

Simpler, Smarter Ways to Manage Virtual Desktops and Apps

IT buyer's guide: key considerations
and best options



Executive Summary

Effective VDI and App Management
Managing Virtual Desktops & Apps

Limitations of Traditional Approaches
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VMware in VDI Management
Summary



Executive Summary

Managing VDI and apps today is like managing the Big Bang. Users are spreading out across diverse remote locations, performance and capacity requirements continue on an upward spiral, and compliance and security mandates are evolving constantly.

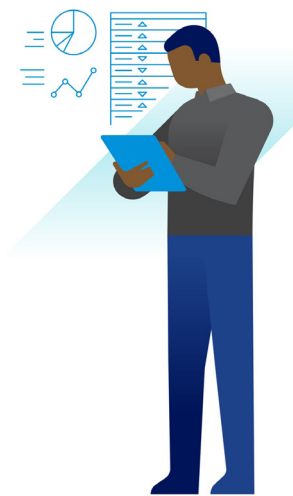
Your ability to deliver a superior experience to users—and build agility, resilience, and cost efficiency for the business—depends on your ability to effectively manage VDI and apps. But how can you keep pace in today's environment?

This eBook provides a summary of why VDI and app management matters more than ever today, and how to create a digital foundation that supports ever-changing business requirements. It describes challenges with traditional approaches, better options for VDI management, and key considerations for evaluating solutions.

Business Value of Effective VDI and App Management

Ultimately, the business value of technology is the ability to own your future. With the right digital foundation, you can deliver superior services today and adapt quickly without unnecessary risk, cost, or disruption.

Effective VDI and app management is central to those goals. If you can give users secure access to corporate services across devices, locations, and connections, you can support key business initiatives and priorities. You can:



Embrace new ways of working

With visibility into all the virtual desktops and apps in your environment, regardless of location, you can support new models of remote working. You can manage remote access to compelling new apps to all authorized users, from anywhere, giving your business a new level of agility.



Reduce costs

When you can find and fix issues with virtual desktops and apps quickly and automatically, you can save labor costs, reduce errors that result in expensive downtime, and cut CapEx by optimizing your capacity for your actual VDI workloads.



Improve the user experience

Slow virtual desktops with lengthy resolution times frustrate users and IT operations staff alike. The ability to monitor and manage the health & performance of the entire stack—hypervisor layer, networks, sessions, users and apps—translates to a superior experience for users in any location.



Accelerate new initiatives

The ability to quickly transform pilot VDI environments into production deployments with minimal disruption enables you to hit the accelerator on corporate initiatives—and prove the value of IT as a strategic partner.

VDI AND APP MANAGEMENT
CAN ENHANCE SECURITY,
OPERATIONAL EFFICIENCY,
AND PRODUCTIVITY FOR
EMPLOYEES AND IT STAFF—
SO YOU CAN FOCUS ON
BUSINESS PRIORITIES.



Challenges with Managing Virtual Desktops and Apps

There is no question that effective VDI and app management benefits the business, its employees, and customers. The question is, why is it so difficult? There are multiple reasons, including:



Excessive complexity

The sheer number of moving parts can be overwhelming. VDI and app management combines the complexities of operations issues with the intricacies of virtual desktop and app management. Key considerations are listed here.

Infrastructure/Operations

- System capacity for desktops and hosted applications
- Anticipating future demand
- Choosing between cloud and on-premises resources
- Finding remediating performance issues
- Ensuring optimal use of staff time

VDI Environment

- Specifying and monitoring metrics? SLAs for users, apps, and sessions
- Executing basic actions: restarts, reboots, run scripts, etc.
- Managing capacity and performance for virtual desktops





High cost

Managing virtual desktops and apps on a day-to-day basis is an expensive proposition. It involves multiple tools, technologies, processes, practices, and specialized skill sets to meet user requirements, SLAs, and compliance mandates. And all too often much of the expense is redundant or excessive because of inefficiencies in operations.



Downtime that reduces productivity

There are many potential causes of downtime in a VDI environment, from human error to excessively complex processes to limitations in current tools and technologies. All of them lead to a loss of employee productivity, which results in delays in key initiatives, excessive costs, and user frustration.



Meeting security and compliance requirements

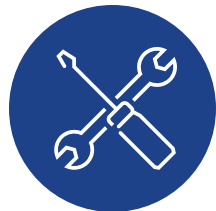
Internal and external compliance standards are constantly evolving, and keeping VDI deployments safe, secure, and compliant is a daunting task. In many cases, compliance involves time-consuming, repetitive manual tasks and there is no easy way to automate or customize the process.



Limitations of Traditional Approaches

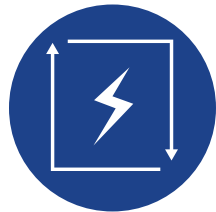
Many solutions for managing VDI and apps have emerged over the years. But most come with trade-offs that emerge only after they’ve already been deployed. To cite a few of the most common limitations:

Too narrowly
focused



IT departments may purchase products in a piecemeal fashion to satisfy immediate needs. Later, these siloed, incompatible toolsets get in the way when IT wants to adopt a more unified, strategic solution.

Limited
use cases



Traditional solutions focus on performance, capacity, OR compliance—take your pick. They are often incapable of meeting the diverse requirements of multiple, modern use cases and end up adding to disruption rather than alleviating it.

Blurred
visibility



Some solutions only provide visibility into certain aspects of the performance and health of the VDI environment, creating a false sense of security or leading to errors and oversights in identifying and remediating issues.

Insufficient
scalability



Many solutions do not scale adequately to support surges in demand for remote working and other fast-evolving VDI models where additional performance and capacity are needed on demand.

Technical debt



Traditional solutions are often difficult to upgrade, consolidate, or integrate without disruption and expense, constraining the company’s agility and resilience.

“ We needed to get better
visibility into our environment
to curb spending or avoid
capital expenses altogether.
That was not possible with
our previous toolset.”

TECHNICAL MANAGER,
TRAVEL

Top 5 Requirements for Smarter VDI and App Management

Once you fully appreciate the limitations of traditional approaches to VDI and app management, you're better prepared to evaluate smarter options. To simplify your search, here are the top 5 capabilities an effective VDI and app management solution must provide.

1

Monitor it all

One platform with full-stack visibility.

The solution should deliver a unified data plane that provides clear visibility into everything that impacts VDI health and performance, including:

- Hypervisor layer
- Network
- Servers and storage
- Sessions
- Users
- Apps



2

Simplify management

Cut complexity and errors with AI and automation.

Look for integrated capabilities that harness intelligence and automation to eliminate manual processes and accelerate incident management, such as:

- Intelligent automation of root cause analysis
- Auto-correlation of metrics and monitoring data
- Smart alerts that notify IT about deviations from normal usage patterns

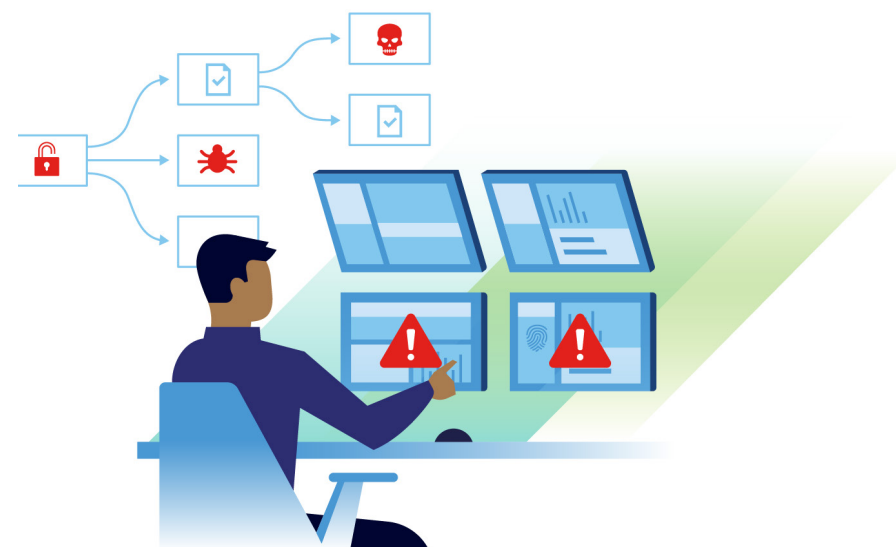
3

Get proactive

See trouble coming and ward it off.

The solution should help you transition from reactive to proactive management by combining near real-time metrics with intelligent, dynamic thresholds so you can prepare for peaks and valleys of performance automatically and take the right remedial actions, right away. Specific capabilities include:

- Horizon aware remediation
- Continuous, automated performance optimization



IT PROFESSIONALS NEED INTELLIGENT ALERTS ABOUT CAPACITY AND PERFORMANCE ISSUES SO THEY CAN PROACTIVELY REMEDIATE PROBLEMS.

4

Increase flexibility

Expand the boundaries of possible.

An effective VDI and RDS management solution gives you options, not constraints. Look for freedom of choice in multiple dimensions, including:

- SaaS or on-premises options
- Massive scalability: 50–100K+ desktops on demand
- Support for multiple modern use cases



5

Eliminate disruption

Accelerate time to value through comprehensive support.

Make sure your vendor can be a full partner to your IT staff. They should provide a wide range of service capabilities that support your staff immediately and over time, including:

- Consulting to plan and deploy the optimal solution
- Infrastructure service and support
- Cloud-based or on-premises platforms and monitoring capabilities
- Consulting on every aspect of implementation and success metrics
- Training, education, and ongoing support



Delivering on the Demand

VMware vRealize® Operations™ Management Pack for Horizon®

VMware has been a pioneer and leader in VDI and app management for many years and offers a solution that goes well beyond the capabilities of traditional offerings.

VMware vRealize Operations Management Pack for Horizon delivers end-to-end visibility into the health, performance, and efficiency of VMware VDI and application environments. It enables administrators to proactively optimize the user experience, avert incidents, and eliminate bottlenecks, which in turn reduces costs and expedites time to resolution (TTR).

The solution combines key capabilities of:

- **VMware vRealize Operations**, a unified platform that offers full-stack visibility from physical, virtual and cloud infrastructure to the applications they support
- **VMware Horizon**, which securely delivers virtual desktops and apps across the hybrid cloud

The results:

- **VMware vSphere & Horizon administrators** can now implement consistent operations throughout their VMware Cloud Foundation hybrid-cloud stack.
- **IT** can ease the management burden for Horizon environments by implementing a simpler, smarter, AI-based solution for self-driving operations.
- **The business** can plan and execute strategic initiatives involving multiple VDI use cases with confidence.

KEY FEATURES

- Full visibility into the performance and health of Horizon deployments on VMware vSphere®
- Intelligent automation of root-cause analysis, session details, and event correlation
- Autocorrelation of metrics and monitoring data
- Agentless data collection
- In-guest metrics
- Real-time, predictive capacity analytics
- Out-of-the-box reporting templates and remediation recommendations
- Integration with vRealize Log Insight™ Cloud for 360-degree troubleshooting with metrics and logs
- Available as a SaaS offering with vRealize Operations™ Cloud for fast time to value

“Thanks to the data we have in vRealize Operations, we can prevent issues before they happen.”

IT INFRASTRUCTURE ARCHITECT,
FINANCIAL SERVICES

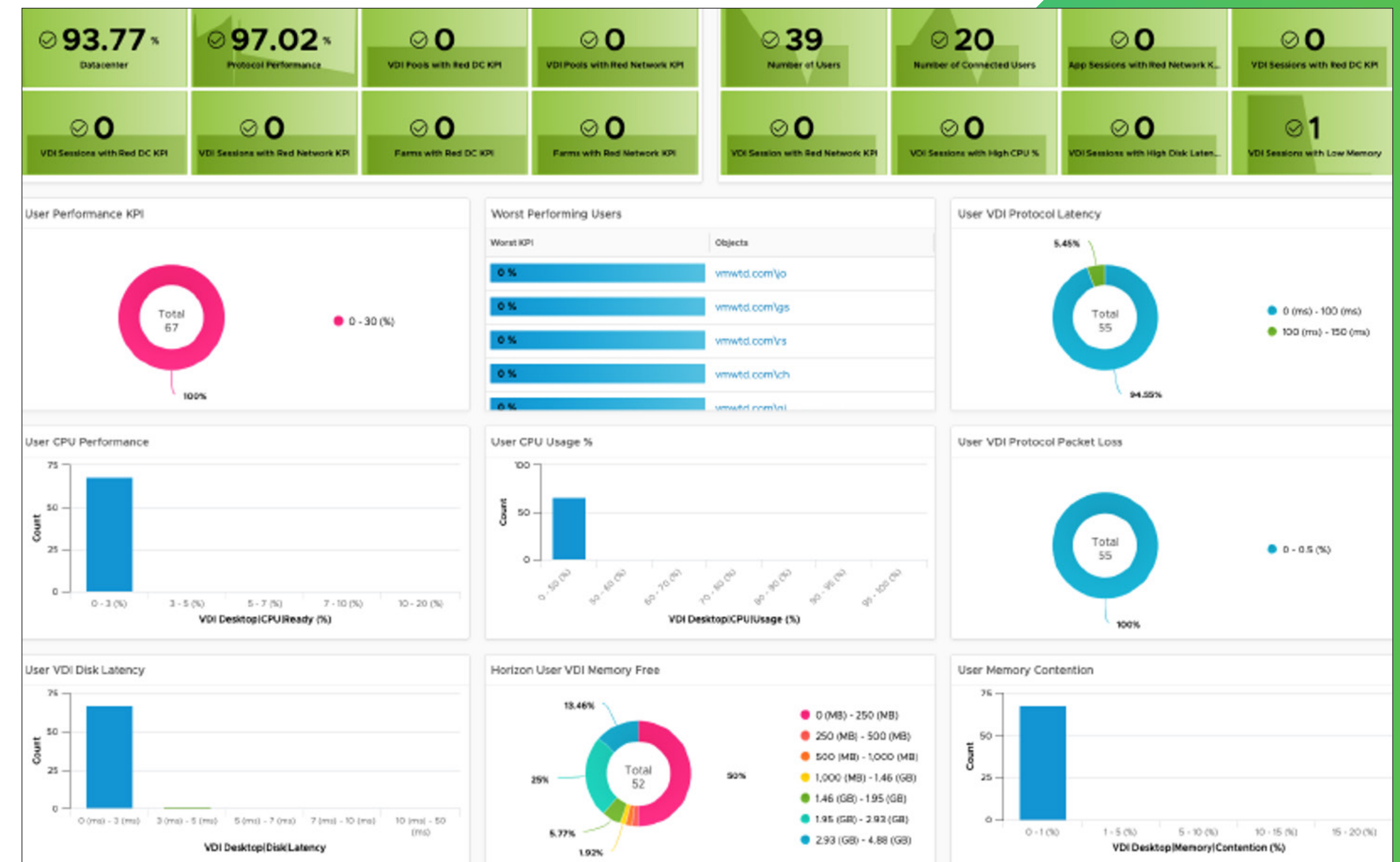
Intelligent Insights at a Glance

VMware vRealize Operations Management Pack for Horizon offers deep, real-time insights that enable IT and business teams to meet their individual business objectives.

The solution provides unified visibility across virtual infrastructure to VDI desktops, across vSAN, NSX and even into hybrid cloud environments, including VMware Cloud™ on AWS. This reduces the growing need for training and eliminates the learning curve and technical complexity of adding additional monitoring solutions.

Administrators can see and respond to multiple metrics at a glance, such as:

- VDI pool performance by KPI
- Farms and pools with capacity issues
- Desktops available
- Sessions with highest protocol latency
- Users consuming the most bandwidth



Recent Enhancements Add New Value

The vRealize Operations Management Pack for Horizon adds new capabilities, updates, and upgrades to the previous-generation solution, VMware vRealize Operations for Horizon. Key enhancements are summarized below.

Intent-Driven Continuous Performance Optimization	Efficient Capacity Management	Intelligent Remediation	Integrated Compliance and Configuration
<ul style="list-style-type: none">• Balance VDI workloads more intelligently with Predictive DRS and Workload Placement	<ul style="list-style-type: none">• Predictive VDI capacity management and planning• Rightsizing of VDI Desktops to optimize size, performance and density	<ul style="list-style-type: none">• Troubleshooting Workbench for expediated metric correlation and root cause analysis with Horizon Integration• Additional OOB Horizon infrastructure and session monitoring via agentless collection• Run scripted actions in-guest• Execute common tasks right from vROps (restart, shutdown, reboot)	<ul style="list-style-type: none">• Ability to create Custom Compliance for Horizon• Automate configuration management with vRO integration
Continuously optimize app performance based on business and Operational intent	Run infrastructure like public cloud – optimal consolidation, proactive planning and procurement	Predict, prevent and troubleshoot across hybrid and multiple clouds	Reduce risk and enforce IT and regulatory standards

TOP 4 ENHANCEMENTS OVER VREALIZE OPERATIONS FOR HORIZON

1. Simplified API driven architecture

- No broker agent
- No agents to deploy

2. Uniform data model

- Aligns Horizon architectural concepts directly to vSphere Compute & Capacity
- New Global Datacenter & Horizon performance KPIs
- New historical performance and capacity KPIs across vSphere & Horizon metrics
- New Horizon Summary dashboards for performance, Pool & Farm capacity, and configuration

3. New Horizon compute-based capacity model

- User sizing
- VDI & RDS Pool capacity Metrics

4. Simplified licensing

- Flexible time periods
- Flexible pricing models

VDI/App Monitoring and Management Use Cases

The vRealize Operations Management Pack for Horizon supports all of the key use cases for VDI and app management, including:

Delivering consistently high performance

The solution makes it easy to bring Horizon infrastructure objects such as Users, Sessions, Pods, and many more into vRealize Operations. This simplifies the task of improving the performance—and the end-user experience. Administrators can track user sessions, quickly pinpoint areas of degraded health, and take targeted remedial action.



Optimizing capacity

Administrators can quickly look at individual VDI VMs or Remote Desktop Services Hosts to enable their session are optimized for their users. They can also look at Connection servers to understand how many sessions are currently connected and how many more they can support.

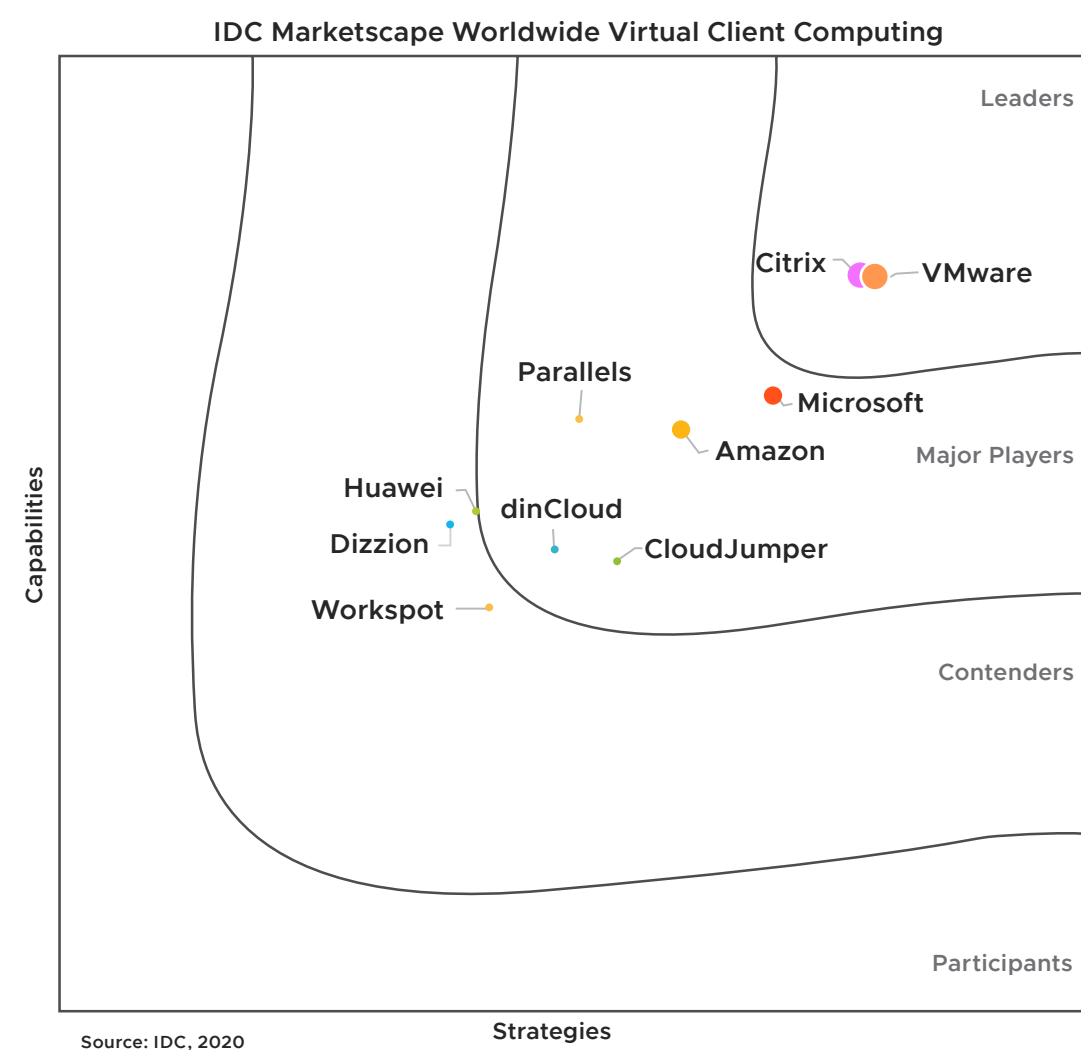


VMware in VDI Management: Market Leadership

While the vRealize Operations Management Pack for Horizon is a relatively recent market entrant, VMware has a long history of leadership in VDI operations management.

Recent analyst report underscore both the technological leadership and the economic advantages of the foundational products within the solution, as illustrated below.

VMware Named a LEADER in 2020 IDC MarketScape for VCC



Positioned in the **LEADERS** category for 5th straight report!

SOURCE: "IDC MarketScape Worldwide Virtual Client Computing Software Vendor Assessment" by Shannon Kalvar, January 2020, IDC #US45752419.

IDC MarketScape vendor analysis model is designed to provide an overview of the competitive fitness of ICT suppliers in a given market. The research methodology utilizes a rigorous scoring methodology based on both qualitative and quantitative criteria that results in a single graphical illustration of each vendor's position within a given market. The Capabilities score measures vendor product, go-to-market and business execution in the short-term. The Strategy score measures alignment of vendor strategies with customer requirements in a 3-5 year time frame. Vendor market share is represented by the size of the circles. Vendor year-over-year growth rate relative to the given market is indicated by a plus, neutral or minus next to the vendor name.

VMware vRealize Operations by the Numbers

COST SAVINGS



20%

reduction in hardware costs.

10%

reduction in storage.

50%

reduction in database management licenses.

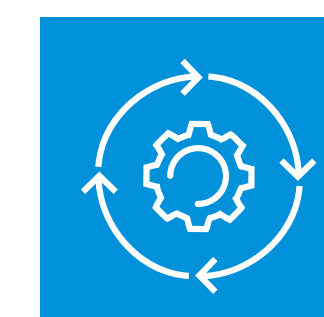
PERFORMANCE



93%

reduction in unplanned downtime.

PRODUCTIVITY



30%

productivity improvement from intelligent remediation, improved visibility, and faster reporting.

SOURCE: Forrester Research, "The Total Economic Impact" of VMware vRealize Operations," 2019.

Learn More

Managing and scaling VDI deployments does not have to be a daunting task. Smarter, simpler solutions are available to get beyond the limitations of traditional offerings and maximize the productivity of IT staff.

The VMware vRealize Operations Management Pack for Horizon enables your IT organization to seamlessly monitor and remediate virtual desktop and application environments at scale, enabling IT to support key business initiatives with cost efficiency and confidence in the security, performance, and capacity of the deployment.

For information or to purchase VMware products, call 1-877-VMWARE (outside North America, +1-650-427-5000), visit <http://www.vmware.com/products>, or search online for an authorized reseller.

For detailed product specifications and system requirements, refer to the VMware vRealize Operations documentation available at <https://www.vmware.com/products/vrealize-operations.html>.

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