IDC MarketScape

IDC MarketScape: Worldwide Virtual Client Computing 2022–2023 Vendor Assessment

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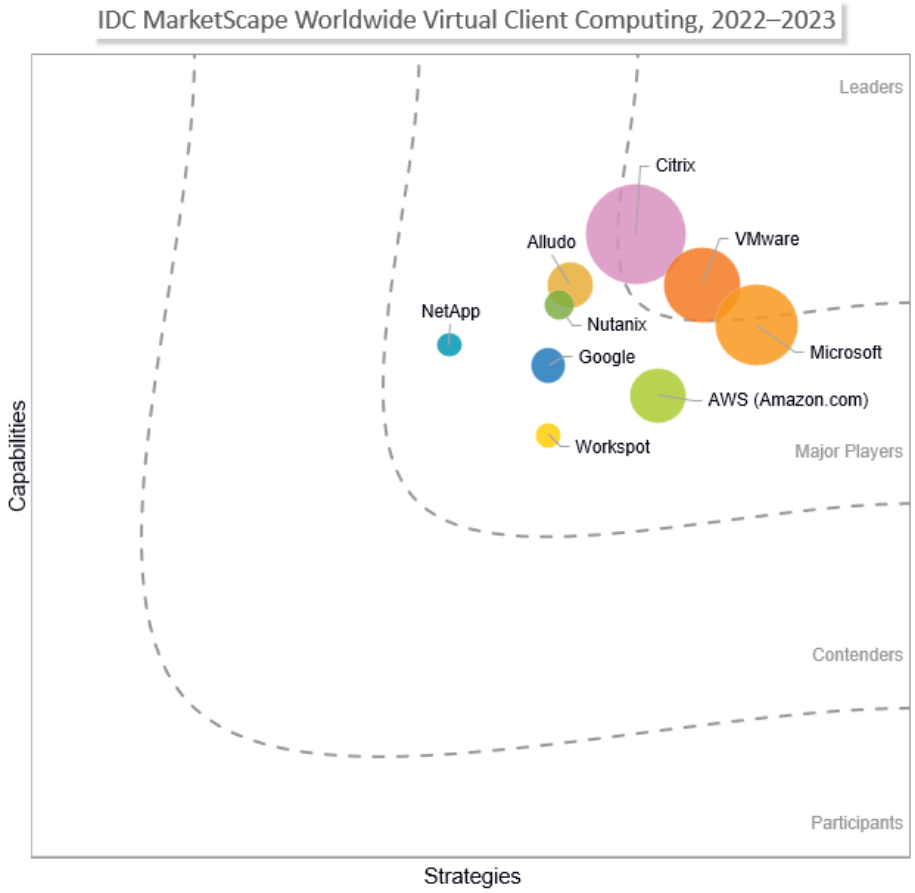
THIS IDC MARKETSCAPE EXCERPT FEATURES VMWARE

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Virtual Client Computing Vendor Assessment



Source: IDC, 2022

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

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IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Virtual Client Computing 2022–2023 Vendor Assessment (Doc # US49857422). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

IDC OPINION

It is cliché at this point to say that the COVID-19 pandemic radically changed the way that we work. From location to time, from blurring the boundaries between work and life to profound restructuring of the labor market, the past two years ushered in changes many thought were decades away. This, perforce, forced a change to all software markets supporting remote work, asynchronous work, and workforce automation.

Virtual client computing (VCC) is one such software market. Before 2020, the market already showed signs of expanding beyond its traditional use cases of security, temporary workstations, and application compatibility. Independent software vendors took up application virtualization as a method for delivering software as a service without refactoring code. Enterprises began to explore automation and intelligence in the workspace, while reducing the staff they had to manage complex virtualization implementations. This expanded the permeation of virtualization in the enterprise, with organizations offering up to 20% of their workspaces through virtualization by 2022.

The pandemic vastly accelerated this adoption, forcing some organizations to go "all in," and others to expand their installations, offering anywhere in the range of 50–100% of their workspaces through a combination of virtualized applications for specific uses and virtualized desktops for general activities. The use cases also expanded alongside a wave of security incidents, with security firms discovering they could quickly restore a company to business functionality through judicious virtualization of key applications, data, and desktop assets.

This shift, unfortunately, brought clarity to the evolving role of virtualization in the now emerging "intelligent digital workspace," an ecosystem of interrelated technologies ranging from intelligent service fulfillment systems to content management and collaboration applications. Virtualization, both application and desktop, is seen as a necessary but not particularly exciting component of the ecosystem. This has forced established vendors to recalibrate their offerings and extend their partnerships to include more, and more varied, software and hardware vendors.

The reduction in operational staff has also driven a movement to the "cloud," particularly the provisioning of infrastructure as a service instead of dedicated hardware in datacenters for compute provisioning. The reduction also opened up an opportunity for automation along all tasks in the virtualization stack, leading to the creation of bundles of automated services, monitoring, software, and infrastructure as a service marketed as "desktop as a service" (DaaS).

Desktop as a service is a broad term, applied to a wide range of offerings, in a relatively indiscriminate manner. Some offerings come directly from virtualization vendors, others from cloud providers, and still others from systems integrators and service providers. This document does not attempt to untangle that web of offerings; instead, it treats DaaS as one of several capabilities offered as part of a full-spectrum virtual client computing suite. A formal IDC MarketScape for desktop as a service will follow this more general IDC MarketScape for VCC.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

Vendors were selected for this IDC MarketScape based on the following criteria:

- Operate and have clients in more than one geographic market (Americas, EMEA, Asia/Pacific, etc.)
- Provide application and/or desktop virtualization support directly to customers
- Provide the ability to manage hybrid (private and public cloud) architectures
- Have developed an ecosystem of partnerships enhancing operational and endpoint functionality
- Have an extended market presence, sufficient to indicate they can sustain a mission-critical technology system for at least five years

These last two points are important particularly for enterprise technology buyers. Virtualization is one part of an ecosystem of technologies used to deliver core business functionality — it must be able to connect the virtualized application/desktop to any peripherals they need and must provide consistent, effective functionality for the duration of the system's deployment. Neither of these is possible when the providing company is funded by venture capital or otherwise financially unstable.

ADVICE FOR TECHNOLOGY BUYERS

Virtualization is a necessary but not prominent aspect of hybrid work, a technology that provides the core functionality needed for remote and hybrid work but is overshadowed by flashier and "more important" technologies. It is also an approach that has, traditionally, required a strong team with broad training in infrastructure and operations as well as application management and specific virtualization technology training.

In the current labor market, it is difficult if not impossible to hire people with the requisite experience and skills to run a completely autonomous virtualization solution. Instead, CIOs and other buyers should focus on identifying and delivering only the critical functions they can themselves, using desktop as a service and cloud-hosted application virtualization for all other noncritical functions.

In addition, IDC research indicates that application and desktop virtualization solutions are almost entirely "hybrid cloud," with resources stretched across the enterprise's datacenters, various public cloud providers, and software-as-a-service companies. This is a reflection of the modern work environment — resources are aggregated from many places to create the "digital workspace," and virtualization perforce follows the workloads. Attempts to "unify" or "rationalize" virtualization environments tend to go poorly; instead focus on selecting the right solution for the critical use cases selected previously.

An additional primary finding from IDC research is that endpoint management, although a separate category for application and desktop virtualization, is critical to the success of the virtualization ecosystem. Perceived problems with virtualization are often, at their root, errors in the endpoint management system instead.

Finally, IDC research also indicates that vendors need to assume primary responsibility for managing and extending their ecosystem. This is a logical extension of both the challenging labor situation and the complexity of modern work environments. Practically, this means that a buyer needs to carefully examine the ecosystem maintained by the suppliers, ensuring that the systems and tools they use are

actively a part of the supplier's ecosystem. More than one virtualization deployment has been hamstrung by issues with headphones and printers, video cameras, and USB docking stations, all far beyond the direct reach of IT support in the current hybrid work environment.

VENDOR SUMMARY PROFILES

This section briefly explains IDC's key observations resulting in a vendor's position in the IDC MarketScape. While every vendor is evaluated against each of the criteria outlined in the Appendix, the description here provides a summary of each vendor's strengths and challenges.

VMware

VMware is positioned in the Leaders category in this 2022–2023 IDC MarketScape for worldwide virtual client computing.

As of October 2022, VMware is being acquired by Broadcom, a conglomerate with a broad portfolio of enterprise software, chip, networking, and other critical infrastructure technologies. It offers a wide range of virtualization technologies including on-premises, cloud-based, and as-a-service virtualization options as well as integration with its broader endpoint management, security, and infrastructure operations suites.

Strengths

VMware offers a fully integrated stack of virtualization solutions, with a range of deployment options. This has caused some difficulties for it in the past, as different solutions could have radically different capabilities, but in recent years, customers report that it has closed the gaps to allow for more seamless operations when using hybrid (on-premises and cloud-based) deployments. In addition, it has integrated its Carbon Black security software into some of its offerings, allowing for AI-based security stretching from the endpoint through the virtualization stack and into the datacenter.

VMware's ecosystem includes a wide range of hardware, peripheral, and software vendors. Of greatest note, however, is its growing body of certified engineers and other infrastructure professionals – a potential boon in this labor-constrained market. This factor alone is worth considering for many companies, as they can use existing VMware resources to meet virtualization and end-user computing needs.

Challenges

Customers indicated that the complexity of synchronizing VMware's application virtualization and other solutions can lead to poorly integrated and costly implementations, especially when one solution is used in isolation. This is a problem endemic to complex, integrated systems – using one of them in isolation from the others does not deliver the value found in using them together. In isolation, or in small deployments using only a fraction of the suite's capability, the costs simply outweigh the benefits.

Consider VMware When

VMware is a good fit for enterprise installations especially where the enterprise already uses VMware for infrastructure and cloud operations. Its tightly integrated endpoint management solution also makes it well suited to environments where the enterprise needs to gain control of the endpoints before rolling out a virtualization solution.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Market Definition

Virtual client computing software enables a client computing model that leverages a range of brokering software and display protocols to enable server-based client computing and improves upon the limitations associated with the traditional distributed desktop environment.

The VCC market includes:

- Products that enable the configuration and management of centralized virtual desktop, virtual user session, and other forms of client virtualization to include type 2 hypervisor, containerized, and cloud-based solutions for delivering virtualized desktops and application
- Management software specifically targeted at the configuration, control, and operations of VCC solutions

Virtual client computing has traditionally been used for specific, tightly managed, and secured use cases and for low-volume remote access (~10% of the employee population). Recent years have seen a shift in this, with VCC becoming more of a general-use computing/remote access solution.

LEARN MORE

Related Research

The following research illuminates and extends the research in this document:

- *IDC State of Global Skills* (IDC #US49747822, October 2022)
- *IDC FutureScape: Worldwide Future of Work 2023 Predictions* (IDC #US48711022, October 2022)
- *Decision Patterns and Personas in the Intelligent Digital Workspace* (IDC #US49688322, September 2022)
- *Market Analysis Perspective: Worldwide Virtual Client Computing, 2022* (IDC #US49674922, September 2022)

Synopsis

This IDC study presents a vendor assessment of the virtual client computing (VCC) market through the IDC MarketScape model. Virtual client computing forms the core of remote work technologies, allowing organizations to support the new hybrid normal. It encapsulates and integrates the digital workspace, enhancing security and granting the IT organization flexibility in end-user computing options when properly managed. Selecting the right solution, for the most important use cases, is critical to delivering on the promised future of work.

"Virtual client computing is by its nature always going to be hybrid, with resources scattered across the edge, various public clouds, private clouds, and on bespoke hardware," said Shannon Kalvar, research director, IT Service Management and Client Virtualization, IDC. "More so than any one 'best' solution, finding the right solution for your specific use cases can mean the difference between struggling to provide service and providing transparent user experiences where virtualization fades into the background and is just 'the way computing is done.'"

About IDC

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