Magic Quadrant for Unified Endpoint Management Tools

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UEM tools continue to mature as buyers migrate PCs away from legacy client management tools. I&O leaders responsible for mobile and endpoint strategy must evaluate these capabilities along with UEM tools’ ability to perform modern management of PCs and management of mobile devices.

Strategic Planning Assumption

Adoption of Windows 10, Google Chrome OS and Apple macOS will drive the need for a combined endpoint management console in greater than 70% of organizations by 2024.

Market Definition/Description

Gartner defines the unified endpoint management (UEM) tool market as a set of offerings that comprise mobile device management (MDM) and modern management of traditional endpoints (PCs and Mac). In addition, our definition includes — and this year’s Magic Quadrant heavily emphasizes — integration with client management tools (CMTs) and processes. This is because of the ongoing migration of PCs from legacy CMTs to UEM that Gartner witnesses in a majority of end-user organizations. The complexity of this task has driven the decision to add CMT functions and integration to the inclusion criteria for 2019’s Magic Quadrant.

UEM tools act as a single console to manage the aforementioned device types, and allow for scalable management of a broad and diverse set of endpoints to:

- Provide a single console to configure, manage and monitor traditional mobile devices, PCs and device management of Internet of Things (IoT) assets.
- Unify the application of data protection, device configuration and usage policies.
- Provide a single view of multidevice users for enhancing efficacy of end-user support and gathering workplace analytics.
- Act as a coordination point to orchestrate the activities of related endpoint technologies such as identity services, security infrastructure and CMTs.

Baseline capabilities of UEM tools include:
MDM, consisting of:

- **Provisioning**: Configuration of Android and iOS devices, distribution of mobile applications, update management, and assistance with device life cycle management

- **Auditing, tracking and reporting**: Providing device hardware and software inventories, auditing settings, and usage to verify compliance with enterprise policies and manage assets

- **Enterprise data protection**: Applying controls for data encryption, mitigating data loss, handling data remediation, and expediting employee hiring and termination

Modern management of personal computers (PC), consisting of:

- Direct management of the following platforms, using OS-native management libraries:
  - macOS (required)
  - Windows 10 (required)

Interaction with existing CMT infrastructure or the inclusion of CMT features to facilitate the co-management of PC devices and/or the migration of devices and policies from CMT-based management to UEM-based management

Additional, but not required, features include the following areas:

- Direct management of a subset of nontraditional devices, such as:
  - Android-embedded devices (including, but not limited to, wearables)
  - Windows-embedded devices
  - Devices running IoT-specific OSs
  - Proprietary or nonproprietary IoT gateways
  - Chrome OS devices

- Analytics capabilities, including:
  - Gathering and monitoring various telemetry from users, apps and devices
  - Using these “signals” to inform policy and policy-related actions

- Inclusion of and/or integration with identity and access management infrastructure

**Magic Quadrant**

https://www.gartner.com/doc/reprints?id=1-1OC1AO2I&ct=190729&st=sb&mkt_tok=eyJpIjoiWWpJNE9XRXhaV0ZoTURjMiIsInQiOiJMQ0kzRWhPTkg5O…
Vendor Strengths and Cautions

42Gears

42Gears is headquartered in Bangalore, India, with offices in Fremont, California, and Manchester, England. The solution is called 42Gears UEM, previously known as SureMDM. The vendor has progressed from a focus on managed and locked-down devices to support for bring your own device (BYOD) and corporate-owned, privately enabled (COPE) devices. 42Gears enjoys a global presence, with its solution increasingly deployed to advance digital business and digital workplace initiatives. The solution is known to cater to the needs of multiple verticals, including education, healthcare, retail, financial services, hospitality, airlines, telecommunications and manufacturing.
42Gears UEM can manage devices that do not run on a standard OS. For example, “things” such as network printers, point of sale (POS) machines such as cash registers and scanners, and Bluetooth headphones can be managed through an IoT gateway that hosts an MDM agent. The vendor has addressed shortcomings in Windows 10 support from 2018, and now supports Windows Autopilot and the Microsoft Graph API to manage Office 365 apps through Intune mobile application management (MAM).

The solution provides an analytics rule engine that allows IT administrators to configure and schedule custom reports and use heuristic-driven analytics to trigger automated actions. These actions can include alert messages or new configuration policies.

42Gears is appropriate for organizations that want to deploy a UEM solution to manage a diverse array of company-owned PCs, mobile devices, ruggedized devices and wearables in a single console, with support for nontraditional, legacy and emerging platforms. Organizations looking to advance their digital business initiatives for frontline workers also should consider it.

**Strengths**

- 42Gears has proven capabilities in managing devices for frontline worker use cases involving augmented reality (AR)/virtual reality (VR), IoT and wearables, in addition to meeting the needs of knowledge worker productivity.

- 42Gears offers robust remote support, remote control and remote view capabilities across iOS (remote view), Android, Windows 10, Linux and macOS. This obviates the need for a dedicated remote support tool for common use cases.

- Customers consistently rank 42Gears high on customer service due to its quick response to address new enhancement requests and resolve support issues.

**Cautions**

- Although 42Gears has a proven customer base in small and midsize organizations, enterprise deployments are still rare, especially where existing enterprise license agreements with larger providers are in place. BYOD support is constrained by the lack of an MAM-only mode.

- 42Gears UEM is pending certifications, such as the U.S. federal government’s FedRAMP ATO and NSA CSfC, Common Criteria (NIAP MDM-PP), DISA STIG and FIPS 140-2, limiting its reach in security-conscious organizations.

- 42Gears has limited uptake among large enterprises in regulated verticals such as banking and finance.

**BlackBerry**

BlackBerry is based in Waterloo, Ontario, Canada. Its UEM product is the culmination of investments and acquisitions in recent years across the management, collaboration, IoT and analytics spaces. The BlackBerry UEM offering builds on the company’s reputation in the...
regulated and high-security mobile markets, adding modern management capabilities to Windows 10 (and higher) and macOS Sierra (and higher), while also providing management for wearables and many IoT devices.

BlackBerry continues to evolve its Workspaces product with support for external collaboration via Dropbox, OneDrive and other external repositories. Enterprise BRIDGE unifies BlackBerry Dynamics containerized apps with Office 365 apps via Intune. BlackBerry UEM also supports Microsoft’s Graph API, which allows BlackBerry to fully manage Office 365 app containers, leveraging Intune programmatically to set proprietary Office 365 data loss prevention (DLP) policies (“save as” control; Intune licenses required). BlackBerry also has one of the stronger offerings among UEM vendors for IoT devices, including integration with the BlackBerry Spark IoT communication platform and its Radar product, aimed at the transportation vertical. BlackBerry also has begun focusing on a suite of professional services, from cybersecurity to enterprise solution consulting.

BlackBerry’s UEM offering is appropriate for organizations that focus on highly secure mobility, collaboration, IoT and modern management for Windows 10 and macOS. The extensibility of BlackBerry to mobile devices and PCs is well suited to organizations seeking to offer company data on unmanaged devices.

Strengths

- BlackBerry’s strength in delivering a highly extensible secure personal information management (PIM)/container, and its long list of certifications, brand recognition and presence in regulated vertical markets make it a formidable competitor for other vendors approaching this vertical.

- BlackBerry’s partnership with Awingu to deliver virtual applications in its Access workspace tool provides integration with virtual apps that few other vendors in this space offer.

- BlackBerry Enterprise BRIDGE and Microsoft Graph API support provides flexibility to Office 365 organizations in how these apps are managed and integrated into business workflows.

Cautions

- Despite formidable vertical market strength in regulated industries, BlackBerry continues to gain traction in nonregulated markets slowly.

- BlackBerry lacks core features of CMTs such as device imaging and traditional patch management capabilities in its UEM offering. However, it does support coexistence with the Microsoft System Center Configuration Manager (ConfigMgr) CMT offering and provide tools for a phased transition to modern management.

- BlackBerry’s marketing and sales execution is heavily weighted toward platform plays centered on IoT and emerging technologies outside of UEM.

Citrix
Citrix, headquartered in the United States, offers Citrix Endpoint Management as a stand-alone UEM offering. The product offers UEM management for a variety of platforms, as well as providing direct integration to deliver virtualized applications using Citrix Virtual Apps and Desktops. Endpoint Management also includes a broad set of tools to help clients migrate to modern management from CMTs.

Citrix markets its Endpoint Management to customers using Microsoft’s Intune UEM product in addition to customers seeking a stand-alone UEM or those with existing Citrix investments. Citrix offers a full set of endpoint management capabilities to a broad set of operating platforms, ranging from mobile and PC devices to IoT devices such as its Citrix Ready Workspace Hub workplace IoT device. The MAM functionality from Citrix offers security policies, micro-VPN technology, containerized apps and integration with Citrix’s Content Collaboration offering, Citrix ShareFile. The vendor offers a suite of containerized mobile productivity apps that can be managed using Citrix Endpoint Management or Microsoft Intune MAM controls.

Citrix remains a good fit for organizations with an existing investment in Citrix virtualization technology and those using Citrix ShareFile. It is also a fit for companies that require a comprehensive suite of containerized applications, and for organizations considering the use of Microsoft Intune for its MAM capabilities for Office 365 apps. The latter can help minimize user-side disruption by allowing the same containerized apps to persist despite shifting from the Citrix offering to Intune.

**Strengths**

- Citrix Workspace offers a direct integration and easy-to-deploy solution for both device management and app virtualization under a single master management console to manage and deliver applications and content.

- Citrix’s containerized applications can be run on an unmanaged device. If an organization is equipped with Microsoft Intune licenses, these apps can be used on a Citrix-managed device or on Intune-managed devices, using Intune’s MAM controls and integrations.

- Citrix continues to catch up from its previous lack of features by offering new advanced functionality, such as machine learning and analytics to dynamically adjust device policy.

**Cautions**

- Due to the tight integration of Citrix products and licenses, clients without any existing or planned Citrix infrastructure should consider other vendors before evaluating Citrix.

- As in previous years, customers continue to report product support and stability issues, with some clients reporting that direct access to executives was needed to resolve the issue. However, such access is not available to all customers and is extremely difficult to scale.

- Gartner typically sees organizations buying Citrix Endpoint Management as a piece of a larger Citrix infrastructure offering and seldom as a stand-alone UEM.
IBM

IBM, headquartered in the United States, offers its UEM product, MaaS360 with Watson, a Security product under the IBM Cloud and Cognitive Software division. Security is a core element of IBM’s messaging and product development, and the company continues to broaden its approach to the market with a greater focus on user productivity.

IBM has taken advantage of its broad software portfolio to combine MaaS360 with adjacent IBM products in areas such as mobile threat defense (MTD), security information and event management (SIEM), and identity as a service (IDaaS) to address several related capabilities in a single product. Additionally, IBM has used its Watson AI expertise to deliver analytics designed to help customers identify and triage issues with devices managed by MaaS360. The automatically generated reports help surface critical issues that require attention. The reports can be customized with filters for issues based on geography and vertical industry. IT operations teams seeking to take on UEM without needing additional staff to administer the tool have called the feature highly valuable.

IBM leverages deep integration between MaaS360 and BigFix — which was sold to HCL in 2019 — to extend a rich set of CMT capabilities into the MaaS360 offering. IBM has continued internal development of capabilities in MaaS360 to enable coexistence with third-party CMT products beyond BigFix.

MaaS360 is a good fit for customers that want a SaaS-based UEM tool that has integrated mobile security and can automate some of the steps required to determine and maintain an ideal compliance and management posture across devices.

Strengths

- The addition of coexistence with third-party CMTs, along with group policy object (GPO) migration capabilities, creates new opportunities for IBM to pursue traditional CMT customers outside of the BigFix community as a bridge toward modern management.

- Customers continue to report that MaaS360 is easier to implement than other UEM solutions.

- MaaS360 provides several policy templates through a wizardlike interface that uses AI to deliver benchmarked reports that enable customers to configure and validate their environment against peer and published practices.

Cautions

- IBM will continue to make IP BigFix CMT intellectual property integrated into the product available to existing licensees through the end of their contract. The vendor will lose full control of cross-selling between the two products.

- MaaS360 is SaaS-only; it does not provide an on-premises management option. However, the solution does offer an on-premises access gateway for email and other applications.
Ivanti

Ivanti, headquartered in the United States, was formed in early 2017 following the acquisition of Landesk by private equity firm Clearlake Capital, merging it with HEAT Software. Since the merger, the company has added several acquisitions to its portfolio, including Concorde Solutions and RES Software, for asset management and identity and automation, respectively. The vendor’s UEM offering is based on its enterprise mobility management (EMM) offering, which previously bore the Landesk brand.

Ivanti’s UEM strategy builds on Landesk’s pedigree in the CMT market. In 2016, Ivanti switched its EMM product focus to the Landesk technology. The vendor has since combined its EMM and CMT products, providing a “single pane of glass” for management of all relevant endpoints. Ivanti is one of the few vendors in this research that offers a full CMT solution as part of its UEM offering.

Ivanti is a good fit for organizations currently managing their PCs using its tools, and those not yet looking to dive head first into modern PC management, but rather for a gradual transition via co-management of CMT functionality with native integration into EMM.

Strengths

- Ivanti’s bundled licensing across its portfolio of integrated IT service management, IT asset management and security products provides it with opportunities to position existing products as entry points to a migration path toward UEM.

- To support customers with complex environments or initiatives, Ivanti has expanded its core UEM offering with a SaaS add-on in 2019, Ivanti Cloud. This product provides analytics and real-time intelligence delivered via dashboards, as well as a natural language search to support initiatives such as device migrations and health assessments.

- Ivanti demonstrates a breadth of UEM features in its offering, pairing established CMT offerings from its Landesk heritage with rich mobile management capabilities aimed at providing a user-centric view of devices, policies and status information.

Cautions

- Gartner does not see the Ivanti offering on many clients’ UEM shortlists and has encountered a number of buyers that more closely associate Ivanti with its legacy Landesk CMT roots, rather than with mobile device or IoT management.

- The majority of the vendor’s UEM presence is in North America and EMEA, with limited customers outside of those regions.

- Relatively few of Ivanti’s customers are taking advantage of its cloud solution since its release in March 2019 when compared with its on-premises deployments that predate the SaaS
ManageEngine

ManageEngine, headquartered in the United States and Chennai, India, offers its UEM products under both the ManageEngine and Zoho brands, the latter a SaaS-based set of IT-facing tools and productivity apps for midsize enterprises. The ManageEngine offering builds on the company’s mobile-centric offering, adding features for Windows, macOS and desktop Linux device management. Features for management of OSs and other tools, such as remote support/management, are not offered across all supported platforms.

ManageEngine has addressed some traditional CMT functions, but its overall UEM offering remains focused on postmigration for customers approaching UEM, not on offering rich bridging technology to support the migration from CMTs.

Gartner clients report that the product offers solid value based on its cost, but those critical of the tool cite feature depth and difficulty in customizing the tool as reasons for their middling reviews. ManageEngine is an appropriate choice for customers invested in the Zoho and ManageEngine platforms, due to its integration with these broader infrastructure offerings.

Strengths

- ManageEngine’s UEM solution is tightly integrated with a broader midsize enterprise-focused platform of IT automation, management and user-facing tools.
- With a strong set of CMT functions, ManageEngine’s offering is well suited to organizations looking to ensure that the migration to UEM does not come at the cost of key PC life cycle management features.
- ManageEngine’s CMT functions are available on Windows and macOS endpoints, with the ability to manage payloads such as .DMG files for app installs on the latter.

Cautions

- The vendor offers CMT and UEM management capabilities, but lacks substantial functionality on the console side to automate migration of CMT assets to UEM without integration performed by the customer.
- The vendor offers no stand-alone PIM function or support for the Microsoft Graph API to allow for MAM-only management of company data in specific apps on unmanaged devices.
- The tool can take policy actions based on device state, but a dedicated analytics feature/module and actions based on external or advanced analytics triggers are not present.

Matrix42

Matrix42 is an endpoint management software vendor headquartered in Frankfurt, Germany. Its strong presence in the mobile space and brand recognition in the European market have helped it
develop a dedicated following.

Having added key capabilities to migrate PCs from CMTs to its UEM, the vendor’s migration path is to migrate devices in “classic management” to Matrix42, and to migrate them to UEM management from “classic” to modern management in the tool.

Matrix42 offers a strong solution for organizations looking for an EU-based and staffed vendor, and those looking for mobile and modern management. Gartner does not recommend the solution for clients seeking an automated process for migrating endpoints from third-party CMT infrastructure.

**Strengths**

- Matrix42 offers a rich set of inventory and app distribution functions on both macOS and Windows devices.
- Matrix42 offers support for management of workplace IoT, such as Raspbian devices and Apple TV devices.
- Matrix42 has a strong presence in the EU and has addressed the North American market, but serves other markets and geographies only “at customer request.”

**Cautions**

- The migration path from CMTs to UEM requires migration to the Matrix42 CMT if an organization is not ready to migrate devices straight from third-party CMTs to UEM, resulting in a two-step migration path.
- Matrix42’s secure PIM/container solution is reliant on third-party technologies.
- The console can address Chrome OS devices with a workspace, but direct modern management of Chrome OS devices is not present in the product.

**Microsoft**

Microsoft, headquartered in the United States, offers Intune as a core component of the Enterprise Mobility + Security (EMS) suite and the foundation of Microsoft’s UEM strategy. Intune/EMS can be used as a stand-alone tool to manage mobile devices, Windows 10 and macOS (using modern management techniques), but a focus is growing on “co-management” of Windows through a two-way integration with System Center Configuration Manager (ConfigMgr; also licensed as part of EMS). Co-management provides flexibility in assigning discrete management “workloads” (for example, OS updates, app distribution, etc.) to either tool as requirements dictate. It also allows organizations making a gradual transition from the traditional Windows management approach to modern management the ability to move workloads to Intune as transitional steps are completed.

Since 2018, Microsoft has placed increasing importance on its Microsoft 365 (M365) offering, which combines EMS, Windows 10 and Office 365 (with Office ProPlus). Broad licenses such as...
M365 surface machine learning capabilities and telemetry-driven security features that can be applied across the “stack” of products in the Microsoft ecosystem.

Intune adoption has grown significantly over the year since the last UEM Magic Quadrant was published. This is expected to continue in the coming months as organizations increasingly move toward modern management of Windows 10.

Intune is appropriate for organizations that are looking for fully integrated ConfigMgr workload management alongside UEM, that require application-level management for Office 365 mobile apps, or that are looking to standardize on Microsoft tools to utilize existing Microsoft license entitlements.

**Strengths**

- Enterprise Agreement (EA) customers that fully buy into the Microsoft 365 vision will find that extensive integration across products exposes capabilities that are difficult to replicate piecemeal.

- Exclusive integration with ConfigMgr and incremental migration capabilities for PCs to Intune and ConfigMgr co-management can reduce the complexity of the transition to UEM.

- There is full integration with Office 365 mobile apps; Intune is required for implementing app-level access to full DLP controls such as controlling “save as,” restricting “copy/paste” and enabling multiidentity features.

**Cautions**

- Organizations with significant investments in some popular identity management products (for example, Ping Identity and Okta) should carefully evaluate whether Intune’s lack of full integration with such products allows for full exploitation of the identity-related features they intend to deploy, particularly on mobile devices.

- Support for macOS is evolving quickly in Intune but lags many competitors. macOS shops should confirm that support for all required features for managing this platform is available prior to deployment.

- Support for Chrome OS device management is currently unavailable with Intune.

**MobileIron**

MobileIron is a publicly traded company headquartered in the United States. The company is an established player in the management of mobile devices, with a complement of modern management features across multiple platforms. MobileIron’s UEM offering benefits from the inclusion of once-stand-alone features to bridge between CMTs and UEM, which were offered as separate products in prior years.

MobileIron also has developed and is marketing capabilities to address security-centric use cases for managed and unmanaged devices, aiming to broaden its appeal to a new buying center and
differentiate itself from competitors with non-UEM functionality.

Despite MobileIron’s expansion into security and endpoint management features, Gartner continues to witness buyers frame the vendor as an MDM specialist, with few seeking out the vendor for broader management migrations of nonmobile devices.

MobileIron is a good fit for organizations seeking a deep set of capabilities on both mobile and nonmobile device management, and for those seeking novel endpoint security features.

Strengths

- Despite its narrower focus compared with large, platform-centric vendors in this space, MobileIron continues to pursue innovations in adjacent product areas to broaden its appeal beyond its core customer base.

- Customers have cited a high degree of satisfaction with the product, even in complex implementations.

- The integration of security and authentication features for unmanaged devices may provide the opportunity for customers to obviate the need for other security infrastructure.

Cautions

- MobileIron’s market presence continues to be impacted by buyers seeking bundled UEM solutions from large, incumbent vendors.

- The vendor’s growth outside of its installed base has been slow.

- Cloud and on-premises versions of the MobileIron UEM product continue to add features on separate release schedules.

Snow Software

Headquartered in Stockholm, Sweden, Snow Software offers UEM capabilities primarily through the Snow Device Manager (SDM), but the functionality is spread across an integrated set of products. SDM is available both on-premises and as a SaaS solution, and is localized in English, German, Portuguese and Swedish.

The vendor fills a niche by combining device management with self-service functionality around employee onboarding/offboarding, hardware life cycle management and software license management. Although Snow offers a tool to migrate to modern management, it is very basic compared with other vendors.

SDM’s integration with Snow License Manager (SLM) allows organizations to ensure compliance with software licensing, along with application usage and cost analytics. SDM also integrates tightly with the vendor’s offering in software asset management, called the Snow Automation Platform, which allows administrators to present users with a self-service enrollment workflow.
This is ideal for BYOD users and any other organization that views license management as a key function.

Snow is migrating features to its web-based console, but requires use of a Windows-only desktop application for creation of policy that can be deployed by the web-based tool. This is more complex than the workflow for other UEM solutions evaluated. Its secure PIM has been withdrawn in favor of OS-level data isolation provided by Android Enterprise and iOS-native app management controls.

SDM is a good fit for midsize organizations with a specific requirement to integrate with application license management and asset inventory in the workplace.

**Strengths**

- Snow’s core competency is software license management. As such, the Snow UEM is strong in integrating with software license management and service desk tools from its own portfolio and from other vendors.

- The self-service workflow streamlines the process of enrolling devices, requesting subscriptions to productivity software and renting a cloud-hosted virtual desktop through a single device check-out portal.

- Customers report very high satisfaction with the simplicity of the solution, which enables them to be up and running with little to no training.

**Cautions**

- Snow has very basic migration tools to assist in the switch to modern management of Windows 10 and macOS.

- Clients using Snow report support issues around product quality and stability, but state that issues are eventually addressed.

- The SDM administration console has improved, but still has an outdated look and feel and is missing several key management features compared with other UEM tools. Moreover, SDM, SLM and Automation Platform currently execute as three separate Windows applications, in addition to the Snow Integration Manager.

**VMware**

VMware is a software and infrastructure vendor headquartered in the United States. Its Workspace ONE offering is centered on UEM, but expands to include VMware’s client and application virtualization, identity and access management, and other technologies at certain license levels.

The vendor continues to benefit from a notably high level of brand and product recognition among Gartner clients and the broader market. As the UEM space matures, ancillary products and
features — such as VMware’s 2018 launch of the Workspace ONE AirLift offering — comprise the innovation in this space, while core UEM functions mature and commoditize.

VMware shows strength in helping its customers bridge between legacy CMTs and UEM by building on previous common CMT functions such as patch management natively within the Workspace ONE offering. The vendor launched the companion AirLift product, with AirLift providing a comprehensive feature set for migrating collections of PCs and PC management policies, like GPOs from tools such as Microsoft’s ConfigManager offering to the Workspace ONE UEM console.

VMware presents a well-rounded UEM suite with deep feature coverage across all major platforms for both mobile devices and traditional PCs. The vendor’s ability to address key CMT feature gaps in UEM without requiring a separate CMT console makes it a good fit for organizations contemplating a complex migration of PCs, policies and payloads from CMTs to UEM.

**Strengths**

- VMware’s AirLift offering provides a rich set of migration capabilities and technology to assist in the migration from CMT management to UEM management.

- VMware’s Workspace ONE offering and the AirWatch branded technology on which it is based remain broadly recognized and requested by clients in all markets and geographies.

- VMware’s announced partnership to document interoperability with Microsoft — which currently plays a pivotal role in making device compliance decisions — is an important step, but has yet to produce discrete product features or options.

**Cautions**

- Despite significant investment by VMware in technology to serve frontline worker use cases, the market is still nascent, and I&O leaders should invest in these use cases with careful consideration of the devices, platforms and integrations required for their specific environment.

- VMware has gained recognition and achieved market education on the role of virtualization technology alongside UEM to help drive the goal of providing users with adaptable workspaces. However, Gartner continues to see most client interest in its UEM-only license tiers.

- Workspace ONE offers detailed policy triggers for event state changes, including roaming and SIM card removal, but these are only available to customers with licenses that include the telecom expense management (TEM) functions of the product.

**Vendors Added and Dropped**

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor’s appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we
have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

**Added**

No vendors were added to the Magic Quadrant.

**Dropped**

- **NationSky**: Despite its strong presence in the Chinese market, NationSky was not able to meet Gartner’s CMT inclusion criteria, although the company offers rudimentary links to existing CMT infrastructure.

- **Sophos**: A compelling solution for modern management, especially for customers already invested in the Sophos ecosystem, the company was not able to satisfy Gartner’s CMT inclusion criteria, although it offers rudimentary links to existing CMT infrastructure.

- **SOTI**: A strong player in the IoT and purpose-built device management space, SOTI currently lacks features to satisfy Gartner’s CMT inclusion criteria.

**Inclusion and Exclusion Criteria**

The inclusion criteria represent the specific attributes that analysts believe are necessary for inclusion in this research.

Vendors must present a solution capable of the following in order to qualify for inclusion in the 2019 UEM Magic Quadrant:

1. A currently shipping, contiguous product (single license) that supports device management using native MDM controls from the following OSs:

   - **Mobile**
     - Apple iOS
     - Android management supporting Android Enterprise MDM (defined as meeting all of the required elements for at least one use case, as defined by Android platform vendor [Google](https://developers.google.com/android/work/release-solution#3_pass_product_review))

   - **PC/Mac**
     - Apple macOS
     - Windows 10

2. Demonstrated integration with CMTs or process through the following methods (vendors must demonstrate the ability to perform one of the following):

   - ...
- A full-stack CMT bundled within the UEM license
- Explicit feature set or product to support CMT migration to modern management
- Turnkey integration with third-party tool (for example, prebuilt integration with BigFix, Microsoft ConfigMgr, or other CMTs)

3. Product must be available as a SaaS-based deployment regardless of other deployment methods, such as on-premises.

4. Demonstrate (with attestation by senior financial or revenue executive) $10,000,000 in revenue directly from UEM licenses in calendar year 2018.

5. Vendor must supply five active customer references to complete an online survey detailing their use of the product and experience with the vendor.

Evaluation Criteria

Ability to Execute

The Ability to Execute criteria evaluate the vendor’s and product’s ability to properly resource product development, marketing and sales. Emphasized criteria center on the product itself, but take into account the operational support from sales, marketing and R&D, and the vendor’s reputation with customers and performance in the market relative to competitors.

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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<tr>
<td>Product or Service</td>
<td>High</td>
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<tr>
<td>Overall Viability</td>
<td>Standard</td>
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<tr>
<td>Sales Execution/Pricing</td>
<td>Low</td>
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<tr>
<td>Market Responsiveness/Record</td>
<td>Medium</td>
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<td>Marketing Execution</td>
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<tr>
<td>Customer Experience</td>
<td>Standard</td>
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<tr>
<td>Operations</td>
<td>Low</td>
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Source: Gartner (August 2019)

Completeness of Vision
Completeness of Vision focuses on the performance of a vendor’s product against current market needs, the strategy and performance in delivering against that understanding, and the ability of the vendor to innovate against current and emerging needs as well as against its competitors. This metric also assesses a vendor’s geographic strategy and presence, its strategy and roadmap for the product and general business model.

Table 2: Completeness of Vision Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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<tbody>
<tr>
<td>Market Understanding</td>
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<td>Marketing Strategy</td>
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<td>Geographic Strategy</td>
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Source: Gartner (August 2019)

Quadrant Descriptions

Leaders

Leaders are identified as those vendors with strong execution and vision scores with products that exemplify the suite of functions that assist organizations in managing a diverse field of mobile and traditional endpoints. Leaders provide tools that catalyze the migration of PCs from legacy CMT management tools to modern, UEM-based management.

Challengers

Challengers exhibit a strong set of technologies, marketing and sales execution, and intellectual property, as also exhibited by their Leader peers, but offer solutions in this market tailored to specific use cases. These include the ability to offer a complete CMT alongside UEM functions in a single product, but lack a breadth of features, making them widely applicable to the use cases and pain points that Gartner observes among UEM buyers.

Visionaries
Visionaries exhibit a strong set of capabilities in their current offerings and a complete set of functionalities to address many use cases, although the vendor's size, platform breadth or integration points make it an appropriate choice for some, but not all, buyers.

**Niche Players**

Niche Players bring many strengths to this market, and some may offer leadership in specific use cases or markets. However, their offerings fail to provide a breadth of features that make them relevant to all buyers, regardless of vertical or geographic market or use case.

**Context**

Gartner defined the market for UEM in 2018 and, as an evolving market, it has continued to gather client and end-user input to refine this definition.

We have revisited the importance of linking to, and assisting in the migration from, existing CMT infrastructure for two reasons:

- **Platform vendor strategy**: Microsoft has clarified messaging to its customers about the sustainability of co-management and coexistence scenarios where CMTs and UEM tools share management of Windows endpoints. Initially cast as a transitional step between CMT and UEM adoption, the vendor has clarified that longer-term co-management and coexistence is an acknowledged and viable strategy.

- **Migration complexity**: Organizations are reporting to Gartner that their reliance on CMT-native functions such as device imaging, centralized patch management and the ability to deploy traditional application payloads (.EXE, .MSI packages) and interpret existing policy schemes (via GPOs) are key features a UEM product must offer to aid in their transition to UEM.

- Organizations, especially large enterprises, continue to support various types of Win32 applications, which necessitates capabilities such as co-management and traditional application deployment.

The end goal of any Magic Quadrant is to provide a level view of vendors that all compete with a similar set of key capabilities and have the resources to provide support for these products to a wide variety of buyers.

**Market Overview**

Gartner defined the market for UEM tools in light of the expanding capabilities — and the expanded use cases — for tools formerly known as EMM and, prior to that, MDM.

The mainstream use cases for UEM tools remain focused mostly on mobile devices like tablets and smartphones, and are used for a portion of Windows and macOS device management when it can be used opportunistically to streamline management of those devices.

Gartner has observed a growing number of organizations considering the migration to UEM, but the process is significantly complicated when legacy applications and processes are in place and...
must be modernized for use in a UEM model with a single console to manage all endpoints.

Due to the aforementioned complications, a UEM-only, single-console model is a future state for many organizations or even a state an organization will not achieve, opting instead for co-management or coexistence of CMTs and UEM tools. This reality is poised to affect more organizations as platform vendors may require additional infrastructure beyond UEM for co-management of devices. In other situations, process requirements such as a desire to continue imaging PCs, a task and function not native to all UEM tools, can complicate the timeline to move to UEM as the single management tool for endpoints.

While all of the tools in this market can service an MDM use case for mobile devices with relative similarity, the differences among vendors emerge in the wide variability of tools to help migrate policies, apps and endpoints between CMTs and UEM.

Gartner believes the need to migrate from CMTs is a starting point that most organizations face. For this reason, the existence of CMT functions or integration was given a much greater weighting and consideration in Gartner’s 2019 analysis of UEM compared with the 2018 Magic Quadrant. This directly impacted the vendors considered in the analysis and their position — year-over-year comparisons should not be attempted as they do not represent a direct comparison due to new and different criteria and weightings.

Achieving a truly simplified, single-console approach to endpoint management promises many operational benefits, but Gartner advises organizations to carefully consider the feasibility of this approach based on existing infrastructure, endpoint diversity, processes and app catalog. It is not uncommon for an organization to arrive at an end state in which UEM tools have obviated some, but not all, endpoint management infrastructure. It is more common to achieve a state in which UEM is adopted and used across endpoints, but not in isolation.

**Evaluation Criteria Definitions**

**Ability to Execute**

**Product/Service:** Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

**Overall Viability:** Viability includes an assessment of the overall organization’s financial health, the financial and practical success of the business unit, and the likelihood that the individual business
unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**Sales Execution/Pricing:** The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness/Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

**Completeness of Vision**

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.
**Vertical/Industry Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor’s strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the “home” or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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