# 12 Ways VCF Lowers Your TCO

Top VCF Capabilities Contributing to CAPEX and/or OPEX Savings



## VMware Cloud Foundation – The Private Cloud Platform

What Customers Can Achieve Today

564% 3-Year ROI with 10 Months Payback

34% Lower

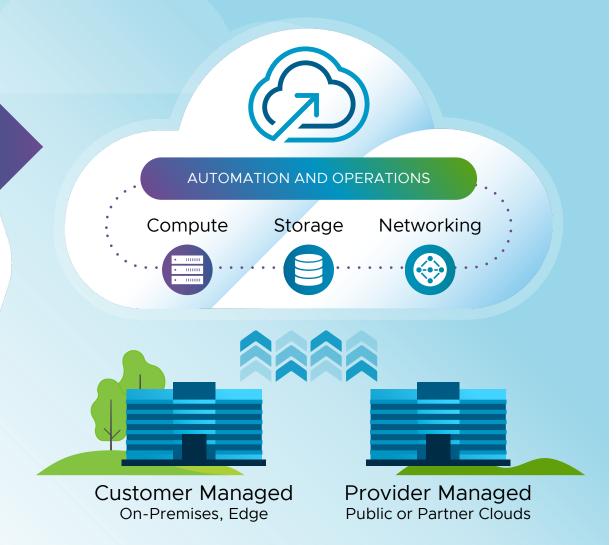
Infrastructure Costs

61% Faster

to Deploy new Workloads

66% Quicker

to Resolve Data Loss Incidents





# 12 Ways VCF Lowers Your TCO

Top VCF Private Cloud Capabilities Contributing to CAPEX and/or OPEX Savings



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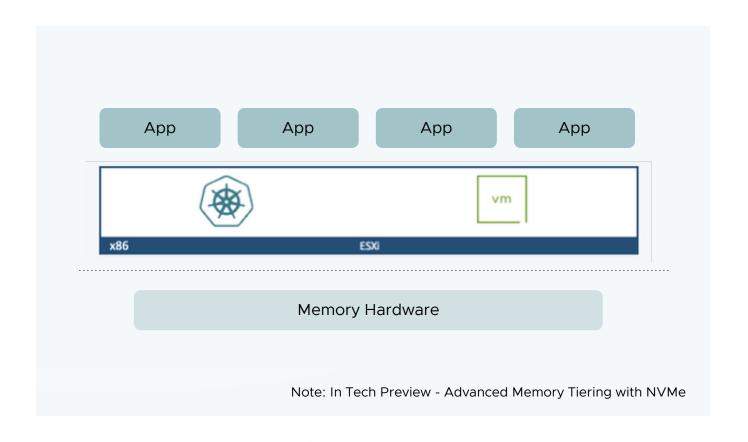
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# Advanced Memory Management and Scheduling, with DPM

Implements memory overcommitment, increasing memory footprint and workload capacity



#### Description

VCF delivers better resource management through its memory overcommitment and memory oversubscription features, for greater memory utilization and VM density without impacting performance. These capabilities are on by default, requiring no additional manual tuning. VCF optimizes power consumption by turning hosts on and off based on demand.

#### **TCO Savings**

CAPEX Savings. Supports higher VM density, allowing customer to run more workloads on a server than other offerings. This significantly reduces hardware costs and software expenses.

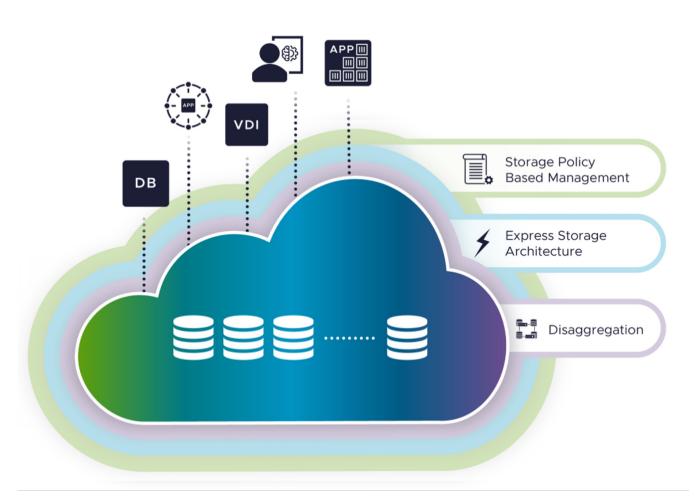
OPEX Savings. Lowers energy costs, and improves operational efficiency with automation, reducing admin time.





# Hyperconverged Storage

Reduces hardware costs, simplify operations to reduce storage TCO by 30%



#### Description

VCF utilizes hyperconverged storage that runs on any standard x86 server. By pooling SSDs into a shared datastore, it uses software to deliver enterprise-grade performance, scale and security. With VCF, easily manage storage with a high degree of automation via storage policies.

#### **TCO Savings**

**CAPEX Savings.** Up to 70% lower hardware and support costs.

**OPEX Savings.** Up to 76% less time spent by IT staff managing storage.

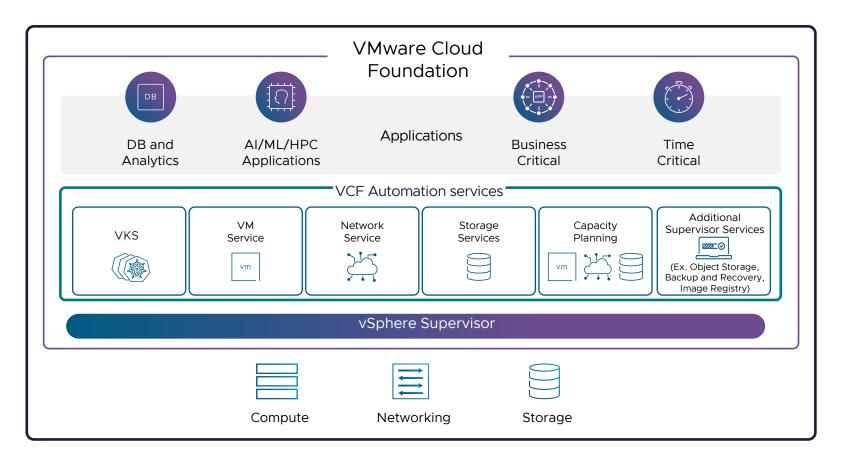
Combined, up to a 30% storage TCO savings over five years.





### Built-in Kubernetes Runtime

Self-service provisioning and management of VMs, Kubernetes clusters & laaS services



#### Description

VCF offers a unified management platform for both VMs and containers using a single API, streamlining customers' operations and reducing complexity. VCF Automation services deliver easy self-service access to Platform and DevOps teams to provision VMs, Kubernetes clusters and laaS services on the vSphere Supervisor.

#### TCO Savings

CAPEX Savings. Eliminates need for additional dedicated container management stack, due to built-in Kubernetes runtime, leading to hardware and software cost savings.

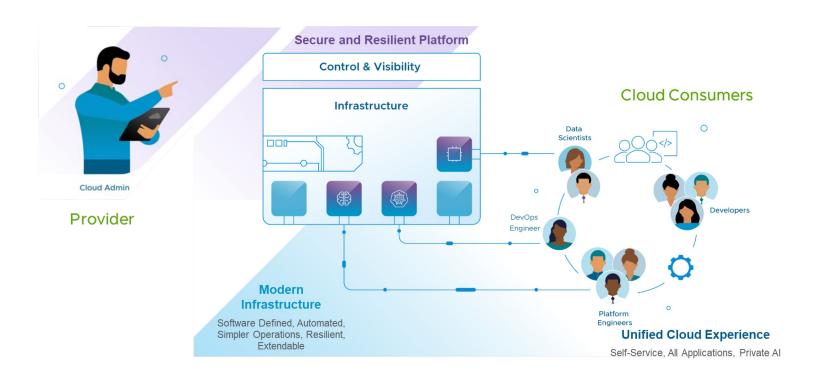
OPEX Savings. Increased productivity, faster time to deploy applications, and reduction in overall ongoing infrastructure management and maintenance costs.





# Modern laaS (Self-Service) Consumption Interface with Policy-based Governance and Service Catalogs

Reduces hardware and IT labor costs, while increasing efficiency and productivity



#### Description

VCF Automation provides a flexible consumption/control model w/ a choice of consumption methods: Self-Service Catalog and Self-Service laaS. Cloud Admins can use project-based policies, governance, and costing to manage resource access and utilization centrally.

#### **TCO Savings**

CAPEX Savings. Control consumption, prevent over provisioning of servers or storage, and reduce need for unnecessary, excess hardware purchases.

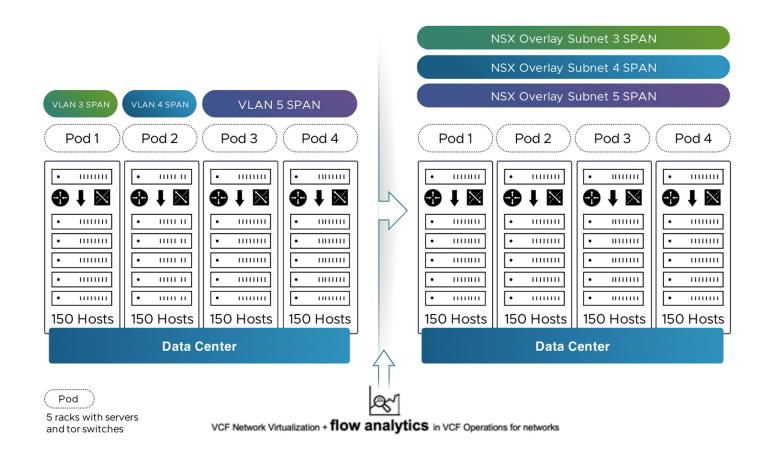
**OPEX Savings.** Reduce manual tasks and human intervention, enable IT to focus on more strategic initiatives vs. repetitive, time consuming tasks.





# Network Virtualization with Extended Network Span and Advanced Workload Mobility

Defrags your data center – with big network span, increases infrastructure density



#### Description

VCF Networking overcomes VLAN span limits that restrict workload mobility and server consolidation. Network virtualization in VCF uses Network Overlays to eliminate VLAN span limitations and enable workload mobility within/across data centers.

#### **TCO Benefits**

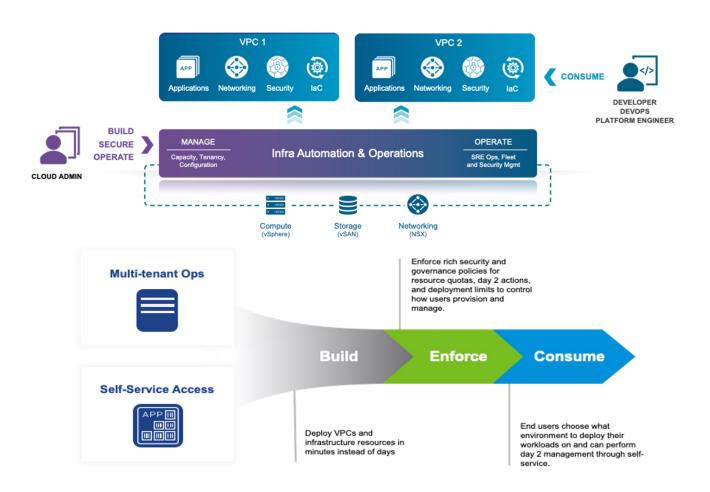
capex Savings. With VCF, the virtual network can span within/across entire data centers, enabling you to improve workload server utilization across application/ networking pods, achieving much greater data center consolidation, up to 70% better resource utilization.





# **VPC-driven Networking**

Boosts IT/Developer productivity by removing network provisioning & consumption bottlenecks



#### Description

VCF uses VPCs in private cloud to simplify multi-tenant network operations and consumption. VPCs speed up infrastructure provisioning by: a) removing the need to re-configure physical networks, b) providing built-in resource isolation, and c) enabling self-service access for app teams to consume network services.

#### **TCO Savings**

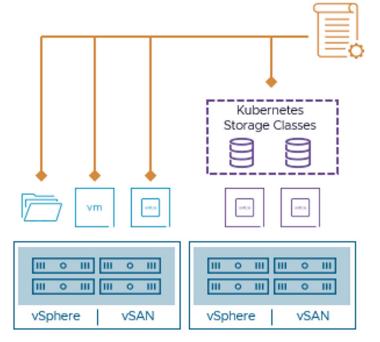
OPEX Savings. Reduces the time required to build and deploy network infrastructure for new and existing applications. Faster infrastructure and application provisioning greatly enhances IT and developer productivity.

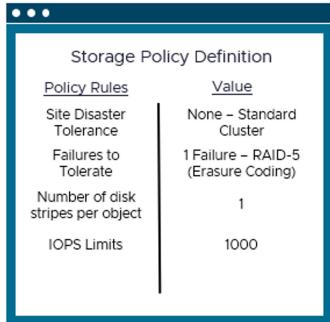




## Advanced Storage Management

Simplifies Storage Operations to Reduce Storage Management By up to 76%





#### Description

Reduce provisioning times with storage policy-based management; let the software do the work. Gain superior insights with intelligent diagnostics to reduce downtime. Simplify lifecycle management with a desired-state model.

#### **TCO Savings**

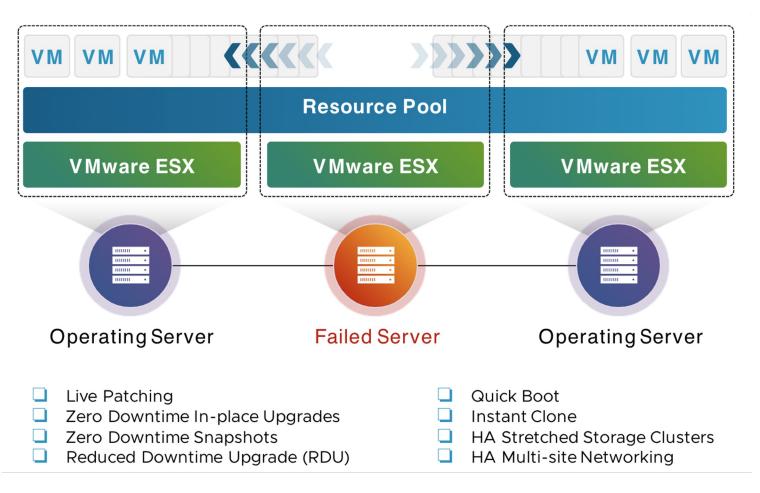
**OPEX Savings.** Reduce time to manage storage by up to 76% via simplified workflows and a high degree of automation.





# Advanced Application Resilience Management

Makes it easy to increase workload availability during planned and unplanned downtimes



#### Description

VCF has the industry-leading feature set to run non-disruptive maintenance, allowing for simplified, automated ways to add updates or fixes without minimal user interruptions. VCF innovations also extend to disaster and unplanned downtime avoidance with redundant, switchover capabilities across the cloud infrastructure.

#### **TCO Savings**

OPEX Savings. Saves IT staff time in performing planned cloud maintenance, often skipping time-consuming hardware initialization, also allowing for more control on when and how to do upgrades.

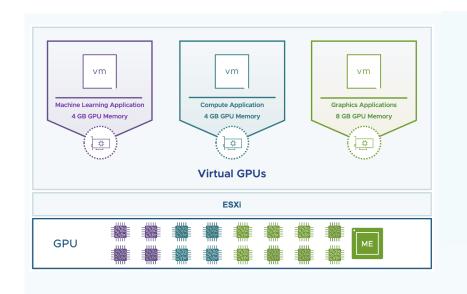
CAPEX Savings. Extends the life of current hardware, ensure memory efficiency, reduces necessary disk space, and increases VM density per host.





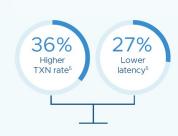
# Hardware Accelerator (GPU, DPU) Virtualization

Improves scalability and efficiency with modern heterogeneous compute infrastructure





Drive higher workload consolidation by utilizing saved cores, with similar or better performance.



Supercharged
performance by leveraging
freed CPU cores and better
cache locality to drive
more workload traffic,
while benefitting from
vMotion and DRS.

Optimizing use of GPU capacity to enhance ROI

Leveraging DPUs to improve consolidation and performance

#### Description

VCF supports not only vGPUs with different application profiles, but also of different sizes on the same physical GPU, maximizing utilization of expensive GPUs. Additionally, VCF supports dual-DPUs in a single host, enabling significant offload of infrastructure services to DPUs, as well as HA configurations.

#### **TCO Savings**

CAPEX Savings. Optimizes utilization of GPUs to reduce the cost of building and delivering new applications and services. Savings of 20% on CPU capacity by leveraging DPUs.

OPEX Savings. Increases operational efficiency through integrated lifecycle management of hardware accelerators for simplified infrastructure and workload management.





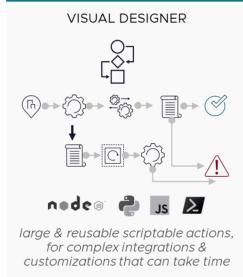
## Built-in End-to-End Automation and Orchestration

Reduces manual labor, optimizes infrastructure utilization, improves reliability (minimize errors)

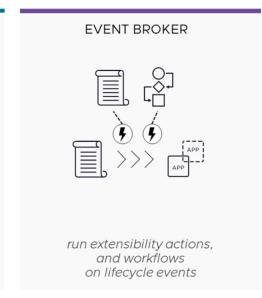
# Action-Based Extensibility (ABX)



# Orchestration Workflows



#### Event Subscription Service



#### Description

VCF Automation provides powerful orchestration and extensibility capabilities. Cloud Admins can design scalable workflows to automate simple to complex IT tasks/processes across both VMware and 3rd party applications, tools, and infrastructure.

#### **TCO Savings**

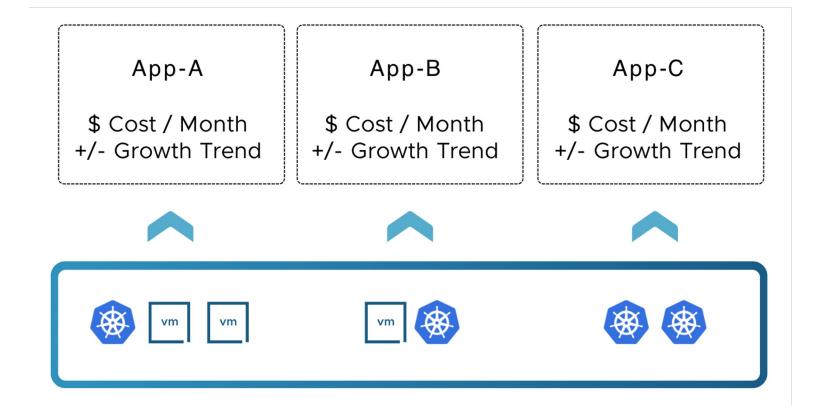
CAPEX Savings. Optimize infrastructure usage via (a) provisioning workloads to optimal destination and (b) eliminating "zombie" resources, making environments more efficient.

**OPEX Savings.** Minimize human errors and the associated costs of correcting them, decreasing both troubleshooting and downtime costs.



# Built-in Cost and Capacity Analytics

See how much an application costs and where to reclaim resources to optimize TCO



#### Description

VCF provides granular visibility into application costs to monitor cost trends, to right size resources (identify reclaimable resources and adjust resource allocations), and to enable showback (chargeback) to implement cost transparency.

#### **TCO Savings**

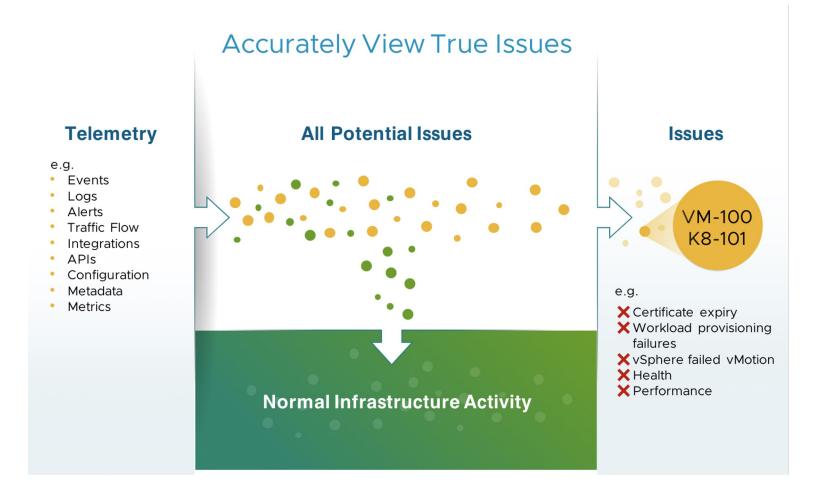
**CAPEX Saving.** Identify and reclaim idle resources to reallocate based on costs and actual usage.

**OPEX Savings**. Efficiency gains of 79% in chargeback modeling and 75% in report preparation.<sup>1</sup>



# Built-in Infrastructure Observability

Proactively solves issues faster to improve performance and reduce overall tool footprint



#### Description

VCF provides advanced operational observability across compute, networking, and storage infrastructure. Unified workflows across the entire cloud infrastructure enable better management, accelerating issue detection and and resolution with advanced dashboards.

#### **TCO Savings**

OPEX Savings. 20% Reduction in issue resolution time. Decreases the time required to detect and resolve issues by allowing quick root causes via diagnostics and traffic flow analytics.

**CAPEX Savings**. Reduces the need for additional monitoring and analytics tools.





