

HCLTech | Supercharging
Progress™

VelocITy-M

A Microsoft Hyper-V and
system center suite-based
private cloud solution



Introduction	3
The problem with traditional IT architectures	3
The solution: HCLTech Velocity-M powered by Microsoft Hyper-V and System Center.....	3
Key features of HCLTech Velocity-M.....	3
Technology overview.....	4
Microsoft Hyper-V: Virtualization at the core.....	4
Key features of Microsoft Hyper-V.....	4
Microsoft system center suite: Centralized management and automation.....	5
System Center Virtual Machine Manager (SCVMM).....	5
SCVMM key capabilities	5
System Center Operations Manager (SCOM).....	6
SCOM key capabilities	6
System Center Configuration Manager (SCCM)	6
SCCM key capabilities.....	6
System Center Data Protection Manager (DPM).....	7
DPM key capabilities	7
System Center Orchestrator (SCO)	7
SCO key capabilities	8
Software-defined infrastructure: Compute, storage and networking integration	8
Benefits of HCLTech Velocity-M private cloud.....	8
Use cases for HCLTech Velocity-M private cloud.....	9
Conclusion.....	9
Appendix	9
About the Author.....	10

Contents

Introduction

Organizations today are constantly seeking infrastructure solutions that provide agility, scalability and cost efficiency. With an increased demand for faster innovation, simplified IT operations, and improved security, businesses are looking for private cloud solutions that can handle modern workloads while reducing complexity.

HCLTech VelocITy-M, powered by Microsoft Hyper-V and the Microsoft System Center suite of products, delivers a comprehensive private cloud solution that addresses these needs. This whitepaper explores the architecture, features, and benefits of the HCLTech VelocITy-M private cloud offering, which enables organizations to build a scalable, secure, and easily managed cloud environment. By leveraging Microsoft's powerful hypervisor and management tools, HCLTech VelocITy-M is an ideal choice for businesses seeking to modernize their infrastructure and drive operational efficiency.

The problem with traditional IT architectures

Organizations with traditional, siloed IT architectures often face resource utilization, complexity, and scalability. Legacy systems are challenging to manage, requiring significant investment in hardware, software, and specialized skills to keep operations running smoothly. Additionally, scaling infrastructure to meet new demands often leads to inefficiencies and increased costs.



Some of the key challenges include:

Inefficiency in resource utilization

Traditional infrastructures often have underutilized resources due to separate computing, storage, and networking silos.

High operational costs

Maintaining separate systems for computing, storage, and networking increases capital expenditure (CAPEX) and operational expenditure (OPEX).

Complex management

Managing multiple tools and processes across a fragmented infrastructure increases the risk of human error, increases downtime, and delays response times.

To address these challenges, many enterprises are turning to hyper-converged and private cloud infrastructures that consolidate resources and simplify management.

The solution: HCLTech VelocITy-M powered by Microsoft Hyper-V and system center

The HCLTech VelocITy-M private cloud solution provides an integrated platform that combines computing, storage, networking, and management into a unified system. Leveraging Microsoft Hyper-V as the virtualization layer and the

Microsoft System Center suite for management, HCLTech VelocITy-M enables organizations to reduce infrastructure complexity, lower costs, and improve performance.

Key features of HCLTech VelocITy-M



Virtualization with Microsoft Hyper-V:

Hyper-V provides a scalable and flexible hypervisor, enabling businesses to consolidate server workloads, reduce hardware requirements, and improve resource utilization.



Unified management with system center:

The System Center suite offers centralized management tools for monitoring, automating, and securing the entire private cloud infrastructure, including virtual machines, storage, and networks.



Data protection and Disaster recovery:

HCLTech VelocITy-M includes built-in backup and disaster recovery services through System Center Data Protection Manager (DPM), ensuring that data is protected and recoverable in case of failure.



Automation and orchestration:

The System Center Orchestrator automates routine tasks, such as provisioning, patch management, and scaling, reducing manual intervention and increasing operational efficiency.

Technology overview

The HCLTech **VelocTy-M** solution leverages the comprehensive virtualization and management capabilities of **Microsoft Hyper-V** and the **Microsoft System Center Suite** to create a fully integrated, scalable, and efficient private cloud environment. This section provides a detailed look into the core technologies that power HCLTech and how they work together to deliver a robust and flexible cloud infrastructure. By combining Hyper-V's hypervisor with the extensive management tools in System Center, HCLTech provides the building blocks for enterprises to virtualize their infrastructure, automate tasks, and ensure seamless disaster recovery.



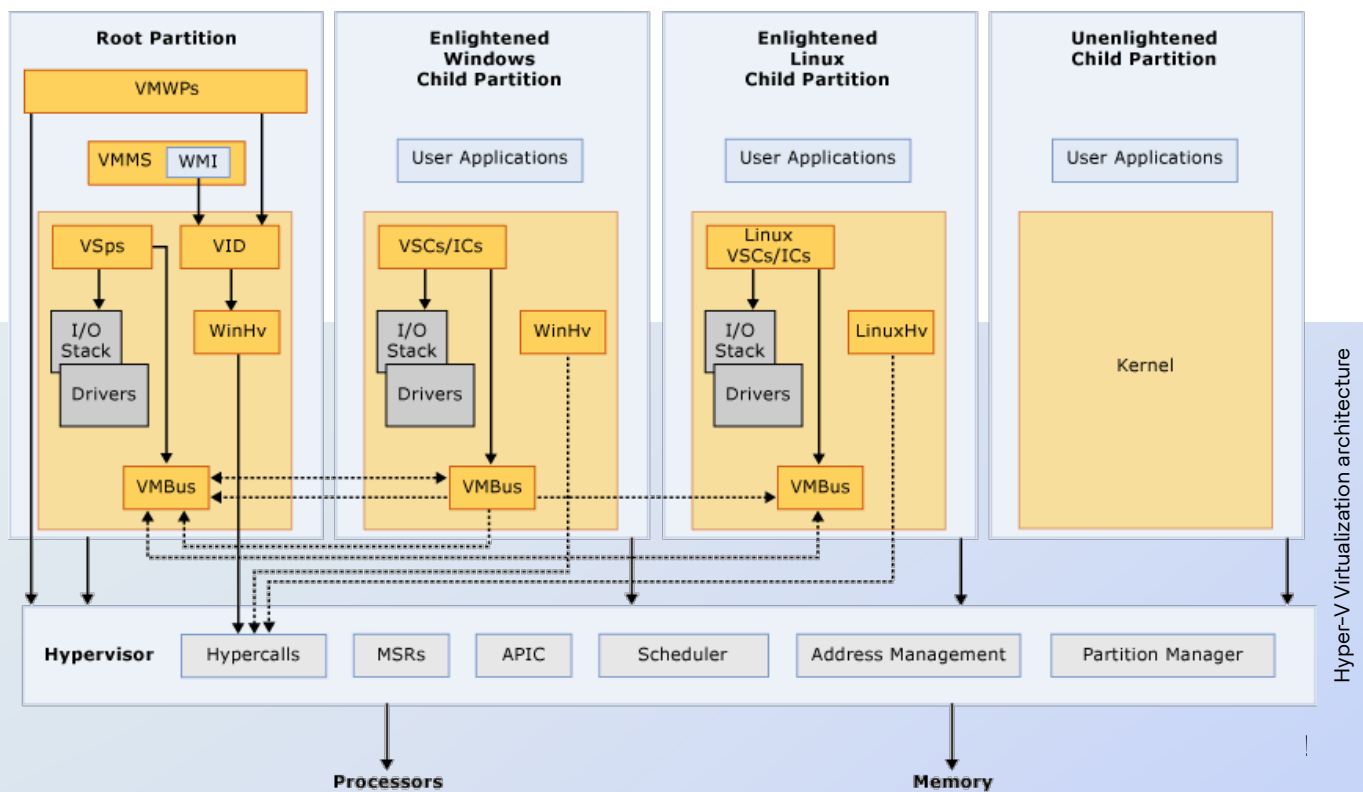
Microsoft Hyper-V: Virtualization at the core

Microsoft Hyper-V serves as the foundation of the HCLTech private cloud by providing the virtualization layer that allows multiple virtual machines (VMs) to run on a single

physical server. Hyper-V's robust feature set enables enterprises to reduce hardware costs, optimize resource utilization, and increase flexibility across their infrastructure.

Hyper-V allows businesses to virtualize their computing storage and network resources as a hypervisor, consolidating everything into one unified system.

Hyper-V High Level Architecture



Key features of Microsoft Hyper-V



Virtualization efficiency:

Hyper-V enables efficient use of compute efficiency: Hyper-V enables efficient use of computing resources by allowing multiple VMs to share the same physical host. This will enable organizations to run various workloads on a single machine, reducing hardware requirements.



Live migration:

One of Hyper-V's standout features is live migration, allowing businesses to move running VMs between hosts without downtime. This ensures business continuity during planned maintenance or unexpected issues.



Dynamic memory:

Hyper-V optimizes memory allocation by adjusting the amount of memory assigned to each VM based on its workload. This ensures that resources are used effectively, avoiding waste and ensuring high performance.



Nested virtualization:

Nested virtualization allows organizations to run a Hyper-V host within a Hyper-V VM, making it ideal for DevOps, testing environments, and training setups.



Shielded VMs:

For enterprises concerned with security, Hyper-V offers Shielded VMs, which protect VMs from unauthorized access and tampering through encryption and secure boot processes. This is critical for protecting sensitive data and workloads.

Microsoft System Center Suite: Centralized management and automation

The Microsoft System Center Suite is the heart of HCLTech VelocITy-M's management capabilities, providing the tools necessary for comprehensive management, monitoring, automation, and data protection across the private cloud environment. The System Center Suite manages the Hyper-V infrastructure and automates many IT operations, making the management of large-scale, complex environments simpler and more efficient.



System Center Virtual Machine Manager (SCVMM)

SCVMM is the key tool for managing Hyper-V virtual environments, providing IT administrators with a centralized console to oversee and control all aspects of their virtual infrastructure. From creating and

configuring VMs to managing storage, networks, and clusters, SCVMM ensures that all components of the HCLTech VelocITy-M private cloud are managed efficiently.



SCVMM key capabilities:



VM provisioning and deployment:

SCVMM allows administrators to create and deploy VMs with pre-configured settings, making it easier to scale the environment on demand.

Storage and network management:

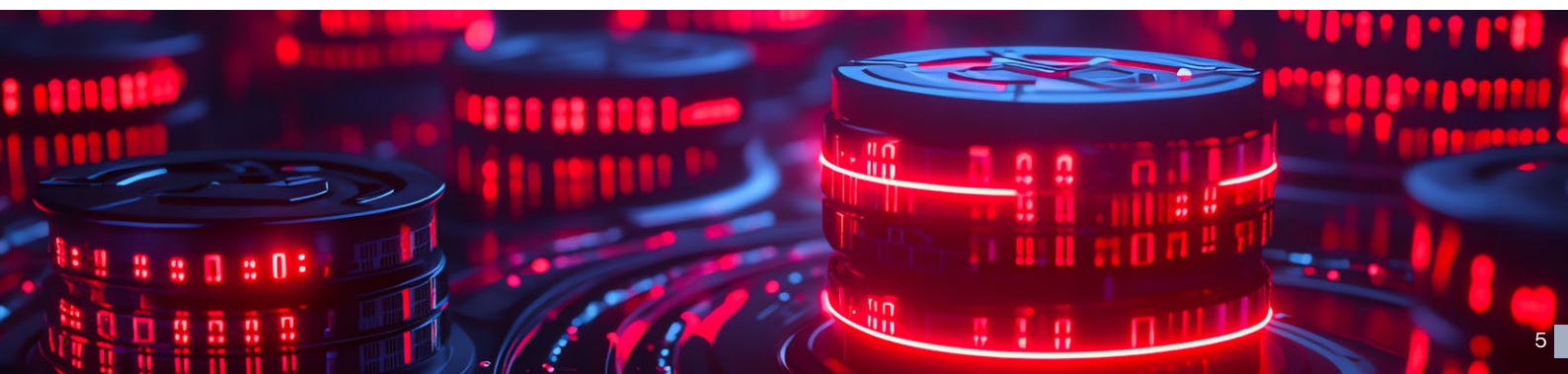
SCVMM integrates with both storage and network components, allowing administrators to configure virtual networks and storage clusters to meet their specific business needs.

Cluster management:

SCVMM enables the creation and management of Hyper-V clusters, allowing for high availability and efficient resource pooling.

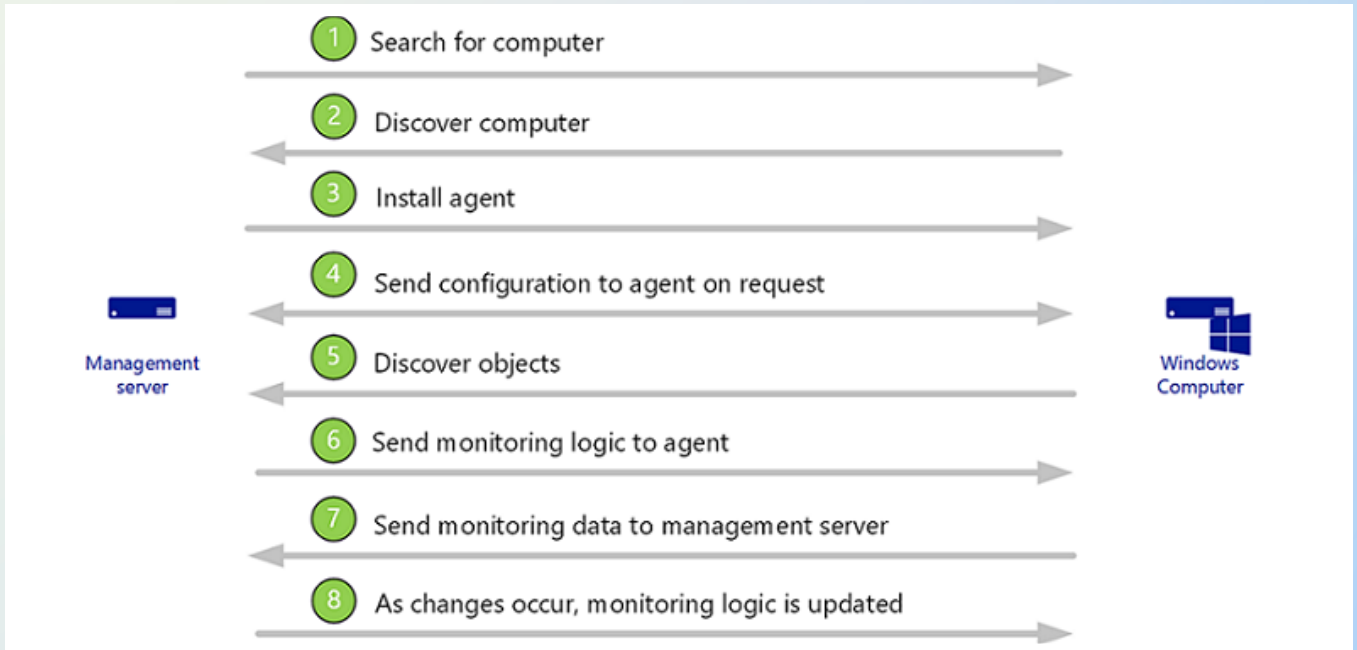
Multi-hypervisor management:

While HCLTech VelocITy-M is primarily based on Hyper-V, SCVMM also supports the management of VMware and other hypervisors, making it a versatile tool for hybrid environments.



System Center Operations Manager (SCOM)

SCOM provides real-time monitoring and alerting across the entire IT infrastructure, ensuring the health, performance, and availability of physical, virtual, and cloud environments. SCOM enables administrators to proactively identify and resolve potential issues before they impact business operations.



SCOM key capabilities:



Health monitoring:

SCOM provides detailed health metrics for virtual machines, hosts, and storage, ensuring that administrators have full visibility into their infrastructure.

Automated alerts:

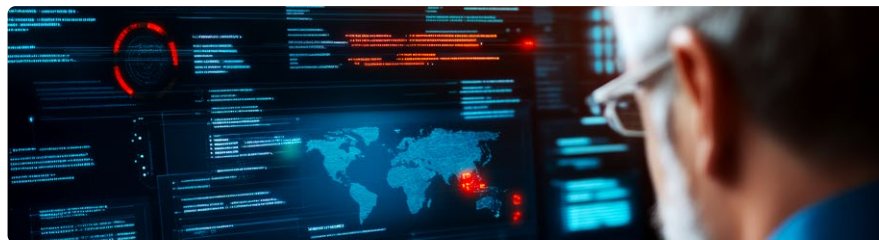
When performance or availability thresholds are breached, SCOM automatically triggers alerts, enabling IT teams to address issues in real time.

Customizable dashboards:

SCOM offers customizable dashboards and reporting tools, giving administrators access to critical metrics at a glance and making it easier to track trends over time.

System Center Configuration Manager (SCCM)

SCCM simplifies the deployment and management of software, patches, and operating systems across the private cloud. By automating these processes, SCCM ensures that all systems remain up to date and compliant with security standards.



SCCM key capabilities:



Automated software deployment:

SCCM automates the deployment of software updates, patches, and security configurations, ensuring that all VMs are consistently maintained and protected.

Compliance management:

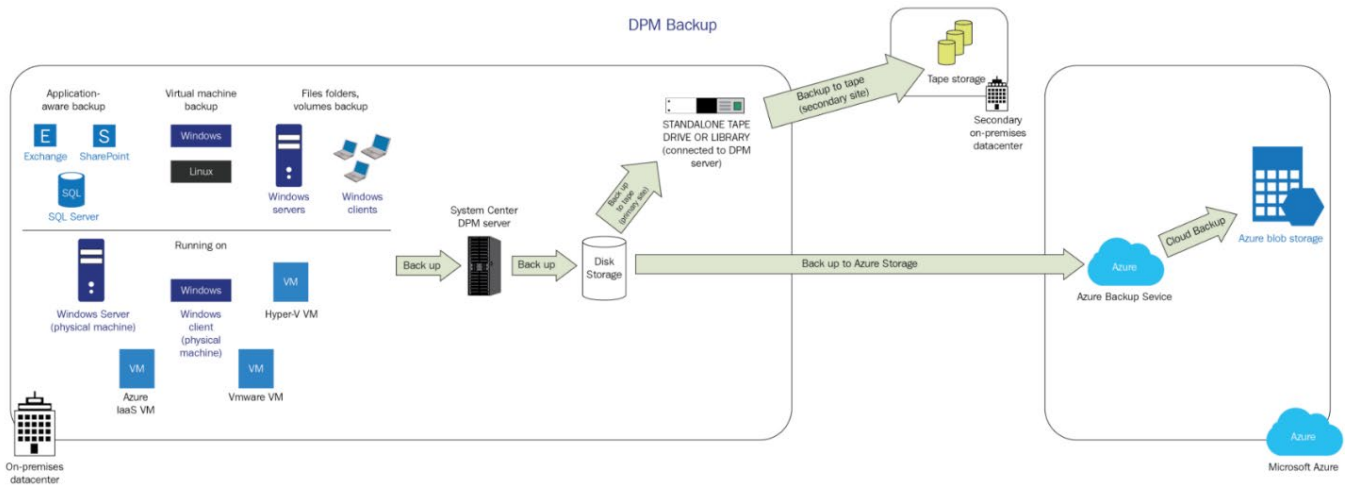
SCCM provides reporting tools to ensure that all infrastructure components comply with organizational and regulatory requirements, reducing the risk of non-compliance.

Patch management:

By automating the process of patching and updating systems, SCCM reduces downtime and eliminates the need for manual intervention, ensuring business continuity.

System Center Data Protection Manager (DPM)

DPM provides robust backup and recovery solutions for virtualized environments, ensuring that critical data is always protected and recoverable in the event of failure or disaster. With DPM, organizations can automate backups of virtual machines and implement disaster recovery strategies that minimize downtime.



DPM key capabilities:



Continuous data protection:

DPM offers continuous data protection for Hyper-V VMs, ensuring that snapshots and backups are regularly taken and stored securely.

Automated backups:

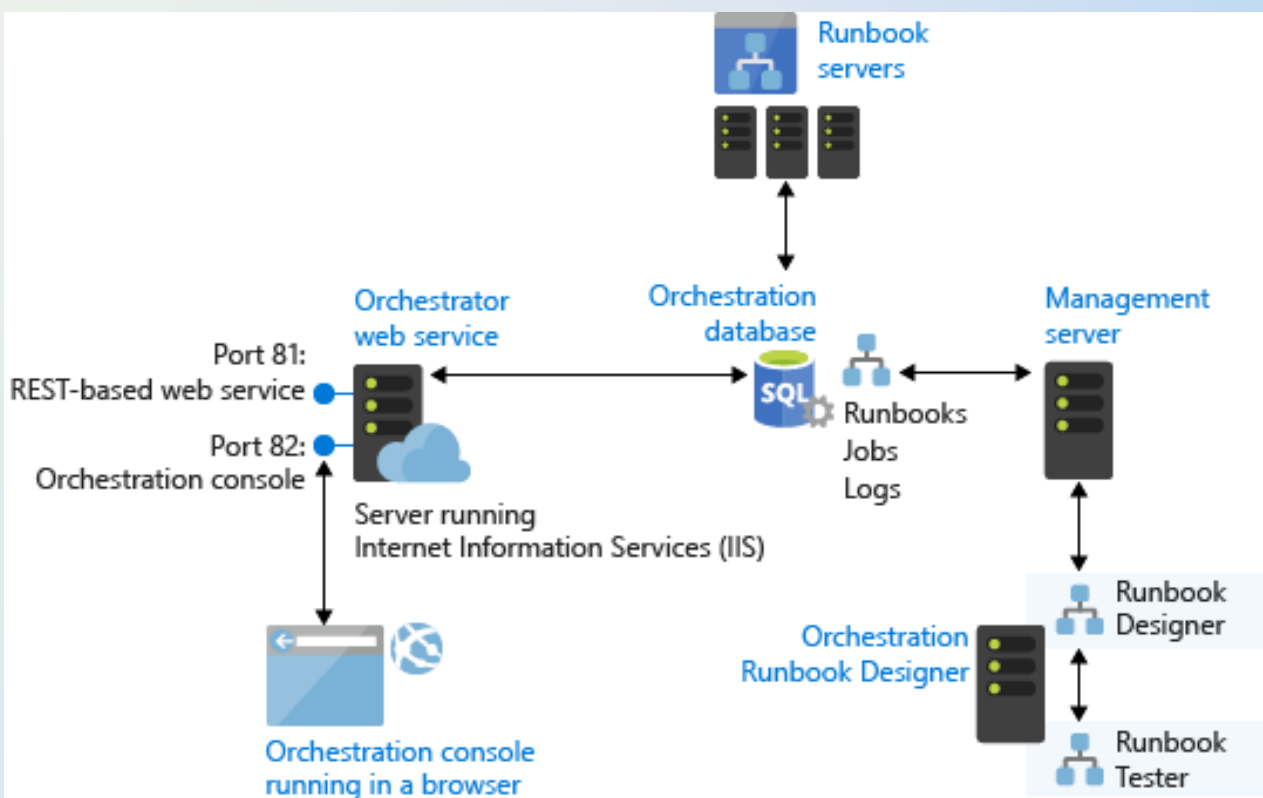
Backups can be scheduled and automated, reducing the risk of data loss while minimizing the administrative overhead of manual backups.

Fast recovery:

DPM enables rapid recovery of data and VMs in the event of a hardware failure or corruption, minimizing downtime and ensuring that business operations can continue uninterrupted.

System Center Orchestrator (SCO)

SCO is an IT process automation tool that allows organizations to automate complex workflows across their IT environment. By integrating with other components of the System Center suite, SCO enables end-to-end automation of routine tasks, freeing up IT teams to focus on more strategic initiatives.



SCO key capabilities:



Automation of IT tasks:

SCO allows IT administrators to automate routine tasks, such as VM provisioning, backup, and patching, reducing the need for manual intervention.

Integration with other tools:

SCO integrates with SCVMM, SCOM, SCCM, and DPM, enabling cross-functional workflows that improve the efficiency of IT operations.

Self-service automation:

Administrators can build and deploy self-service portals, allowing users to request and manage virtual resources, further reducing the burden on IT teams.

Software-defined infrastructure:

Compute, storage and networking integration

HCLTech VelocITy-M takes advantage of Microsoft's Software-Defined Infrastructure (SDI) technologies, which integrate compute, storage, and networking resources into a unified private cloud infrastructure. By eliminating the

need for separate systems and manual configurations, HCLTech VelocITy-M simplifies IT management and reduces operational overhead.

Benefits of HCLTech VelocITy-M Private Cloud

The HCLTech VelocITy-M private cloud offering delivers significant benefits to organizations by streamlining infrastructure management, improving resource utilization, and enabling business agility.



Simplified management

With centralized management through the System Center suite, HCLTech VelocITy-M enables IT administrators to manage the entire private cloud from a single console. This reduces the complexity of managing separate compute, storage, and networking resources, allowing businesses to streamline operations, thus enabling unified management across on-premises and cloud environments.

It ensures automation of routine tasks such as patching, backup, and provisioning, reducing manual workloads.



Enhanced scalability

HCLTech VelocITy-M allows businesses to easily scale their infrastructure as needed. New computing, storage, and networking resources can be added without complex reconfigurations or downtime.

Hyper-V enables dynamic allocation of resources to match real-time workload demands.



Cost efficiency

By consolidating server workloads and automating IT operations, HCLTech VelocITy-M reduces both CAPEX and OPEX. The integrated automation and management tools provided by System Center reduce the need for manual intervention, further lowering operational costs. Further, it also reduces hardware costs through server consolidation.

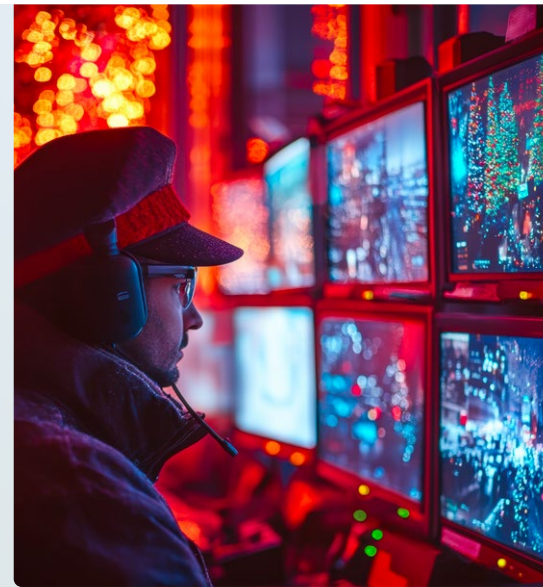
It helps lower operational expenses by automating day-to-day tasks and improving resource utilization.



Built-in security and compliance

With features like Shielded VMs, role-based access control (RBAC) and BitLocker encryption, HCLTech VelocITy-M ensures that virtualized environments remain secure. System Center Configuration Manager enforces compliance by automating patch management and security configurations. It has robust security features including shielded VMs and Secure Boot protect against threats.

Moreover, it ensures compliance enforcement with automated reporting and patching ensure compliance with regulatory requirements.



Business Continuity and Disaster Recovery

HCLTech VelocITy-M includes built-in backup and disaster recovery capabilities through System Center Data Protection Manager (DPM). In case of failure, businesses can recover their data and VMs quickly, minimizing downtime and ensuring business continuity. It leads to faster recovery in case of hardware failure or data loss.

Our clients use VelocITy-M across a range of scenarios—from data center modernization and VDI rollouts to hybrid cloud integration. HCLTech ensures each use case is mapped to business KPIs, risk posture, and ROI expectations. For instance, a financial services client can achieve faster recovery time and infra cost reduction using our DR and automation framework. VelocITy-M is flexible enough to scale from departmental workloads to enterprise-wide modernization.

Use cases for HCLTech VelocTy-M Private Cloud

Data Center consolidation

Many organizations run legacy hardware and software that increases costs and complexity. HCLTech VelocTy-M allows enterprises to consolidate their data centers, reducing physical hardware requirements and improving efficiency.

Virtual Desktop Infrastructure (VDI)

With an increasing shift toward remote work, businesses need scalable VDI solutions to provide secure access to applications and data. HCLTech VelocTy-M enables businesses to deploy VDI environments with centralized management and automated scaling to support fluctuating demand.

Disaster recovery

The built-in disaster recovery capabilities of HCLTech VelocTy-M make it an ideal solution for businesses that require high availability and continuous operations. By leveraging System Center Data Protection Manager, businesses can ensure that their critical data is protected and recoverable.

Hybrid cloud enablement

HCLTech VelocTy-M integrates seamlessly with public cloud platforms like Azure, allowing businesses to extend their private cloud infrastructure to the cloud for additional flexibility, disaster recovery, or cloud bursting during peak demand.

HCLTech sees VelocTy-M as more than a technology stack—it's a transformation enabler. Our consultative deployment model, prebuilt accelerators, and industry best practices allow clients to modernize at their own pace, with confidence. Whether the goal is cost reduction, faster innovation, regulatory alignment, or operational resilience, VelocTy-M offers a modular yet comprehensive pathway. With our global experience, we help clients unlock the full value of their private cloud investments.

With an increasing shift toward remote work, businesses need scalable VDI solutions to provide secure access to applications and data. HCLTech VelocTy-M enables businesses to deploy VDI environments with centralized management and automated scaling to support fluctuating demand.

Conclusion

The HCLTech VelocTy-M private cloud solution, powered by Microsoft Hyper-V and System Center, provides a comprehensive, scalable, and secure platform for businesses looking to modernize their IT infrastructure. By simplifying management, improving scalability, and enhancing security, HCLTech VelocTy-M enables organizations to reduce costs, increase operational efficiency, and ensure business agility. Whether deployed for data center consolidation, virtual desktop

infrastructure, or disaster recovery, HCLTech VelocTy-M delivers the performance and reliability needed to meet the demands of modern enterprise workloads.

Appendix:

Key Components of the HCLTech VelocTy-M Solution

Microsoft Hyper-V

Virtualization Layer: Hyper-V is the hypervisor that allows businesses to virtualize compute resources, running multiple virtual machines on a single physical server, maximizing resource utilization.

Key features: Live Migration, Dynamic Memory, Secure Boot, Shielded VMs, and Nested Virtualization.

System Center Virtual Machine Manager (SCVMM)

Centralized management for VMs: SCVMM allows administrators to create, manage, and configure virtual machines, virtual networks, and storage resources. It simplifies the provisioning and scaling of VMs and provides insights into resource utilization.

System Center Operations Manager (SCOM)

Real-time monitoring and alerts: SCOM provides continuous monitoring of physical, virtual, and cloud resources, ensuring optimal performance and availability. IT teams receive real-time alerts when performance metrics deviate from thresholds, enabling proactive issue resolution.

System Center Configuration Manager (SCCM)

Automation of updates and configurations: SCCM automates the deployment of patches, software updates, and operating systems across the private cloud infrastructure, ensuring that all components are up to date and compliant with security and organizational policies.

System Center Data Protection Manager (DPM)

Backup and Disaster Recovery: DPM ensures continuous data protection for virtual machines, providing automated backups, replication, and fast recovery capabilities in the event of failure or disaster.

System Center Orchestrator (SCO)

SCO allows IT administrators to automate routine workflows, such as provisioning, patch management, and disaster recovery processes. This reduces manual tasks, improves efficiency, and lowers the risk of human error.



Kumar Aditya

Product Manager
Hybrid Cloud Business Unit
HCLTech

About the Author

Kumar is at the forefront of cloud innovation as a Product Manager in the hybrid cloud business unit of HCLTech. With his 15 years of experience, he brings a rich and diverse background in IT sales and management across multiple organizations, with a focus on driving product roll-out strategies, GTM (Go-To-Market) planning, product marketing initiatives, and strategy consulting. His experience spans roles where he excelled in leveraging customer and business intelligence to drive business of IT Infrastructure products and services, enhancing customer experiences and client relationships.

HCLTech | Supercharging
Progress™

HCLTech is a global technology company, home to more than 223,000 people across 60 countries, delivering industry-leading capabilities centered around digital, engineering, cloud and AI, powered by a broad portfolio of technology services and products. We work with clients across all major verticals, providing industry solutions for Financial Services, Manufacturing, Life Sciences and Healthcare, High Tech, Semiconductor, Telecom and Media, Retail and CPG, and Public Services. Consolidated revenues as of 12 months ending June 2025 totaled \$14 billion. To learn how we can supercharge progress for you, visit hcltech.com.

hcltech.com

