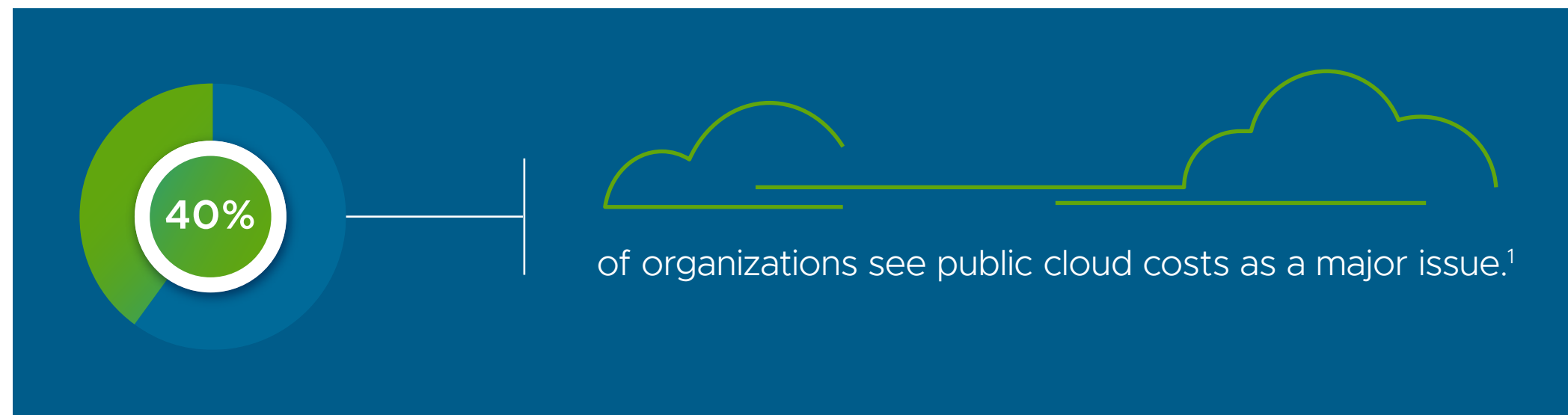


1. IDC FutureScape. "The Infrastructure and Cloud Impact 2024 Predictions." 2023.

2. IDC White Paper, sponsored by VMware by Broadcom. "The Business Value of VMware Cloud Foundation", doc #US52312224. August 2024.

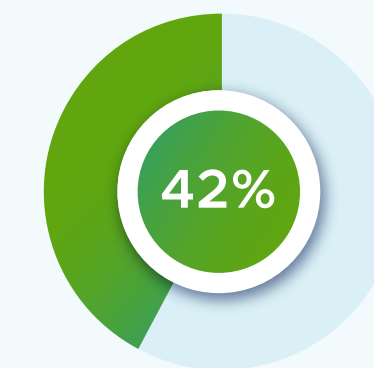
Cost management

With dynamically changing business needs, today's organizations often struggle to predict and optimize infrastructure costs. To keep expenses under control, you need to efficiently manage resources, avoid over-provisioning, and apply cost optimization practices—but this can be difficult to achieve. Hidden, unforeseen costs can quickly add up, impacting overall budget and ROI.



How VMware Cloud Foundation solves it

VCF helps reduce CapEx by enabling you to allocate more VMs per host, leading to fewer hosts and associated host networking hardware. Meanwhile, infrastructure automation and orchestration, automated operations, deployment and lifecycle management, sustainable infrastructure, and less hardware support costs help to significantly reduce OpEx.



lower 3-year cost of operations
was realized by VCF customers
versus legacy infrastructure.²

“VMware Cloud Foundation helps us optimize IT resources to reduce our carbon emissions. We’ve reduced our hardware footprint across computing, storage and networking, there is better sizing of IT environments from the outset, and we’re running the same number of applications on 10-times fewer servers.”

David Varusio

IT Cloud Project Manager, Orange France

1. IDC FutureScape. “The Infrastructure and Cloud Impact 2024 Predictions.” 2023.

2. IDC White Paper, sponsored by VMware by Broadcom. “The Business Value of VMware Cloud Foundation”, doc #US52312224. August 2024.

Skills gap

Deploying and maintaining a modern infrastructure demands expertise in new technologies such as cloud computing, containerization, automation and DevOps practices. Finding IT professionals with these specialized skills can be extremely difficult—organizations must either spend the time and money to identify and hire these experts, or train their existing workforce to acquire the necessary skills. Either way, it leads to higher costs and longer timelines.



How VMware Cloud Foundation solves it

VCF offers the same VMware environment across all your different endpoints, enabling you to leverage familiar and proven VMware skills, tools and processes. DevOps and platform teams can use familiar developer and automation tools across the entire IT infrastructure landscape. There's no need to invest in new skills or additional people—your organization can start taking advantage of private cloud capabilities immediately.

“From concept to deployment, VMware Cloud Foundation allowed us to get up and running with private AI in just a matter of days, giving us the agility we need to stay ahead.”

Michele Collauto

Senior Systems Engineer, US Senate Federal Credit Union

Start building your modern infrastructure today!

Ready to take advantage of the exceptional efficiency, scalability, security, and performance of VMware Cloud Foundation?

Check out these helpful resources to get started:

[VCF Website](#) [Datasheet](#) [Blogs](#)

[VCF Total Cost of Ownership](#)

[White paper](#) [Infographic](#)

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