

Enterprise mobility management (EMM) platforms help companies secure their mobile infrastructure, as well

as control device policies and manage mobile apps, content, networks and services. EMM also plays a role in overseeing expenses related to communications services, mobile policies and identity management.

BY BOB VIOLINO

Just as MDM evolved into EMM, so EMM is evolving into unified endpoint management

(UEM), a strategic approach that consolidates how enterprises manage an array of deployed devices including phones, tablets, PCs and even IoT devices. It delivers more reliable data into the state of devices and apps used by employees, as well as insight into identity and how hardware and apps are being used, all of which can be used to improve cross-functional workflows.

Our in-depth chart compares the features and functions offered by major EMM/UEM vendors including BlackBerry, Citrix, IBM, Ivanti, Microsoft, Sophos, SOTI, and VMware. You can scroll through the whole chart or click on a topic in the bulleted list below to go to that specific section of the chart. •

- **Deployment Options** (on-premises, cloud)
- Mobile Platforms Supported
- Mobile Device Management (selective wipe, disable camera, etc.)
- Mobile Application Management (sandboxing, remote app management, etc.)
- Security

 (app deny/allow lists, secure web browser, firewall, etc.)
- **Document/Content Management** (encrypted document container, secure email, etc.)
- Network Management
 (roaming cost control, device diagnostics, usage monitoring, etc.)
- Service Management

 (help desk support management, remote control of device, etc.)
- Integration with PC Management Tools
- **Reporting** (alerts, real-time dashboards, app-level analytics, etc.)

This chart was originally published in May 2013 and most recently updated in May 2021. We chose the vendors and products listed here based on conversations with independent analysts; all have significant market share or are important to include for other reasons such as features and functions. All information in the chart about the products and services comes from the respective vendors.

JUNE 2021 | COMPUTERWORLD 1



Deployment Options

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--------------------|----------------------------|-------------------------------|---|--|-------------------------------|------------------|-----------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti's Unified Endpoint Management Solutions | Microsoft Endpoint Manager | Sophos Mobile | The SOTI ONE platform | VMware Workspace ONE |
| On-premises | YES | YES | NO (but on-premises access gateway available for email, VPN and other applications) | YES | YES | NO | YES | YES |
| Cloud/SaaS | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | |
| | | | | | | | | |



Mobile Platforms Supported

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--------------------------|--|--|---|--|---|---|---|--|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl, SOTI Snap, SOTI Assist, SOTI Insight, SOTI Connect | VMware Workspace ONE |
| iOS | YES | YES | YES | YES | YES | YES | YES | YES |
| Android | YES | YES | YES | YES | YES | YES | YES | YES |
| Android Enterprise | YES | YES | YES | YES | YES | YES | YES | YES |
| Extended Android APIs | YES (Samsung Knox) | YES | YES (Samsung Knox, Android-based OEMs) | YES | YES | YES (Samsung Knox and SAFE, LG Gate, Sony) | YES | YES (Samsung Knox, Zebra MX, Android Enterprise OEMConfig, custom settings via XML) |
| BlackBerry | YES | YES | YES | NO | NO | YES (models running Android) | YES (Android BlackBerry devices only) | YES |
| Windows Mobile | NO | NO | NO | NO | NO | NO | YES | YES |
| Windows Phone 7 | NO | NO | NO | NO | NO | NO | YES | YES |
| Windows Phone 8 | NO | NO | NO | NO | NO | NO | YES | YES |
| Other | Windows 10; macOS; Chrome OS; tvOS; QNX; Android Things | Windows 10; macOS; Chrome OS; Citrix Ready Workspace Hub; Alexa for Business | Windows 10; macOS; Chrome OS; Linux; Windows 7; Amazon Fire; Android Wear; Android Things; Microsoft Holographic; watchOS; Windows IOT Platform | Windows; macOS; Chrome OS; Linux; IMoT; Raspberry Pi OS; Zebra; tvOS; Android OEMS | Windows 10; macOS; Zebra; OEMConfig | Windows 10; macOS; Chrome OS | Windows 10; macOS; iPadOS; Zebra, TSC Printronix AutolD, SATO, Honeywell, Brother, Toshiba, Epson, Bixolon, Citizen, Dascom, and Advantech Printers | Windows 10; macOS; Chrome OS; Linux; tvOS; Windows 7, 8, 8.1, RT; Windows CE 7; Symbian; QNX 6.5; Tizen; Raspberry Pi OS |



Mobile Device Management

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|----------------------------|-------------------------------|--|------------|-------------------------------|------------------|--------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl and SOTI Connect | VMware Workspace ONE |
| Password protection | YES | YES | YES | YES | YES | YES | YES | YES |
| Password reset | YES | YES | YES | YES | YES | YES | YES | YES |
| Remote device wipe | YES | YES | YES | YES | YES | YES | YES | YES |
| Selective wipe | YES | YES | YES | YES | YES | YES | YES | YES |
| Remote lock | YES | YES | YES | YES | YES | YES | YES | YES |
| Set VPN, Wi-Fi, APN, proxy/ gateway settings | YES | YES | YES | YES | YES | YES | YES | YES |
| Disable Wi-Fi | YES | YES | YES | YES | YES | YES | YES | YES |
| Disable carrier data connection | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | |
| | | | | | | | | |



Mobile Device Management (continued)

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|--|-------------------------------|--|------------|--|------------------|--------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Enterprise Mobility + Security | Sophos Mobile | SOTI MobiControl and SOTI Connect | VMware Workspace ONE |
| Configuration monitoring/ auditing | YES | YES | YES | YES | YES | YES | YES | YES |
| Automated provisioning/ enrollment | YES | YES | YES | YES | YES | YES | YES | YES |
| Disable camera | YES | YES | YES | YES | YES | YES | YES | YES |
| Disable Bluetooth | YES | YES | YES | YES | YES | YES | YES | YES |
| Manage mobile- attached devices (e.g., printers, scanners) | YES (via ISV partners) | YES | YES | YES | NO (but can block removable storage) | YES | YES | YES |
| Support multiple users per device (auto-configure device settings based on the currently logged-in user) | YES (supports multi- user/shared device support for iOS) | YES | YES | YES | YES | NO | YES | YES |
| | | | | | | | | |
| | | | | | | | | |



Mobile Application Management

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|---|----------------------------|-------------------------------|--|------------|-------------------------------|------------------|-----------------------------------|--|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl and SOTI Snap | VMware Workspace ONE |
| User self-service app delivery | YES | YES | YES | YES | YES | YES | YES | YES |
| Full-featured en- terprise app store | YES | YES | YES | YES | YES | YES | YES | YES |
| Containerization /sandboxing | YES | YES | YES | YES | YES | YES | YES | YES |
| App contain- erization using developer SDK/toolkit | YES | YES | YES | YES | YES | YES | YES | YES |
| App contain- erization using app wrapping | YES (via partner) | YES | YES | YES | YES | NO | NO | YES |
| Block copy/paste between apps | YES | YES | YES | YES | YES | YES | YES | YES |
| Block copy/paste from email | YES | YES | YES | YES | YES | YES | YES | YES |
| Restrict which apps can open a given file | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | \ \mathref{j} \mat |



Mobile Application Management (cont.)

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|---|----------------------------|-------------------------------|--|------------|-------------------------------|------------------|-----------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl and SOTI Snap | VMware Workspace ONE |
| App inventory tracking | YES | YES | YES | YES | YES | YES | YES | YES |
| App usage monitoring | YES | YES | YES | YES | YES | YES | YES | YES |
| Apple volume purchase program integration (decrements volume purchase agreement quantity available as users download apps from store) | YES | YES | YES | YES | YES | YES | YES | YES |
| Remote desktop access (access to apps and data on desktop from smartphone or tablet) | YES | YES | YES | YES | YES | NO | YES | YES |
| Supports native iOS app controls | YES | YES | YES | YES | YES | YES | YES | YES |
| Supports native Android Enterprise app controls | YES | YES | YES | YES | YES | YES | YES | YES |
| Ability to deploy apps to unman- aged devices | YES | YES | YES | YES | YES | YES | YES (SOTI Snap apps only) | YES |



Security Security

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|---|----------------------------|-------------------------------|--|------------|-------------------------------|---|---------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile and Sophos Intercept X for Mobile | SOTI MobiControl and SOTI Identity | VMware Workspace ONE |
| Secure web browser | YES | YES | YES | YES | YES | YES | YES | YES |
| Application deny/allow lists | YES | YES | YES | YES | YES | YES | YES | YES |
| Data loss pre- vention (DLP) | YES | YES | YES | YES | YES | YES | YES | YES |
| Email attach- ment DLP | YES | YES | YES | YES | YES | YES | YES | YES |
| Device compro- mise detection (jailbreak/rooting) | YES | YES | YES | YES | YES | YES | YES | YES |
| Device-level encryption | YES | YES | YES | YES | YES | YES | YES | YES |
| Encrypted folders | YES | YES | YES | YES | YES | YES | YES | YES |
| Encrypted email attachments | YES | YES | YES | YES | YES | YES | YES | YES |
| Encrypted email message body | YES | YES | YES | YES | YES | YES | YES | YES |
| essuge essuy | | | | | | | | \ \ >> |



Security (continued)

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|---|-------------------------------|--|------------|-------------------------------|---|---------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile and Sophos Intercept X for Mobile | SOTI MobiControl and SOTI Identity | VMware Workspace ONE |
| Geofencing | YES (via Persona and via partners) | YES | YES | YES | YES | YES | YES | YES |
| Time fencing | YES (via partners) | YES | YES | YES | NO | YES | YES | YES |
| Mobile VPN | YES (proprietary non-VPN secure connectivity and per-app VPN) | YES | YES | YES | YES | YES | YES | YES |
| App-level micro VPN | YES | YES | YES | YES | YES | YES (in combination with Sophos XG Firewall) | YES | YES |
| Multifactor device/app authentication (token-based, facial rec- ognition, client access card support, etc.) | YES | YES | YES | YES | YES | YES | YES | YES |
| Malware detection | YES | YES (via partners) | YES | YES | YES | YES | YES | YES |
| Includes firewall | YES | YES | YES | YES | YES | NO | YES | YES |
| | | | | | | | | >>> |



Security (continued)

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|------------------------------|----------------------------|-------------------------------|--|------------|-------------------------------|---|---------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile and Sophos Intercept X for Mobile | SOTI MobiControl and SOTI Identity | VMware Workspace ONE |
| Single sign-on support | YES | YES | YES | YES | YES | YES | YES | YES |
| Mobile identity | YES | YES | YES | YES | YES | YES | YES | YES |
| Entitlement management | YES | YES | YES | YES | NO | YES | YES | YES |
| Risk-based authentication | YES | YES | YES | YES | YES | NO | YES | YES |
| | | | | | | | | |
| | | | | | | | | |



Document/Content Management

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|----------------------------|---|--|------------|-------------------------------|------------------|---------------------------------|--|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management (XM Enterprise Transition) | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl (Hub) | Workspace ONE Content, Workspace ONE Boxer |
| Encrypted docu- ment container | YES | YES | YES | YES | YES | YES | YES | YES |
| Secure email | YES | YES | YES | YES | YES | YES | YES (via OS/MDM APIs) | YES |
| File server access | YES | YES | YES | YES | YES | YES | YES | YES |
| Secure SharePoint access | YES | YES | YES | YES | YES | YES | YES | YES |
| Integrates with enteprise document management software | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |



Network Management

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|----------------------------|-------------------------------|--|--|-------------------------------|------------------|---------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl | VMware Workspace ONE |
| Data usage management (restrict where, when and whether downloads occur over Wi-Fi or cellular) | YES | YES | YES (for MaaS360 Secure Document Sharing) | YES | NO | YES | YES | YES |
| Roaming cost control (such as auto disablement of data when roaming) | YES | YES | YES | YES | YES | YES | YES | YES |
| Device diagnostics | YES | YES | YES | YES | YES | YES | YES | YES |
| Usage monitoring | YES | YES | YES | YES | YES | YES | YES | YES |
| Block device from accessing email if policies violated | YES | YES | YES | YES | YES | YES | YES | YES |
| Offers peer-to- peer distribution | NO | YES | YES | YES | YES | NO | YES | YES |
| Partners with third-party content delivery | NO | YES | YES | YES (via AWS and Azure storage) | NO | NO | YES | YES |
| network | | | | | | | | |



Service Management

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|------------------------------------|----------------------------|-------------------------------|--|----------------------------------|-------------------------------|------------------|-------------------------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl and SOTI Assist | VMware Workspace ONE |
| Help desk support management | YES | YES | YES | YES | NO | NO | YES | YES |
| Service monitoring | YES | YES (via partners) | YES | YES | YES | YES | YES | YES |
| Remote control of device | YES (via partner) | YES (via partners) | YES | YES | YES | YES | YES (with remote diagnostics) | YES |
| User self- service portal | YES | YES | YES | YES | YES | YES | YES | YES |
| Chatbot support | YES | YES | YES (via MaaS360 Assistant) | YES (provided in the ITSM) | YES | NO | NO | YES |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |





Integration with PC Management Tools

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|--|----------------------------|-------------------------------|--|------------|-------------------------------|------------------|---------------------|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl | VMware Workspace ONE |
| Offers a separate or integrated PC management tool (for Windows 10 or Mac) | YES | YES | YES | YES | YES | YES | YES | YES |
| Integrates with a third-party tool | YES | YES | YES | YES | NO | NO | NO | YES |
| Offers integrated management console for PC and mobile management | YES | YES | YES | YES | YES | YES | YES | YES |
| Offers integrated app store for both desktop and mobile app deployment | YES | YES | YES | YES | YES | YES | YES | YES |
| Offers GPO or other policy migration from legacy PC man- | NO | YES | YES | YES | YES | NO | YES | YES |
| agement systems | | | | | | | | |
| Supports legacy Windows systems (xp, 7) | NO | YES | YES | YES | YES | NO | YES | YES |
| | | | | | | | | |



Reporting

| | BlackBerry | Citrix | IBM | Ivanti | Microsoft | Sophos | SOTI | VMware |
|---|--------------------------------|-------------------------------|--|------------|-------------------------------|------------------|--|-------------------------|
| Product Name(s) | BlackBerry Spark Suites | Citrix Endpoint Management | IBM Security MaaS360 with Watson | Ivanti UEM | Microsoft Endpoint Manager | Sophos Mobile | SOTI MobiControl, SOTI Connect, SOTI Insight | VMware Workspace ONE |
| Alerts | YES | YES | YES | YES | YES | YES | YES | YES |
| Automated responses to alerts | YES | YES | YES | YES | YES | YES | YES | YES |
| Automated, scheduled report delivery | YES (also via partners) | YES | YES | YES | YES | YES | YES | YES |
| Real-time dashboards | YES | YES | YES | YES | YES | YES | YES | YES |
| Device-level analytics | YES | YES | YES | YES | YES | YES | YES | YES |
| App-level analytics | YES | YES | YES | YES | YES | YES | YES | YES |
| Can leverage aggregate data across customer base for insights/ best practices | YES | YES | YES | YES | YES | YES | YES | YES |
| | | | | | | | | |