EMA Radar™ for Digital Employee Experience Management (DEX)

Summary Report Spotlighting VMware

November 2022
By Steve Brasen, Research Director

Executive Summary

All modern businesses are dependent on digital technologies to drive workforce productivity to achieve company performance and financial success. The principles of digital transformation and modern management postulate that digital technologies should principally support user-centric requirements and preferences to maximize business productivity. However, traditional IT management tools are not designed to fully gauge and respond to user experiences issues. Digital experience management (DEX) solutions emerged in recent years to directly address this service delivery gap. Related solutions collect comprehensive contextual information on user interactions with

digital technologies, analyze the data to quantify user experiences, and provide support for remediating any deficiencies. This Enterprise Management Associates® (EMA™) Radar Report identifies the 12 leading DEX solution providers—including 1E, Applixure, Catchpoint, Cisco, ControlUp, Datadog, Dynatrace, Lakeside, Martello, Nexthink, Qualtrics, Alluvio Aternity, and VMware—and empirically compares and grades their offered solutions against a broad range of measurements to determine overall product strengths and cost-efficiencies.

Understanding Digital Experience Management (DEX)

Delivering on the Promise of Digital Transformation

Every modern enterprise implicitly recognizes the importance of digital transformation principles. The concepts first emerged in the 1980s when personal computers broadly entered the workplace and were reinforced over the next few decades as the internet emerged as the single most important business resource. The term "digital transformation" specifically speaks to the integration of digital technologies (devices, applications, SaaS services, etc.) into every aspect of business operations. Nearly all of today's workers rely on the use of at least some technologies to perform essential job tasks. The availability of smaller and more powerful computing systems has accelerated digital transformation initiatives and led to the introduction of more complex and feature-rich information technology (IT) environments.

Unfortunately, an increase in the quantity of IT services does not directly translate into an increase in workforce productivity. Modern business environments employ a wide variety of IT services accessed across numerous clouds and business-hosted environments from multiple endpoints (i.e., desktop PCs, laptops, mobile devices, wearables, and IoT devices). While businesses have been quick to adopt technologies that they perceive will enhance their operational performance, they are often surprised to discover that actual improvements fall short of targeted goals. Not surprisingly, people are not as predictable as machines. Workers bring with them varying degrees of familiarity with digital resources, and while some will rapidly adapt to the introduction of new technologies, others will struggle to keep up. Additionally, as IT ecosystems have become more complex, overall workforce efficiency often declines as employees must "jump through hoops" to perform tasks that should really be effortless.

Disillusioned with the effects of popularly implemented digital transformation initiatives, many businesses today are revisiting foundational IT management concepts with an eye toward enhancing workforce experiences and productivity. While it may seem that this always been an IT focus, traditional management practices have been principally business-centric rather than user-centric.

Common business practices for IT emphasize the achievement of service-level agreements (frequently defined as recording the availability of IT services), security and compliance achievements, and reducing IT management efforts and related costs. Until recently, accommodating unique user needs and preferences was only addressed if they did not impact the business-specific considerations.

Over the past few years, IT management disciplines have increasingly incorporated concepts from modern management theory. To be clear, modern management theory is not, in fact, very modern, since the concepts really date back to the early days of the Industrial Revolution. The approach postulates that workforce productivity is predicated by job satisfaction, rather than purely by financial compensation. Applying these principles to the present-day use of IT, a consensus has formed that also asserts that technology should serve the workers, not the other way around.

Much of the credit for encouraging businesses toward a more modern management approach has been the collective urging of the users themselves. The bring your own device (BYOD) and "consumerization of IT" trends that emerged following the introduction of iPhone and Android mobile devices in 2007 led to a broader expectation among workers that they will be able to utilize the devices, applications, and IT services they are most comfortable using. These unprecedented demands for personalized IT experiences have become a cornerstone for attracting and retaining talent. According to EMA primary research, one out of every ten workers will actively seek employment elsewhere if they are forced to use IT resources they do not like.

Transitioning from traditional business-centric to modern user-centric IT service delivery requires a fundamental re-envisioning of core management processes. In particular, solutions need to be introduced to quantify user experiences and provide actionable guidance on how to remediate any deficiencies in real time. Recognizing these evolving requirements, a number of innovative solution providers have developed a unique class of IT management platforms that target digital transformation and modern management core principles.

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The Emergence of Digital Employee Experience Management (DEX)

Many early solutions developed to enhance digital experiences evolved from platforms supporting application performance monitoring (APM) and were designed to gauge user experiences when using managed software services. These approaches quickly segmented into two markets: solutions supporting applications utilized by business employees and those targeting consumer audiences. Since consumer experiences directly affect business sales performance, related solutions—customer experience management (abbreviated: CEM or CXM)—were more popularly adopted and continue to garner significant attention today. Solutions focused on improving the digital experiences of employees saw relatively slower adoption rates as businesses placed a higher priority on other IT considerations, such as security assurance, business intelligences, and cloud adoption. Nonetheless, recent trends for supporting work-from-anywhere initiatives and the delivery of user-centric IT services to increase workforce productivity are accelerating adoption of platforms designed to manage business employee digital experiences.

It should be noted that at the time of this writing, the management of employee user experiences is not an explicitly defined practice. In fact, there is not even a consensus on what the practices should be called. Common terms for related approaches include digital experience management (abbreviated: DEX or DEM), digital employee experience management (DEEM), employee experience management (EXP), user experience management (UX, UXM, or UEM), and end-user experience management (EUEM). EMA conducted an informal inquiry among solution providers and determined that digital experience management (DEX) is the most frequently employed term describing this particular class of solutions. As such, EMA has standardized on DEX as referencing practices and solutions for monitoring, analyzing, reporting, and remediating issues dealing with user experiences.

Definitions of the scope of DEX practices also vary greatly, with most vendors describing it as the feature set offered by the tools they are selling. However, at a high level, several common characteristics among DEX solutions can be distinguished, even if individual approaches to how they are achieved substantially differ. EMA has determined that most DEX platforms offer features that can logically be segmented into the following four categories:

Objective User Experience Data Collection

The performance of digital technologies has a direct impact on user experiences. By collecting contextual information on the performance of devices, applications, networks, and service-hosting environments, administrators can objectively identify IT service deficiencies and opportunities for performance improvements.

Subjective User Experience Data Collection

No two users experience technologies in the same way. What is easy for one user may be difficult for another. To ascertain how an individual user is perceiving an IT service, either their actions and responses must be recorded or they must be periodically surveyed to provide feedback.

Intelligent User Experience Data Analysis

The collection of both objective and subjective user experience data is typically too extensive to be manually reviewed by administrators in real time. The employment of intelligence technologies, including analytics, machine learning, cognitive computing, and language processing, is essential for the rapid correlation of the complex datasets to quantify and score user experiences, as well as provide guidance on experience improvements.

User Experience Problem Remediation

Once user experience data is collected and analyzed, remediation processes should be executed to proactively improve end-user productivity and satisfaction with offered IT services. Remediation approaches may include service desk notifications, the creation of workflows, administrator executable responses, and fully automated responses.

Assessing the DEX Market

To assist organizations in identifying DEX solutions that will most effectively meet their requirements for improving employee productivity and experiences in the utilization of digital technologies, EMA evaluated the leading platforms available on the market today. To be clear, EMA defines "value" as the ratio derived from the strength of a product set against its cost-efficiency. Put simply, the more users pay for a solution, the greater the advantages they should receive in terms of breadth of functionality and supportability. EMA's review process began with the determination of critical DEX features and capabilities. This list was used to establish evaluation KPIs that were ranked and weighted to correspond with the requirements EMA determined that organizations that have adopted or plan to adopt in a digital experience management platform. The prioritization determinations were based on discussions with IT operations managers, survey-based research responses, and end users, as well as EMA's own experience and knowledge of enterprise requirements and best practices.

From these KPIs, a minimum level of functional requirements was established to identify which management platforms qualified for recognition as leading DEX solutions. Minimum requirements included providing support for most or all of the principal DEX practice elements (objective data collection, subjective data collection, intelligent analysis, and remediation).

EMA reviewed over two dozen vendors claiming to offer functionality for monitoring and managing employee digital experiences. Of these, EMA internally identified nine that were determined to offer sufficient functionality to warrant a detailed review. Each of these vendors was invited to participate in the in-depth evaluation process.

A detailed questionnaire on the capabilities, cost, and supportability of their respective product sets was submitted to each of the selected digital experience management solution providers. More than 300 points of comparison were considered and all responses were carefully vetted for accuracy. Any vendors who did not participate in providing product information were evaluated based on publicly available sources including documentation, technical writings, video demonstrations, and other published resources. EMA also conducted interviews with vendor customers to confirm product capabilities and indicate customer satisfaction with the product sets. Scoring of the vendor solutions was mathematically calculated by correlating available features, architectures, pricing, and capabilities with the predetermined KPIs. Some individual feature scores were adjusted based on firsthand customer experiences with the product sets. Final scoring of each product set was used in the creation of the product comparison charts and in the determination of award winners.

Characteristics of a Preferred Solution

The EMA Radar Report evaluation process standardizes the review of product sets in specific management disciplines by comparing vendors and product characteristics in five distinct categories: architecture and integration, functionality, deployment and administration, cost advantage, and vendor strength. Identified in the following sections are the elements EMA believes are indicative of an ideal digital experience management solution in each of the primary evaluation categories.

Architecture and Integration

The ideal DEX solution is architected to centrally assess and improve user experiences across all types of devices, applications, and IT services that end users utilize to perform business tasks. Deployments should be flexible to support enterprise hosting requirements for on-premises, cloud, or hybrid implementation. Solutions offering a modular approach to platform adoption that allows customers to purchase individual management components must be fully integrated to simplify and ensure consistency across administrative processes. If multiple management services are necessary to support especially large or geographically distributed environments, all management resources should still be maintained from a single master instance that is accessed from a unified console. Scalability of the product set should be achieved by enabling expansion based on increasing enterprise requirements (i.e., a growing number of supported endpoints, expanded user support needs, etc.). Cloud-hosted services typically have an advantage over on-premises solutions for achieving scalability because they require no additional hardware or software installations to support increased support stack sizes.

The assessment of digital experiences requires broad visibility into contextual conditions and IT service states, and no single DEX platform can be expected to natively collect this required information across all applications, devices, and hosted IT service supported in all business environments. Integration with third-party IT resources, therefore, is an essential capability for establishing holistic visibility into digital experiences. Additionally, integration points allow organizations to leverage third-party management platforms for the execution of remediation activities. DEX platforms that include a broad range of direct integrations are more extensible and easier to deploy and maintain. EMA recognizes "direct integrations" as solutions that federate collected data, employ a common data collection process, enable task executions, and/or store data in a common repository without the need for additional coding or customization. IT management resources for which direct integrations are relevant to DEX solutions include:

- Directory services (e.g., Active Directory, LDAP, etc.)
- Service management platforms (e.g., ServiceNow, BMX Helix, etc.)
- Systems management platforms (e.g., Microsoft System Center Configuration Manager, VMware Workspace One, etc.)
- Security management platforms (e.g., Splunk, IBM QRadar, etc.)
- Business productivity tools (e.g., Microsoft 365, GSuite, etc.)

Since direct integrations can not be included for all possible IT resources, the availability of robust APIs is essential for the easy establishment of custom integrations. Open APIs are particularly advantageous for allowing third-party solutions to leverage the extent of a DEX platform's features and capabilities. Alternatively or additionally, a DEX platform may offer software developer kits (SDKs) that allow organizations to custom code integration points or actions that are externally executable.

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Functionality

DEX encompasses a broad range of capabilities that are essential for monitoring, analyzing, and remediating user experiences. Some product sets include unique features that perform very specialized tasks, so each organization should carefully identify and prioritize which capabilities are most applicable to its business requirements before initiating a product comparison. For the purposes of this evaluation, EMA identified several key functional capabilities for achieving DEX requirements. While no offered platform will comprehensively include all noted capabilities, the number and strength of features supported provide an indication of how well a solution will address specific DEX goals. The features noted are logically organized to correspond to the four primary pillars of DEX support.

Objective User Experience Data Collection

- **System Monitoring** – The collection of performance indicators from endpoint devices and their operating systems including configuration and status information. System elements that should be monitored include CPU and memory utilization, running processes, storage disk states, and network performance. Additionally, the DEX platform should be able to recognize and monitor virtual desktop instances. All collected system information should be recorded centrally for easy access and to simplify analysis.

- **Application Monitoring** – Users should monitor all software components they employ to identify any configuration or performance issues. These include applications installed on endpoints, business-hosted applications, and SaaS applications. Browser performance should also be monitored to ensure reliable connections to web-hosted applications.

- **Real User Monitoring (RUM)** – The detailed analysis of user interactions with applications and online services. Related solutions help gauge IT service performance and reliability from endpoint perspectives. Optimal DEX platforms can collect RUM information from all application types (local, web, SaaS) employed by business workers. Key data to be collected includes the frequency and timing of user activities, identification of how users navigate IT services, user entry and exit actions, and the recording of user actions (such as individual button clicks).

Subjective User Experience Data Collection

- **User Sentiment Surveys** – Determining actual user perceptions of applications and IT services requires them to provide direct feedback on their experiences. Surveys may be distributed over email, accessed via a web portal, or (most effectively) presented as a popup on endpoint screens while users are actively utilizing related services. Ideal solutions provide features for building surveys and orchestrating their distribution or execution.

- **Rendering of User Views** – By statistically rendering what users actually see when they interact with applications in a business workflow, capturing application response times, and comparing those times against established baselines, administrators can subjectively interpret user experiences.

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Intelligent User Experience Data Analysis

- **Synthetic Transactions** – The ability simulate user activities normally performed on IT applications or environments helps administrators test new resources prior to their implementation and identify performance issues on existing IT services. DEX solutions may use synthetic transactions to determine the impact of configuration changes on endpoints or the introduction of system updates and patches.

- **User Experience Scoring** – Analytics and/or machine learning technologies should be employed to quantify user experiences into a single numerical score. This score may be used as a threshold trigger for initiating administrator investigations or automated responses and may be incorporated into service-level agreements (SLAs) or experience-level agreements (XLAs). An ideal DEX solution will calculate user experience scores based on both objective data (empirical hardware, operating system, and application statistics) and subjective data (end-user survey responses).

- **Intelligent Root Cause Analysis** – Intelligence technologies should be utilized to identify the event, setting, configuration, or state that resulted in the degradation of user experiences. This information can only be attained by correlating complex conditional information that would be impossible to perform in real time using manual processes. Root cause determination is an essential step for initiating automated remediation processes.

- **Intelligent User Segmentation** – Since users employ technologies in different ways and for different purposes, it is beneficial to group users based on similar IT utilization properties. Intelligence technologies can analyze how users employ applications and devices and segment them based on commonalities. Optimal configurations can then be demined for one user by examining those that are most beneficial to the user's peers.

- **Interpretation of Natural Language** – Natural language processing (NLP) should be utilized to interpret open field feedback provided in user sentiment surveys to assist with user experience scoring and remediation recommendations. NLP may also be used to simplify administrator queries by allowing them to ask unstructured questions.

User Experience Problem Remediation

- **Automation Support** – The remediation of user experience issues is dependent on the breadth of automated response scripts. An ideal DEX solution will natively include an extensive library of automated scripts that will perform remediation tasks either on demand (executed by an administrator) or in response to an action trigger. Optimal solutions include features for internally building new custom automation scripts as well as importing externally created scripts. They will also support a variety of scripting languages and include script validation tools.

- **Remediation Action Triggers** – Proactive DEX processes are enabled by introducing automated solutions that resolve conditions that will diminish user productivity before they impact user activities. Triggers are the states or actions that will initiate an automated response, and an optimal approach has the flexibility to define a wide range of triggers, including detection of deficient states, responses to user sentiment surveys, the crossing of predetermined KPI thresholds, and contextual changes (such as disconnecting from the platform server or network).

- **Remediation Orchestration** – Remediation actions often require the utilization of multiple individual automation scripts. Orchestration functionality allows administrators to define and sequentially order a series of automated steps into a single workflow. Additionally, individual automation steps or whole workflows may be scheduled to occur during maintenance windows or other times when they will not impact end-user productivity.

Deployment and Administration

The ease with which a solution can be deployed is directly related to the complexity of the infrastructure supporting it. The more hardware and software elements need to be installed, the more challenging the deployment will likely be. An ideal solution will employ automation for enabling a turnkey deployment process, rapidly installing software components (such as databases, reporting engines, and console interfaces) and automatically detecting the mobile endpoints that will be supported. While cloud-hosted platforms typically do not require any on-premises software or hardware installation, organizations sometimes have the option of installing an on-premises staging area to host software elements, such as data repositories, to meet compliance and business requirements. If agents need to be deployed on managed devices, they should be automatically pushed from the console server or made available for download by the end user from a publicly available source (such as a web portal or app store).

Administration is simplified with an intuitive and customizable console interface that consolidates all DEX processes, dashboards, and reports. A mobile application or HTML5-based web interface that enables console access is advantageous for IT administrators who need to provide remote or out-of-hours support. The processes for collecting configuration and status data from applications and devices should be automated, requiring little or no administrator interaction. Dashboard views should be customizable and graphically display easily-digestible information, including aggregated experience scores, historical trends, and the status of DEX tasks (e.g., survey campaigns, remediation actions, etc.) for individual applications/users, groups of applications/users, or enterprise-wide views. Administration is further simplified by the inclusion of direct management tools, such as the ability to query specific information from endpoints, initiate a remote access and control session, or communicate directly with end users. Dashboard views and administration actions should be designated to adapt to individual roles.

Vendors must also display a commitment to supporting the DEX platform and its user community. Maintenance contracts should be offered that deliver responsive and continuously available live support, as well as timely product updates. Vendors should offer professional services staffed with support professionals who are knowledgeable about their solution set and management processes to assist customers with training, problem solving, environment optimization, and the initial product deployment. Vendors should also engage the user community by hosting online forums and regular conferences or meetings to educate organizations on the effective use of their platforms and on DEX best practices.

Cost Advantage

Pricing models for a DEX platform should be simple to understand and easy to calculate. Commonly, DEX solutions are offered for a subscription price, priced either by the number of supported users or endpoint devices. Since EMA research shows that the majority of business professionals employ more than one device, the adoption of user-based licenses will benefit many organizations even though these licenses are generally offered at a slightly higher rate than device-based licenses. Maintenance contracts, which provide access to platform updates and the vendor's help desk, are typically offered with subscription licensing for no additional cost. Additionally, cost considerations should include any infrastructure costs, such as for on-premises servers or database licenses.

Vendor Strength

Consumers should always be aware of a vendor's stability and its commitment to a platform prior to adopting the solution in order to be sure of its long-term viability. A vendor that is financially strong with high revenue and vast equity is more likely to continue support for a management platform. Solution providers that invest heavily in research and development will also be assured of maintaining continual value in the platform's architecture and feature set. Strategic and channel partnerships also increase vendor relevance in the marketspace, and customer loyalty provides visible credibility of the platform's favorability. Additionally, a vendor's vision and strategy for development, innovation, and foresight of future requirements indicates whether a management solution will maintain optimal value in constantly changing marketplaces.

Evaluation Criteria

Feature Eligibility

For a product set to be credited with a feature or capability in EMA's evaluation, it was required to meet three strict criteria:

- The features needed to be generally available with the solution set at the time of the evaluation. Any features that were in beta testing or were scheduled to be included in later releases of the management suite were not eligible for consideration.
- All features needed to be self-contained within the included package sets. Any features not natively included in the evaluated package sets, but available separately from the same vendor or third-party vendors for an additional cost, did not qualify.
- All reported features needed to be clearly documented in publicly available resources (such as user manuals or technical papers) for verification of their existence and to ensure they are supported.

Financial Evaluation

To enable product license cost comparisons that are as fair as can possibly be attained through analytical processes, EMA developed six sample support models and applied vendor pricing to each. Pricing included subscription costs for all products, add-ons, and modules necessary to achieve the functionality credited in all other sections of this evaluation. Additionally, expenditures were added to account for any additional hardware and/or software infrastructure costs necessary for the platform to operate, and maintenance costs (if applicable) were calculated for the time specified in each model. The results for each of the six models were empirically rated on a pricing scale (i.e., rated from 1-10 with a two-decimal point level of accuracy). Ratings for all six models were then averaged to provide the final scoring reported in this evaluation. The six models used in EMA's evaluation are as follows:

- **Short-Term Small Business Model** – supporting 100 users (140 devices) over 3 years

- **Long-Term Small Business Model** – supporting 100 users (140 devices) over 7 years
- **Short-Term Medium Business Model** – supporting 1,000 users (1,400 devices) over 3 years
- **Long-Term Medium Business Model** – supporting 1,000 users (1,400 devices) over 7 years
- **Short-Term Large Business Model** – supporting 10,000 users (14,000 devices) over 3 years
- **Long-Term Large Business Model** – supporting 10,000 users (14,000 devices) over 7 years

Organizations that offer multiple product licensing and/or deployment models were evaluated across all potential scenarios, and the best scores achieved were calculated in the final tabulation.

Vendor Profile Feature Scorings

The scoring of solution features was achieved by comparing product and vendor characteristics against EMA's predetermined KPIs defining an optimal DEX solution. To bring visibility to EMA's evaluation results, the full vendor profiles included in this report provide indications on how EMA rated support in each reviewed category. Feature ratings are defined as follows:

- **None** – The platform offers no features in this category
- **Limited** – The platform supports only a few features in this category
- **Solid** – The platform supports a moderate number of features in this category
- **Strong** – The platform supports most features in this category
- **Outstanding** – The platform features in this category exceed EMA-defined requirements

On the EMA Radar™

Digital Employee Experience Management Market Overview

EMA defines value in any solution as a comparison of the strength of the platform against its total cost of ownership. The EMA Digital Experience Management Market Landscape Chart provides a graphical representation of evaluated industry leader positioning in relation to both critical axes. The "Product Strength" axis combines evaluation scores for *Functionality* with *Architecture & Integration*. "Cost-Efficiency" is calculated by adding the scores achieved for *Cost Advantage* and *Deployment & Administration*. The size of each bubble indicates the *Vendor Strength* as quantified in their individual profiles.

EMA RADAR REPORT FOR DIGITAL EMPLOYEE EXPERIENCE MANAGEMENT

vmware®

Overview

VMWARE

Digital Employee Experience
Management (DEX)
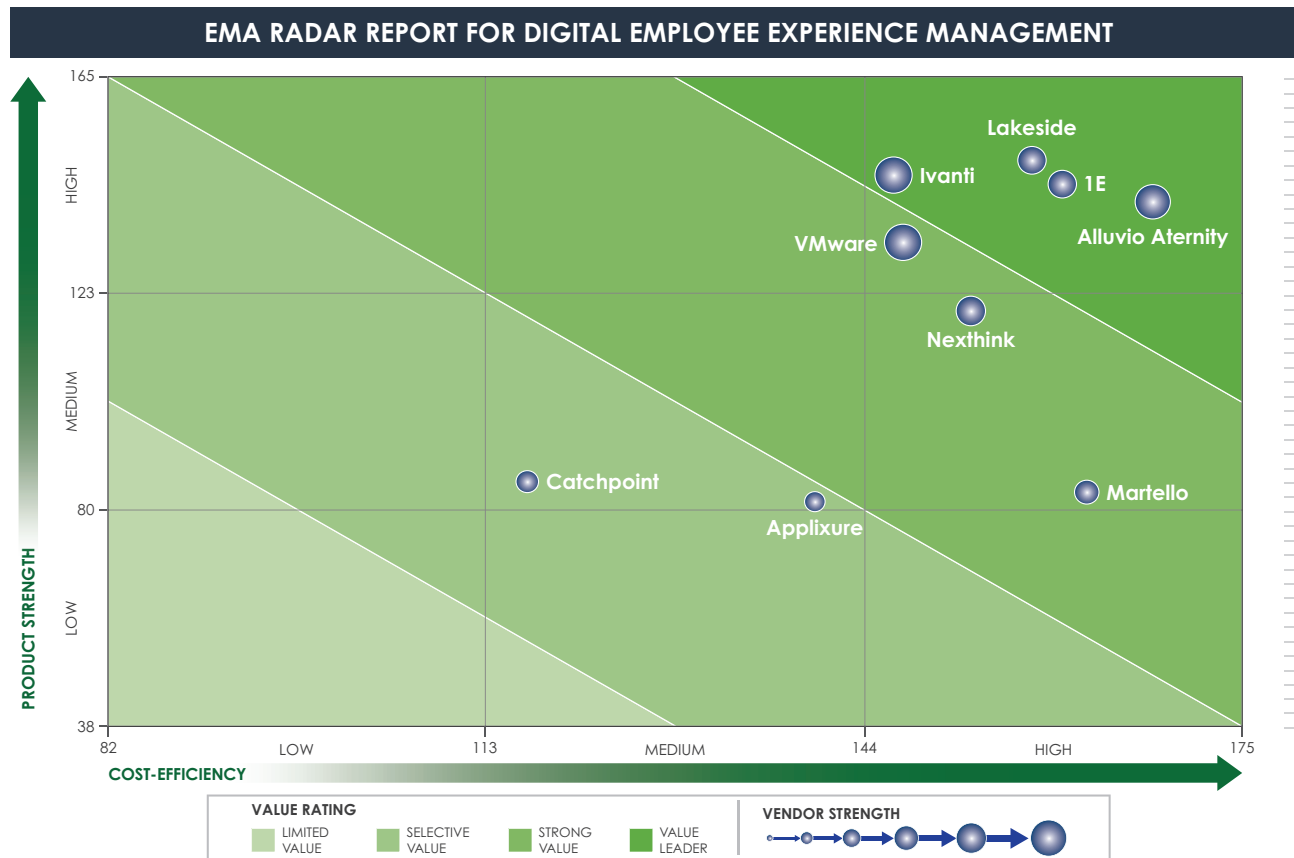
Expanding its unified endpoint management (UEM) solution suite, Workspace ONE, VMware introduced its DEX solution in 2020 with functional support for employee lifecycle service delivery, remote support, and an additional component to the platform's Workspace ONE Intelligence module, Digital Employee Experience Management (DEEM). Adopting a cloud-first approach, Workspace ONE enables administrators to measure, analyze, and remediate end-user experiences with machine learning-driven root cause analysis and prebuilt integrations to support endpoints and users at any location. A single employee experience score combines device, app, and network telemetry data with user sentiment surveys.

Headquarters:

Palo Alto, CA

Territories Supported with a Regional Office:

- North America
- Central & South America
- Europe-Middle East-Africa (EMEA)
- Asia Pacific (APAC)

Company Website:

www.vmware.com

Product Name:

VMware Workspace ONE Digital Employee Experience Management

Architecture:

SaaS, on-premises, hybrid

Notable Features:

- Provides an employee experience score
- Tracks device health and performance
- Monitors application and OS performance and stability
- Measures application utilization and engagement
- Utilizes mobile app analytics to understand user interactions
- Automates IT tasks across applications and devices

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VMware 344.90
Average 242.31

Functionality
63.11

Deployment &
Administration
78.32

Cost Advantage
43.63

Vendor Strength
90.00

Architecture &
Integration
69.84

100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00

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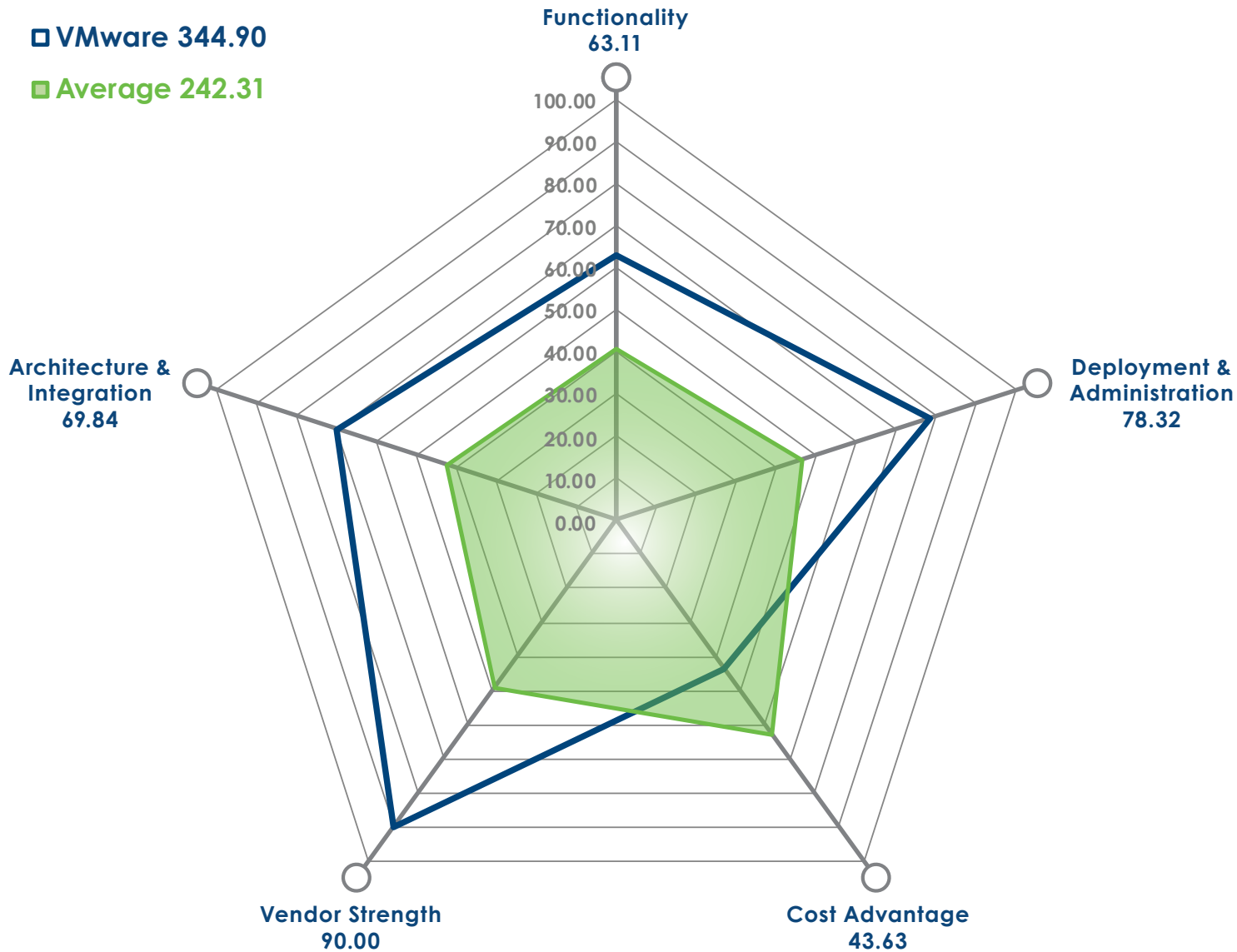
Deployment & Administration

Ease of Deployment	
Deployment Complexity	Strong
Endpoint Onboarding	Outstanding

Support and Services	
Customer Support	Strong
Community Services	Strong
Professional Services	Strong

Ease of Administration	
Console Ease of Use	Strong
Survey Design	Solid
Prebuilt Reports and Scripts	Strong
Customizable Dashboards	Strong
End-User Communication	Solid

While a fully SaaS implementation of Workspace ONE does not require any infrastructure installation, on-premises software and hybrid approaches necessitate the deployment of physical or virtual management servers and an SQL database. Adding a Digital Employee Experience Management add-on package to an existing Workspace ONE implementation requires little effort once the license is purchased. Endpoint devices are autodetected, and agents are installed on devices automatically, manually by administrators, or downloaded from an app store by end users. The centralized web console features selectable and customizable dashboard visualizations on the status of endpoints and collected user experience details. Administrators can communicate with end users and share their screens during remote access sessions using Workspace ONE Assist. Maintenance contracts with VMware Workspace ONE include 24x7x365 access to remote live service desk support via phone, email, or web chat sessions. VMware also offers professional services for onsite support to assist with installation, training, and problem remediation. Subscribers are also provided access to a knowledgebase portal and a moderated online user group community forum.

VMware Workspace ONE User Experience Dashboard
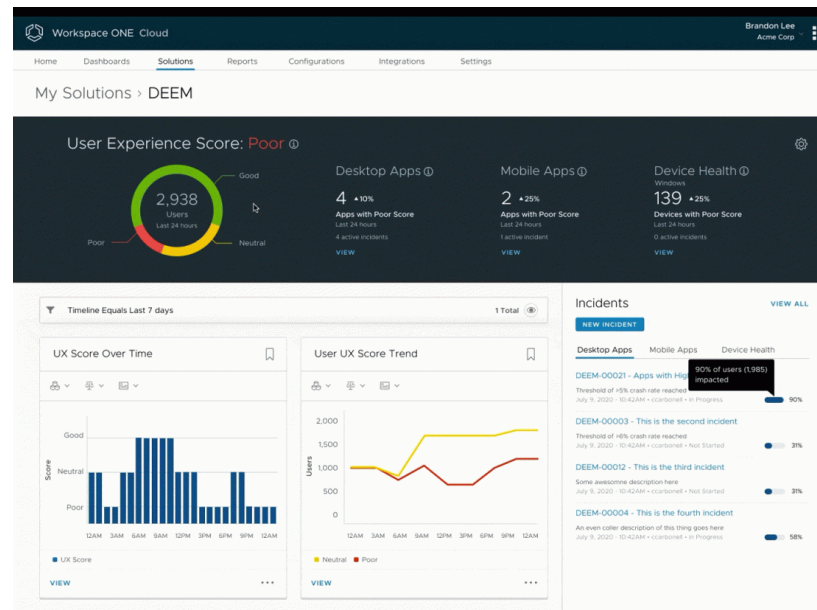
Architecture & Integration

Architecture	
Infrastructure Complexity	Strong
Deployment Flexibility	Outstanding
Scalability	Strong
Data Collection Architecture	Strong

Heterogenous Endpoint Support	
Windows	Strong
macOS	Strong
Mobile Devices	Outstanding
Virtual Desktops	Outstanding
Other	Strong

Integrations	
Direct (prebuilt) Integrations	Strong
APIs & SDKs	Outstanding

VMware Workspace ONE may be deployed as a cloud-hosted SaaS solution, an on-premises software-based solution, or a hybrid solution, including both cloud and on-premises components. The platform employs a common console interface and a centralized reporting engine, and a single instance of the on-premises solution can support up to 30,000 endpoints. All platform features are supported for iOS, Android, Windows 10 and 11, and macOS (versions 10.12 and up). Some features are also supported on legacy editions of Windows (versions 7 and 8) and Mac OS X (10.10 and 10.11). Additionally, Workspace ONE provides support for Chromebooks, thin clients, Bluetooth-connected wearables, rugged devices, and virtual desktops. Workspace ONE directly integrates with directory services (including Active Directory, Azure Active Directory, and LDAP) and identity providers (such as Okta and Ping). Examples of other management platforms with which Workspace ONE integrates include Splunk, ServiceNow, Adaptiva, and Flexera. Public and private API access to Workspace ONE is available for organizations to build web-based or other consoles for feature access.
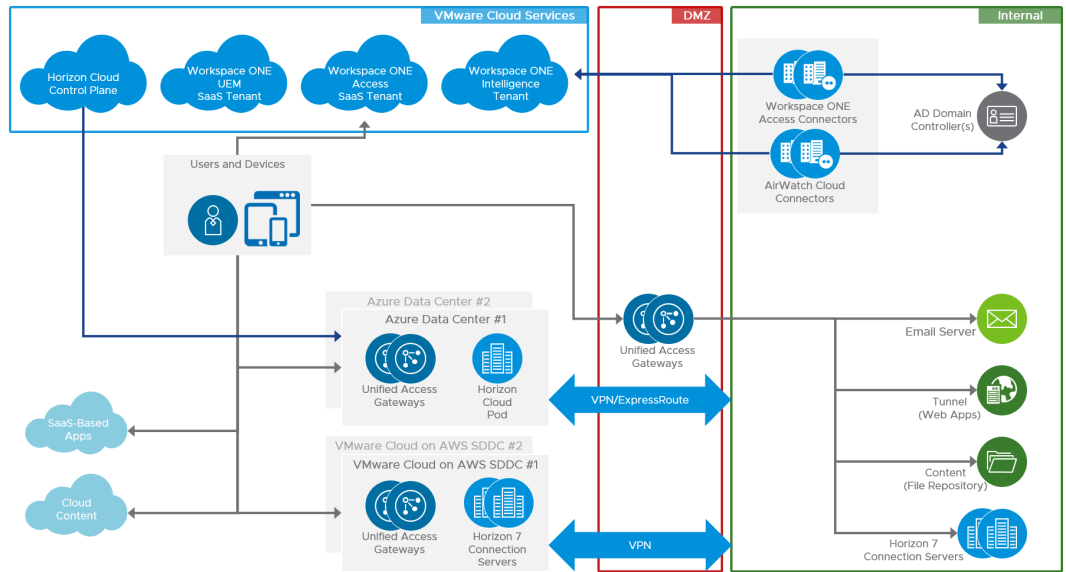
Functionality

Subjective Data Collection	
Survey Style	Solid
Survey Design	Strong
Campaign Management	Solid
Survey Triggers	Strong
Rendering of User Views	Strong

Objective Data Collection	
Hardware Monitoring	Outstanding
OS Monitoring	Outstanding
Application Monitoring	Strong
Network Monitoring	Strong
Real User Monitoring (RUM)	None

Intelligent Analysis	
User Experience Scoring	Strong
Predictive Performance	Strong
Root Cause Analysis	Strong
Synthetic Transactions	None
Performance Baselining	Strong
User Segmentation	Strong
Natural Language Processing	None

Automated Remediation	
Prebuilt Scripts	Strong
Custom Scripting	Solid
Remediation Action Triggers	Strong
Remediation Orchestration	Strong

To collect subjective user experience feedback, administrators may create surveys in Workspace ONE Intelligence using an included design engine. Surveys are distributed to end users through the Intelligent Hub as notifications and administrators may initiate the surveys on-demand, schedule them for a specific time, or have them triggered by a predetermined condition or event. Surveys may also target specific groups of users, such as by device or installed applications. Administrators may also interpret user experiences utilizing features for remote access and session recording.

Workspace ONE collects granular details on supported endpoint devices—including on device ownership, device location, operating systems, patch levels, hardware configurations, system performance, and network speed—and stores the information in a centralized asset data repository. The platform also collects and historically tracks information on installed applications, application errors, and software licenses.

Leveraging machine learning and analytics, collected endpoint and network performance date is used to calculate user experience scores. Intelligence technologies are also used to perform root cause analysis and to predictively detect performance issues. The Smart Insights feature included with the platform dashboard also utilizes machine learning algorithms to notify administrators of anomalies detected outside of trended performance baselines.

Workspace ONE includes a number of automations for performing automated remediation to detect problems, such as for installing software and making configuration changes. The platform can import and execute custom scripts that are built with PowerShell, Bash, Python 3, or Zsh. Remediation automation and scripts may be executed on-demand or triggered by a detected event or condition. Freestyle, a low-code IT orchestrator platform, is also included, enabling administrators to create remediation workflows.

Cost Efficiency

Pricing Model	
License Costs	$$$$$
Maintenance Costs	Included
Infrastructure Costs	None (SaaS)

VMware offers Workspace ONE for an annual subscription free, priced either per device or per user. Three principal editions of the platform are offered (Standard, Advance, and Enterprise) with pricing proportional to the amount of functionality included in each. Lower cost "Essentials" editions are also offered targeting functionality specifically supporting mobile devices, desktops, or unified endpoint management (UEM). VMware's digital employee experience management functionality is included with the Enterprise edition of the platform and is purchasable as an add-on package with all other editions. For the purposes of EMA's evaluation and to ensure all noted functionality is supported, pricing for the Advanced addition with Workspace ONE Intelligence purchased as an add-on was reviewed.

VMware includes product updates and live support with all subscription levels. While the SaaS edition of the platform does not incur any infrastructure costs, on-premises and hybrid implementations will require the deployment of physical or virtual management servers.

It is important to recognize that EMA has only evaluated Workspace ONE's cost efficiency in relation to the offered DEX features. The platform includes a broad range of functionality supporting systems, service, and security management not included in this evaluation, and adopters may achieve more significant cost efficiency improvements as part of an overall IT management strategy.

Vendor Strength

Pricing Model	
Vision	Strong
Strategy	Strong
Financial Strength	Strong
Research and Development	Strong
Partnerships and Channels	Outstanding
Market Credibility	Strong

VMware describes its Workspace ONE Digital Employee Experience Management component of Workspace ONE Intelligence as an analytics platform that delivers integrated insights and automation to help keep employees productive and engaged at any location. VMware first introduced DEX add-on capabilities to the Workspace ONE endpoint management suite in 2020, distinguishing VMware as the first unified endpoint management (UEM) solution provider to enter the DEX market.

In May of 2022, it was formally announced that IT solution provider Broadcom had entered into an agreement to acquire VMware. Prior to this, VMware publicly reported $12.9 billion in annual revenue across its entire product portfolio. The company maintains an extensive technical and channel partner community. While VMware is not yet broadly identified as a leading DEX solution provider, the Workspace ONE brand is well recognized as a leading UEM platform and has attained a strong customer base.

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