



# BlackBerry UEM

## Overview

12.16



# Contents

- What's new in BlackBerry UEM 12.16 MR1.....4**
- What's new in BlackBerry UEM 12.16.....5**
- What's new in BlackBerry UEM Cloud.....7**
- What is BlackBerry UEM?.....9**
- BlackBerry Spark Suites.....10**
  - Benefits of BlackBerry Workspaces..... 11
  - Benefits of BlackBerry Enterprise Identity.....12
  - Benefits of BlackBerry 2FA..... 12
  - Benefits of BlackBerry UEM Notifications..... 12
  - Enterprise apps.....13
    - BlackBerry Dynamics apps.....13
  - Enterprise SDKs..... 14
- Key BlackBerry UEM features..... 17**
- Key features for all device types.....20**
- Key features for each device type.....23**
- Compatibility and requirements..... 29**
- Legal notice..... 30**

# What's new in BlackBerry UEM 12.16 MR1

- **Chrome OS support:** BlackBerry UEM now supports devices that are running Chrome OS. Chrome OS support with BlackBerry UEM requires a Google managed domain. Enrollment and some management of Chrome OS devices continues to be done through the Google managed domain. The Chrome OS integration with BlackBerry UEM extends the management of some of the Chrome OS management functionality to UEM. You can perform some commands on Chrome OS devices, such as view device report, view device actions, and delete only work data.

If your organization's UEM environment is already configured for Android Enterprise, and it is configured to use managed Google Play accounts, and you want to support Chrome OS Enterprise devices as an MDM solution (such as assign policies), you must perform one of the following options:

- Disconnect the current Android Enterprise configuration and integrate with an existing Google domain. However, existing Android Enterprise devices will stop functioning.
- Create a new UEM domain or BlackBerry UEM Cloud tenant and integrate Android Enterprise with an existing Google domain.

For more information visit [support.blackberry.com](https://support.blackberry.com) to read article 98789.

- **Azure AD Conditional Access:** You can now configure multiple Azure AD connections for Conditional Access in a UEM tenant. Additionally, you can configure multiple UEM domains to connect to the same Azure AD tenant.

# What's new in BlackBerry UEM 12.16

## Management console

**Android app licenses:** The Android app license page has been removed from the UEM management console.

**Google Play Store layout:** You must use the Organize Apps functionality in Google Play iFrame to manage your Google Play Store layout. You can no longer use the Category drop-down list in the app details to manage your Google Play Store layout.

**VPN profile:** You specify an associated proxy profile when you select "IKEv2 Always On" in a VPN profile

**Purebred app:** When you use the new Purebred app version 2.1 (8), which must be submitted through the Custom App Distribution mechanism, you must update the uniform type identifiers (UTI) that contain underscores ('\_') to dashes ('-') for the BlackBerry UEM Client app policy. For example, use `purebred.select.all-user;` `purebred.select.no-filter;` `purebred.zip.all-user;` `purebred.zip.no-filter.` Users may need to reactivate the new Purebred app on their device.

**Cryptographic tokens for iOS devices:** UEM now supports the CryptoTokenKit framework for iOS devices so that BlackBerry Dynamics apps can access cryptographic tokens from PKI apps (such as Purebred). Support for cryptographic tokens is enabled when you select the "Native keystore" connection option and the iOS platform in the user credential profile. This feature requires UEM 12.16 and apps that use BlackBerry Dynamics SDK 10.2 or later.

**User credential profiles:** In user credential profiles that use native keystore connections, you can now specify the device OS platforms that you want the profile to apply to.

## iPad

**Shared iPad devices:** iPad devices can now be shared between multiple users. When users sign in with a Managed Apple ID their data loads, and the user then has access to their own email accounts, files, iCloud Photo Library, app data, and more.

## Android

**Android software releases:** In the device SR requirements profile, you can now apply Android OS updates to Samsung devices.

**BlackBerry Dynamics profile:** A new setting was added to the BlackBerry Dynamics profile that allows you to specify whether Android device users can use custom keyboards with BlackBerry Dynamics apps.

## IT policies

Device Type	Rule Name	Description	Activation types
-------------	-----------	-------------	------------------

Android	Work apps exempt from VPN	List of work apps that are not required to send data over the work connection when Force work apps to only use VPN is selected	<ul style="list-style-type: none"> <li>• Work space only</li> <li>• Work space only – (Premium)</li> <li>• Work and personal - user privacy</li> <li>• Work and personal - user privacy (Premium)</li> <li>• Work and personal - full control</li> <li>• Work and personal - full control (Premium)</li> </ul>
iOS	Recommended software update cadence (supervised only)	Specify how the software presents software updates to the user. When there is only one update available, the system shows the update to the user. Otherwise, the updates are displayed in the specified order.	MDM controls

# What's new in BlackBerry UEM Cloud

## Management console

**Android app licenses:** The Android app license page has been removed from the UEM management console.

**Google Play Store layout:** You must use the Organize Apps functionality in Google Play iFrame to manage your Google Play Store layout. You can no longer use the Category drop-down list in the app details to manage your Google Play Store layout.

**VPN profile:** You specify an associated proxy profile when you select "IKEv2 Always On" in a VPN profile

**Purebred app:** When you use the new Purebred app version 2.1 (8), which must be submitted through the Custom App Distribution mechanism, you must update the uniform type identifiers (UTI) that contain underscores ('\_') to dashes ('-') for the BlackBerry UEM Client app policy. For example, use `purebred.select.all-user;` `purebred.select.no-filter;` `purebred.zip.all-user;` `purebred.zip.no-filter.` Users may need to reactivate the new Purebred app on their device.

**Cryptographic tokens for iOS devices:** UEM now supports the CryptoTokenKit framework for iOS devices so that BlackBerry Dynamics apps can access cryptographic tokens from PKI apps (such as Purebred). Support for cryptographic tokens is enabled when you select the "Native keystore" connection option and the iOS platform in the user credential profile. This feature requires UEM 12.16 and apps that use BlackBerry Dynamics SDK 10.2 or later.

**User credential profiles:** In user credential profiles that use native keystore connections, you can now specify the device OS platforms that you want the profile to apply to.

## iPad

**Shared iPad devices:** iPad devices can now be shared between multiple users. When users sign in with a Managed Apple ID their data loads, and the user then has access to their own email accounts, files, iCloud Photo Library, app data, and more.

## Android

**Android software releases:** In the device SR requirements profile, you can now apply Android OS updates to Samsung devices.

**BlackBerry Dynamics profile:** A new setting was added to the BlackBerry Dynamics profile that allows you to specify whether Android device users can use custom keyboards with BlackBerry Dynamics apps.

## IT policies

Device Type	Rule Name	Description	Activation types
-------------	-----------	-------------	------------------

Android	Work apps exempt from VPN	List of work apps that are not required to send data over the work connection when Force work apps to only use VPN is selected	<ul style="list-style-type: none"> <li>• Work space only</li> <li>• Work space only – (Premium)</li> <li>• Work and personal - user privacy</li> <li>• Work and personal - user privacy (Premium)</li> <li>• Work and personal - full control</li> <li>• Work and personal - full control (Premium)</li> </ul>
iOS	Recommended software update cadence (supervised only)	Specify how the software presents software updates to the user. When there is only one update available, the system shows the update to the user. Otherwise, the updates are displayed in the specified order. This rule applies only to devices running iOS 14.5.0 and later.	<ul style="list-style-type: none"> <li>• MDM controls</li> </ul>

### BlackBerry Enterprise Mobility Server

**MSAL Authentication:** BEMS Cloud now uses the Microsoft Authentication Library in BEMS-Mail and BEMS-Docs to authenticate to Microsoft Office 365 resources such as Microsoft Outlook, Microsoft SharePoint Online, Microsoft OneDrive for Business, and Microsoft Azure Information Protection (Azure-IP). No additional actions are required if your environment is already configured for modern authentication.

**Contact Service API for developers:** The Contact Service API now supports additional contact folders and subfolders. For more information, see the [Contact Service API content](#).

**Security enhancement:** log4j2 library has been updated to version 2.17.1.



# What is BlackBerry UEM?

BlackBerry UEM is a multiplatform EMM solution from BlackBerry that provides comprehensive device, app, and content management with integrated security and connectivity, and helps you manage iOS, macOS, Android, and Windows 10 devices for your organization. To see the newest features available in BlackBerry UEM, see the [BlackBerry UEM release notes](#).

You can install BlackBerry UEM in an on-premises environment for the utmost control over your servers, data, and devices, or you can use BlackBerry UEM Cloud, which offers an easy-to-use, low-cost, and secure solution. BlackBerry hosts BlackBerry UEM Cloud over the Internet. You only need a supported web browser to access the service.

Both BlackBerry UEM on-premises and BlackBerry UEM Cloud offer trusted end-to-end security and provide the control that organizations need to manage all endpoints and ownership models.

Benefits of BlackBerry UEM include:

Feature	Benefit
Low total cost of ownership	BlackBerry UEM on-premises reduces complexity, optimizes pooled resources, ensures maximum uptime and helps you achieve the lowest total cost of ownership for an on-premises solution.  BlackBerry UEM Cloud reduces the cost of ownership by removing the need to install, manage, and update services.
Single web-based interface	Manage iOS, macOS, Android, and Windows 10 devices plus additional services all from a single management console.
Flexible ownership models	Use a set of customizable policies and profiles to manage BYOD, COPE, and COBO devices, and protect business information.
User and device reporting	Manage fleets of devices using comprehensive reporting and dashboards, dynamic filters, and search capabilities.
Simple user setup and enrollment	Allow users to activate their own devices with BlackBerry UEM Self-Service.
Industry-leading mobile security	Leverage the BlackBerry Infrastructure to ensure data security across all devices.
High availability	Configure high availability on-premises to minimize service interruptions for device users or rely on BlackBerry to maintain BlackBerry UEM Cloud and maximize uptime for you.
Additional services available	Enable services such as <a href="#">BlackBerry Workspaces</a> , <a href="#">BlackBerry Enterprise Identity</a> , <a href="#">BlackBerry 2FA</a> , <a href="#">BBM Enterprise</a> , and <a href="#">BlackBerry UEM Notifications</a> (BlackBerry UEM on-premises only) that allow you to add value to your BlackBerry UEM deployment.

For more information about BlackBerry UEM, see the [Administration content](#).

# BlackBerry Spark Suites

Beyond the security and productivity features that BlackBerry UEM provides, BlackBerry Spark Suites offer unified endpoint management and endpoint security solutions to meet the needs of businesses and organizations.

Security-conscious organizations are moving to a Zero Trust approach to modernize network security while simultaneously enhancing and improving the network experience for end users. The Zero Trust security model trusts nothing and no one by default, including users inside the work network. Every user, endpoint, and network are assumed to be potentially hostile. In Zero Trust security, no user can access anything until they prove who they are, that their access is authorized, that the network they are connected to is not compromised, and that they, or malware hiding on their device, are not acting maliciously.

For more information on the BlackBerry Spark Suites and products included in them, see the [BlackBerry Spark Overview](#).

Suite	Description
BlackBerry Spark Suite	<p>The BlackBerry Spark Suite is the gold standard for unified endpoint security and unified endpoint management. It combines the BlackBerry Spark UEM Suite and BlackBerry Cyber Suite into one package that provides the utmost in endpoint management and security to protect your organization against multiple threats.</p> <p>The BlackBerry Spark Suite combines the Zero Trust Unified Endpoint Security model offered by BlackBerry Cyber Suite and the proven BlackBerry Spark UEM Suite for endpoint management to provide the full range of BlackBerry enterprise products to manage and secure all of your endpoints and the communications between them. With this suite you get all of the products in the Cyber Suite and the Spark UEM Suite plus the ability to manage CylancePROTECT Mobile from the management console of either suite.</p>
BlackBerry Cyber Suite	<p>The BlackBerry Cyber Suite provides unified endpoint security for your organization to monitor and prevent malicious attacks using AI-driven intelligence and response mechanisms. BlackBerry Cyber Suite works with all MDM providers to meet your security needs, even when your device management needs don't require the sophistication of BlackBerry UEM.</p> <p>BlackBerry Cyber Suite offers these advantages:</p> <ul style="list-style-type: none"><li>• Provides a path from Zero Trust architecture to Zero Touch experience powered by strong AI</li><li>• Works with any Unified Endpoint Management (UEM) or Mobile Device Management (MDM) platform</li><li>• Provides continuous monitoring and threat detection</li><li>• Provides contextual and continuous authentication that spans endpoints, networks, apps, and people</li></ul>

Suite	Description
BlackBerry Spark UEM Suite	<p>The BlackBerry Spark UEM Suite provides best-in-class unified endpoint management. It includes full-featured BlackBerry UEM, which has long been trusted by governments, corporations, and other organizations to manage and secure communication with mobile devices, plus identity management, two-factor authentication, and digital rights management so that users can securely access work resources and work from anywhere.</p> <p>The BlackBerry Spark UEM Suite adds the following products to BlackBerry UEM:</p> <ul style="list-style-type: none"> <li>• BlackBerry Enterprise Identity</li> <li>• BlackBerry 2FA</li> <li>• BlackBerry Workspaces</li> <li>• BlackBerry Dynamics apps</li> <li>• BlackBerry Dynamics SDK</li> </ul> <p>For more information on all of the products in the suite and how they work together, see the <a href="#">BlackBerry Spark Overview</a>.</p>
BlackBerry Spark UEM Express Suite	<p>The BlackBerry Spark UEM Express Suite is an ideal device management and productivity solution for smaller business and organizations. It includes the essential features to manage users' devices, whether devices are provided by your organization or owned by your employees, while protecting your data. You can equip users to be productive with work apps that provide secure work email, secure Web browsing and intranet access, task management, and instant messaging.</p> <p>The BlackBerry Spark UEM Express Suite includes BlackBerry UEM and the most popular BlackBerry Dynamics apps to meet common business needs.</p>

For a visual overview of the BlackBerry Spark Suites, [see the visual introduction](#).

## Benefits of BlackBerry Workspaces

BlackBerry Workspaces is an enterprise file management platform that allows users to securely access, synchronize, edit, and share files and folders across multiple devices. BlackBerry Workspaces limits the risk for data loss or theft by embedding digital rights management security into every file, so your content remains secure and within your control, even after it is downloaded and shared with others. With a secure file store and the ability to transfer data while maintaining control, both employees and IT can be confident in data sharing and document security.

Users can access BlackBerry Workspaces from a Web browser and from apps on Windows and macOS computers and on iOS, and Android devices. Content is synchronized across all of a user's devices when they are online, allowing users to manage, view, create, edit, and annotate files from any device. You can use the Workspaces plug-in for BlackBerry UEM to integrate Workspaces management into the BlackBerry UEM management console

If your organization also implements BlackBerry Enterprise Identity, you can use Enterprise Identity to manage user entitlement to Workspaces. For more information about Enterprise Identity see the [BlackBerry Enterprise Identity content](#).

For more information, [see the BlackBerry Workspaces content](#).

## Benefits of BlackBerry Enterprise Identity

BlackBerry Enterprise Identity makes it easy for users to access cloud applications from any device, including iOS, and Android, as well as traditional computing platforms. This capability is tightly integrated with BlackBerry UEM, unifying industry-leading EMM with the entitlement and control of all your cloud services.

BlackBerry Enterprise Identity provides single sign-on (SSO) to cloud services such as Microsoft Office 365, G Suite, BlackBerry Workspaces, and many others. With single sign-on, users don't have to complete multiple log ins or remember multiple passwords. Administrators can also add custom services to Enterprise Identity to give users access to internal applications.

Administrators use the BlackBerry UEM management console to add services, manage users, and to add and manage additional administrators. The integration with BlackBerry UEM makes it easy to manage users and entitle them to access cloud applications and services from their devices. Using BlackBerry UEM, cloud services and mobile app binaries can be bundled together and then simply assigned to a user or group of users.

For more information about Enterprise Identity, [see the BlackBerry Enterprise Identity content](#).

## Benefits of BlackBerry 2FA

BlackBerry 2FA provides users with two-factor authentication to access your organization's resources. It allows you to use your users iOS and Android devices as the second factor of authentication when users connect to your organization's resources. BlackBerry 2FA provides a simple user experience that prompts users for confirmation on their device when they attempt to access one of your resources.

For users who don't have a mobile device or have a mobile device that doesn't have sufficient connectivity to support the real-time BlackBerry 2FA, you can issue standards-based one-time password (OTP) tokens. The first authentication factor is the user's directory password, and the second authentication factor is a dynamic code that appears on the token's screen.

You manage BlackBerry 2FA from the BlackBerry UEM or BlackBerry UEM Cloud management console. BlackBerry 2FA is also integrated with BlackBerry Enterprise Identity. You can use BlackBerry 2FA to provide a second factor of authentication for the resources that you manage access to with Enterprise Identity.

For more information about BlackBerry 2FA, see [the BlackBerry 2FA content](#).

## Benefits of BlackBerry UEM Notifications

BlackBerry UEM Notifications takes advantage of the BlackBerry AtHoc Networked Crisis Communication system to allow administrators to send critical messages and notifications to users and groups from the UEM management console.

Because UEM Notifications allows administrators to manage devices and notifications within the UEM management console, they don't need to manage and reconcile user contact information across multiple systems or deal with access issues in external systems. UEM Notifications leverages contact information using Microsoft Active Directory synchronization. UEM Notifications also offers flexible delivery options, including Text-To-Speech voice calls, SMS, and email so that users get alerts using their preferred channel, which increases the likelihood of action and compliance.

Administrators can track and manage notifications sent, including detailed message status by delivery method. UEM Notifications uses FedRAMP-authorized delivery services and provides a comprehensive report of all sent messages and their statuses.

BlackBerry UEM Notifications is available for use with BlackBerry UEM on-premises only.

For more information about UEM Notifications, see the [UEM Notifications content](#).

## Enterprise apps

BlackBerry offers several enterprise apps that administrators can push to devices or users can install to help them access work data and be more productive.

Component	Description
BlackBerry UEM Client	<p>The BlackBerry UEM Client allows BlackBerry UEM to manage iOS and Android devices. Users require the BlackBerry UEM Client to activate iOS or Android devices for mobile device management with BlackBerry UEM. Users can download the latest version of the BlackBerry UEM Client from the App Store for iOS devices and from Google Play for Android devices. After users activate their devices, the BlackBerry UEM Client allows users to do the following:</p> <ul style="list-style-type: none"><li>• Verify whether their devices are compliant with the organization's standards</li><li>• View the profiles that have been assigned to their user accounts</li><li>• View the IT policy rules that have been assigned to their user accounts</li><li>• Access work apps</li><li>• Create access keys for BlackBerry Dynamics apps</li><li>• Preauthenticate with BlackBerry 2FA</li><li>• Access a software OTP code</li><li>• Retrieve and email device log files</li><li>• Deactivate their devices</li></ul> <p>For more information, <a href="#">see the BlackBerry UEM Client content</a>.</p>
BlackBerry Dynamics apps	<p><a href="#">BlackBerry Dynamics</a> productivity apps such as BlackBerry Work, BlackBerry Access, and BlackBerry Connect provide users with access to work data and productivity tools. For more information, see the documentation for each app.</p>
BBM Enterprise	<p>BBM Enterprise adds a layer of end-to-end encryption for BBM messages sent between BBM Enterprise users in your organization and other BBM users inside or outside of your organization. BBM Enterprise is available for iOS, Android, Windows, and macOS devices.</p> <p>BBM Enterprise uses a FIPS 140-2 validated cryptographic library. Your organization owns the encryption keys and no one else, not even BlackBerry, can access them.</p> <p>For most devices, you can use BlackBerry UEM to assign BBM Enterprise to users. After you enable users to use BBM Enterprise, users can download the BBM Enterprise app from the App Store, the Google Play store, or BlackBerry World. For more information about BBM Enterprise, <a href="#">see the BBM Enterprise content</a>.</p> <p>BBM Enterprise is sold separately from the BlackBerry Spark suites.</p>

### BlackBerry Dynamics apps

BlackBerry Dynamics productivity apps provide users with access to work data and productivity tools. BlackBerry Dynamics apps developed by BlackBerry include the following:

App	Description
BlackBerry Work	<p>The BlackBerry Work app provides secure access to work email and allows users to view and send attachments, create custom contact notifications, and manage their messages.</p> <p>For more information about BlackBerry Work, see <a href="#">the BlackBerry Work content</a>.</p>
BlackBerry Access	<p>BlackBerry Access is a secure browser that allows users to access work intranets and web applications. BlackBerry Access also allows you to enable access to work resources or build and deploy rich HTML5 apps, while maintaining a high level of security and compliance.</p> <p>For more information about BlackBerry Access, see <a href="#">the BlackBerry Access content</a>.</p>
BlackBerry Connect	<p>BlackBerry Connect allows communication and collaboration with secure instant messaging, company directory lookup, and user presence from an easy-to-use interface on the user's device.</p> <p>For more information about BlackBerry Connect, see <a href="#">the BlackBerry Connect content</a>.</p>
BlackBerry Tasks	<p>BlackBerry Tasks allows users to create, edit, and manage tasks that are synchronized with Microsoft Exchange.</p> <p>For more information about BlackBerry Tasks, see <a href="#">the BlackBerry Tasks content</a>.</p>
BlackBerry Notes	<p>BlackBerry Notes allows users to create, edit, and manage notes that are synchronized with Microsoft Exchange on their mobile device of choice.</p> <p>For more information about BlackBerry Notes, see <a href="#">the BlackBerry Notes content</a>.</p>
BlackBerry Enterprise BRIDGE	<p>BlackBerry Enterprise BRIDGE is a Microsoft Intune app that is enabled for BlackBerry Dynamics. It allows you to securely view, edit, and save documents using Intune-managed Microsoft apps, such as Microsoft Word, Microsoft PowerPoint, and Microsoft Excel in BlackBerry Dynamics on iOS and Android devices.</p> <p>For more information about BlackBerry Enterprise BRIDGE, see <a href="#">the BlackBerry Enterprise BRIDGE content</a>.</p>

You can also use BlackBerry Dynamics apps developed by one of BlackBerry's many third-party application partners. For a full list of publicly available apps, visit the [BlackBerry Marketplace for Enterprise Software](#).

You can also develop your own BlackBerry Dynamics apps using the BlackBerry Dynamics SDK. For more information, see [the BlackBerry Dynamics SDK content](#).

## Enterprise SDKs

BlackBerry offers several SDK options to help your organization customize and extend your BlackBerry solution.

Component	Description
BlackBerry UEM Integration SDK	<p>The BlackBerry UEM Integration SDK allows developers to create plug-ins that extend the functionality of BlackBerry UEM. Using the UEM Integration SDK (which includes the UEM Integration plug-in for Eclipse) and the UEM Integration APIs, you can create and deploy BlackBerry UEM plug-ins that allow for the tight integration of new features or services with an existing BlackBerry UEM installation.</p> <p>For more information about the BlackBerry UEM Integration SDK, see the <a href="#">BlackBerry UEM Integration SDK content</a>.</p>
BlackBerry Dynamics SDK	<p>The BlackBerry Dynamics SDK provides a powerful set of tools to ISV and enterprise developers, allowing them to focus on building their apps rather than learning how to secure, deploy, and manage those apps. The BlackBerry Dynamics SDK can be used to develop native, hybrid, and web apps for iOS, macOS, Android, and Windows devices, with services such as the following:</p> <ul style="list-style-type: none"> <li>• Security services (for example, secure communications and interapp data exchange APIs)</li> <li>• Mobile services (for example, presence, email, push, directory lookup)</li> <li>• Platform services (for example, single sign-on authentication, identity and access management, app-level controls for admins)</li> </ul> <p>For more information about the BlackBerry Dynamics SDK, see the <a href="#">BlackBerry Dynamics SDK content</a>.</p>
BlackBerry Analytics SDK	<p>The BlackBerry Analytics SDK allows BlackBerry Dynamics app developers to enable custom BlackBerry Dynamics apps for Android and iOS to automatically record events and send them to BlackBerry Analytics. All you need to do is integrate the BlackBerry Analytics library into your app; the SDK does the work of sending the events for you.</p> <p>For more information about the BlackBerry Analytics SDK, see the <a href="#">BlackBerry Analytics content</a>.</p>
Spark Communications Services SDK	<p>The BlackBerry Spark Communications Services SDK provides a framework to develop real-time, end-to-end secure messaging capabilities in your own product or service. The Spark Communications Services security model ensures that only the sender and intended recipient can see each message sent, and that messages aren't modified in transit between the sender and recipient.</p> <p>The Spark Communications Services SDK also provides the framework for other forms of collaboration and communication, such as push notifications, secure voice and video calls, and file sharing. You can even extend and create new types of real-time services and use cases by defining your own custom application protocols and data types.</p> <p>For more information about the Spark Communications Services, see the <a href="#">Spark Communications Services SDK content</a>.</p>

Component	Description
BlackBerry Web Services	<p>The BlackBerry Web Services are a collection of SOAP and REST web services that you can use to create applications to manage your organization's BlackBerry UEM domain, user accounts, and all supported devices. You can use the BlackBerry Web Services to automate many tasks that administrators typically perform using the management console. For example, you can create an application that automates the process of creating user accounts, adds users to multiple groups, and manages users' devices.</p> <p>For more information about the BlackBerry Web Services, see the <a href="#">BlackBerry Web Services for BlackBerry UEM content</a>.</p>

For more information on obtaining and using all of the developer tools available from BlackBerry, visit the the [BlackBerry Developers site](#).



# Key BlackBerry UEM features

Feature	Description
Multiplatform device management	You can manage iOS, macOS, Android, and Windows 10 devices.
Single, intuitive UI	You can view all devices in one place and access all management tasks in a single, web-based UI. You can share administrative duties with multiple administrators who can access the management console at the same time. You can toggle between default and advanced views to see options for displaying information and filtering the user list.
Trusted and secure experience	Device controls give you precise management of how devices connect to your network, what capabilities are enabled, and what apps are available. Whether the devices are owned by your organization or your users, you can protect your organization's information.
Separate work and personal needs	You can manage devices using Android Enterprise Samsung Knox, and BlackBerry Balance technologies that are designed to make sure that personal information and work information are kept separate and secure on devices. If the device is lost or the employee leaves the organization, you can delete only work-related information or all information from the device.
Secure IP connectivity	You can use BlackBerry Secure Connect Plus to provide a secure IP tunnel between work space apps on iOS, Samsung Knox Workspace, and Android devices that have a work profile and your organization's network. This tunnel gives users access to work resources behind the organization's firewall while making sure the security of data using standard IPv4 protocols (TCP and UDP) and end-to-end encryption.
Simple user self-service	BlackBerry UEM Self-Service reduces support requests and lowers IT costs for your organization while giving users the option to manage their devices in a timely manner. Using BlackBerry UEM Self-Service, users can perform tasks like activating or switching devices, changing their device passwords remotely, deleting device data, or lock their lost or stolen devices, and address other critical support requirements.
Integration with services such as BlackBerry Workspaces, BlackBerry Enterprise Identity, and BlackBerry 2FA	You can integrate BlackBerry UEM with BlackBerry Workspaces, BlackBerry Enterprise Identity, and BlackBerry 2FA that allow you to add value to your organization's BlackBerry UEM instance.
Powerful app management	BlackBerry UEM is a comprehensive app management platform for all devices. You can deploy apps from all major app stores, including App Store, Google Play, Windows Store, and BlackBerry World storefront.

Feature	Description
Role-based administration	<p>You can share administrative duties with multiple administrators who can access the administration consoles at the same time. You can use roles to define the actions that an administrator can perform and reduce security risks, distribute job responsibilities, and increase efficiency by limiting the options available to each administrator. You can use predefined roles or create your own custom roles.</p>
Company directory integration	<p>You can use local, built-in user authentication to access the management console and self-service console, or you can integrate with the Microsoft Active Directory or LDAP company directories that you use in your organization's environment (for example, IBM Domino Directory). BlackBerry UEM supports connections to multiple directories. You can have any combination of both Microsoft Active Directory and LDAP.</p> <p>You can also configure BlackBerry UEM to automatically synchronize the membership of a directory-linked group to its associated company directory groups when the scheduled synchronization occurs.</p> <p>When you configure the settings for directory-linked groups, you can select offboarding protection. Offboarding protection requires two consecutive synchronization cycles before device data or user accounts are deleted from BlackBerry UEM. This feature helps to prevent unexpected deletions that can occur because of latency in directory replication.</p> <p>To integrate BlackBerry UEM Cloud with your company directory you must install the BlackBerry Connectivity Node. You can install one or more instances of the BlackBerry Connectivity Node.</p>
High availability	<p>If you have BlackBerry UEM Cloud, instead of having to maintain your own highly available service for device management, with all the upfront and maintenance costs, BlackBerry maintains the service and maximizes uptime for you.</p>
Migration	<p>You can migrate users, devices, groups, and other data from an on-premises BlackBerry UEM source database to a new on-premises or BlackBerry UEM Cloud instance.</p> <p>If you have configured BlackBerry UEM to manage Google Play accounts can migrate Android Enterprise devices from an on-premises BlackBerry UEM server to BlackBerry UEM Cloud or another on-premises BlackBerry UEM server.</p> <p>You can migrate BlackBerry Dynamics users from on-premises BlackBerry UEM (version 12.13 or later) to a BlackBerry UEM Cloud.</p>

Feature	Description
Cisco ISE integration	Cisco Identity Services Engine (ISE) is network administration software that gives an organization the ability to control whether devices can access the work network (for example, permitting or denying Wi-Fi or VPN connections). You can create a connection between Cisco ISE and BlackBerry UEM on-premises so that Cisco ISE can retrieve data about the devices that are activated on BlackBerry UEM. Cisco ISE checks device data to determine whether devices comply with your organization's access policies.
Regional deployment	You can set up regional connections for enterprise connectivity features by deploying one or more BlackBerry Connectivity Node instances in a dedicated region. This is known as a server group. Each BlackBerry Connectivity Node includes BlackBerry Secure Connect Plus, the BlackBerry Gatekeeping Service, the BlackBerry Secure Gateway, BlackBerry Proxy, and the BlackBerry Cloud Connector. You can associate enterprise connectivity and email profiles with a server group so that any users who are assigned those profiles use a specific regional connection to the BlackBerry Infrastructure when using BlackBerry Connectivity Node components. Deploying more than one BlackBerry Connectivity Node in a server group also allows for high availability and load balancing.
Wearable devices	You can activate and manage certain Android-based, head-worn wearable devices in BlackBerry UEM. For example, you can manage Vuzix M300 Smart Glasses. Smart glasses provide users with hands-free access to visual information such as notifications, step-by-step instructions, images, and video and allow users to issue voice commands, scan bar-codes and use GPS navigation. Examples of BlackBerry UEM management capabilities that are supported include: Device activation using QR code, IT policies, Wi-Fi and VPN profiles, app management and location services.
Microsoft Intune integration	For iOS and Android devices, if you want to protect data in Microsoft Office 365 apps using the MAM features of Microsoft Intune, you can use Intune to protect app data while using BlackBerry UEM to manage the devices. Intune provides security features that protect data within apps. For example, Intune can require that data within apps be encrypted and prevent copying and pasting, printing, and using the Save as command. You can connect UEM to Intune, allowing you to manage Intune app protection policies from within the UEM management console.

# Key features for all device types

There are activities that you can perform with all of the device types that BlackBerry UEM supports. These include activation, management of devices, apps and licenses, controlling how devices connect to your organization's resources, and enforcing your organization's requirements. For more information about these features, see the following table.

Feature	Description
Activate devices	<p>When you activate a device, you associate the device with your organization's environment so that users can access work data on their devices. You can activate a device with just an email address and activation password.</p> <p>You can allow users to activate devices themselves or you can activate devices for users and then distribute the devices. All device types can be activated over the wireless network.</p>
Manage devices	<p>You can view all devices in one place and access all management tasks in a single, web-based UI. You can manage multiple devices for each user account and view the device inventory for your organization. You can perform the following actions if the actions are supported by the device:</p> <ul style="list-style-type: none"><li>• Lock the device, change the device or work space password, or delete information from the device</li><li>• Connect the device securely to your organization's mail environment, using Microsoft Exchange ActiveSync for email and calendar support</li><li>• Control how the device can connect to your organization's network, including Wi-Fi and VPN settings</li><li>• Configure single sign-on for the device so that it authenticates automatically with domains and web services in your organization's network</li><li>• Control the capabilities of the device, such as setting rules for password strength and disabling functions like the camera</li><li>• Manage app availability on the device, including specifying app versions and whether the apps are required or optional</li><li>• Search app stores directly for apps to assign to devices</li><li>• Install certificates on the device and optionally configure SCEP to permit automatic certificate enrollment</li><li>• Extend email security using S/MIME or PGP</li></ul>
Manage groups of users, apps, and devices	<p>Groups simplify the management of users, apps, and devices. You can use groups to apply the same configuration settings to similar user accounts or similar devices. You can assign different groups of apps to different groups of users, and a user can be a member of several groups.</p>
Control which devices can access Microsoft Exchange ActiveSync	<p>You can use gatekeeping in BlackBerry UEM to ensure that only devices managed by BlackBerry UEM can access work email and other information on the device and meet your organization's security policy.</p>

Feature	Description
Control how devices connect to your organization's resources	You can use an enterprise connectivity profile to control how apps on devices connect to your organization's resources. When you enable enterprise connectivity, you avoid opening multiple ports in your organization's firewall to the Internet for device management and third-party applications such as the mail server, certification authority, and other web servers or content servers. Enterprise connectivity sends all traffic through the BlackBerry Infrastructure to BlackBerry UEM on port 3101.
Manage work apps	<p>On all managed devices, work apps are apps that your organization makes available for its users. Note that UEM does not support app management for macOS. For more information about macOS MDM controls activation, see the <a href="#">Activating devices</a> information.</p> <p>You can search the app stores directly for apps to assign to devices. You can specify whether apps are required on devices, and you can view whether a work app is installed on a device. Work apps can also be proprietary apps that were developed by your organization or by third-party developers for your organization's use.</p>
Enforce your organization's requirements for devices	You can use a compliance profile to help enforce your organization's requirements for devices, such as not permitting access to work data for devices that are jailbroken, rooted, or have an integrity alert, or requiring that certain apps be installed on devices. You can send a notification to users to ask them to meet your organization's requirements, or you can limit users' access to your organization's resources and applications, delete work data, or delete all data on the device.
Send an email to users	You can send an email to multiple users directly from the management console. The users must have an email address associated with their account.
Create or import many user accounts with a .csv file	You can import a .csv file into BlackBerry UEM to create or import many user accounts at once. Depending on your requirements, you can also specify group membership and activation settings for the user accounts in the .csv file.
View reports of user and device information	The reporting dashboard displays an overview of your BlackBerry UEM environment. For example, you can view the number of devices in your organization sorted by service provider. You can view details about users and devices, export the information to a .csv file, and access user accounts from the dashboard.
High availability and disaster recovery for the BlackBerry Infrastructure and BlackBerry UEM Cloud environments	<p>BlackBerry data centers are located around the world and are designed to provide high availability and disaster recovery. BlackBerry data centers provide secure physical access to buildings, monitoring, and hardware redundancies to help protect your organization's data from natural disasters.</p> <p>BlackBerry data centers have disaster recovery plans for service outages. The plans are designed to have minimal impact on device users and ensure business continuity. Data and apps are backed up in near real time to avoid data loss.</p>
Certificate-based authentication	You can send certificates to devices using certificate profiles. These profiles help to restrict access to Microsoft Exchange ActiveSync, Wi-Fi connections, or VPN connections to devices that use certificate-based authentication.

Feature	Description
Manage licenses for specific features and device controls	You can manage licenses and view detailed information for each license type, such as usage and expiration. The license types that your organization uses determine the devices and features that you can manage. You must activate licenses before you can activate devices. Free trials are available so that you can try out the service.

# Key features for each device type

## iOS devices

Feature	Description
Run app lock mode	On iOS devices that are supervised using Apple Configurator 2, you can use an app lock mode profile to limit the device to run only one app. For example, you can limit access to a single app for training purposes or for point-of-sales demonstrations.
Device activation	You can use Apple Configurator 2 to prepare devices for activation in BlackBerry UEM. Users can activate the prepared devices without using the BlackBerry UEM Client app.
Filter web content	You can use web content filter profiles to limit the websites that a user can view on a device. You can enable automatic filtering with the option to allow and restrict websites, or allow access only to specific websites.
Link Apple VPP accounts to a BlackBerry UEM domain	The Volume Purchase Program (VPP) allows you to buy and distribute iOS apps in bulk. You can link Apple VPP accounts to a BlackBerry UEM domain so that you can distribute purchased licenses for iOS apps associated with the VPP accounts.
Apple Device Enrollment Program	<p>You can configure BlackBerry UEM to use the Apple Device Enrollment Program (DEP) so that you can synchronize BlackBerry UEM with the DEP. After you configure BlackBerry UEM, you can use the BlackBerry UEM management console to manage the activation of the iOS devices that your organization purchased for the DEP. You can use multiple DEP accounts.</p> <p>You can link multiple Apple DEP accounts to one BlackBerry UEM domain.</p>
Support for app-based PKI solutions	Added support for app-based PKI solutions, such as Purebred, which can enroll certificates for BlackBerry Dynamics apps. You can now install the PKI app on devices and allow the latest versions of BlackBerry Dynamics apps, such as BlackBerry Work and BlackBerry Access, to use certificates enrolled through the PKI app.
Use custom payload profiles	You can use custom payload profiles to control features on iOS devices that are not controlled by existing BlackBerry UEM policies or profiles. You can create Apple configuration profiles using Apple Configurator and add them to BlackBerry UEM custom payload profiles. You can assign the custom payload profiles to users, user groups, and device groups.
BlackBerry Secure Gateway	The BlackBerry Secure Gateway allows iOS devices with the MDM controls activation type to connect to your work email server through the BlackBerry Infrastructure and BlackBerry UEM. If you use the BlackBerry Secure Gateway, you don't have to expose your mail server outside of the firewall to allow users with these devices to receive work email when they are not connected to your organization's VPN or work Wi-Fi network.

Feature	Description
Integration with BlackBerry Dynamics	<p>You can use the BlackBerry Dynamics profile to allow iOS devices to access BlackBerry Dynamics productivity apps such as BlackBerry Work, BlackBerry Access, and BlackBerry Connect. You can assign the BlackBerry Dynamics profile to user accounts, user groups, or device groups. Multiple devices can access the same apps.</p> <p>The profile allows you to enable BlackBerry Dynamics for users that are not already BlackBerry Dynamics enabled.</p>
Per-app VPN	<p>You can set up per-app VPN for iOS devices to specify which apps on devices must use a VPN for their data in transit. Per-app VPN helps decrease the load on your organization's VPN by enabling only certain work traffic to use the VPN (for example, accessing application servers or webpages behind the firewall). This feature also supports user privacy and increases connection speed for personal apps by not sending the personal traffic through the VPN.</p> <p>For iOS devices, apps are associated with a VPN profile when you assign the app or app group to a user, user group, or device group.</p>
Apple Activation Lock	<p>The Activation Lock feature requires the user's Apple ID and password before a user can turn off Find My iPhone, erase the device, or reactivate and use the device. You can bypass the activation lock to give a COPE or COBO device to a different user.</p>
Personal app lists	<p>You can view a list of apps that are installed in a user's personal space on iOS devices in your environment. You can view a list of personal apps installed on a user's device on the User Details page or view a list of all personal apps installed in users' personal spaces on the Personal apps page in the management console.</p>
Lost Mode for supervised iOS devices	<p>Lost Mode allows you to lock a device, set a message that you want to display, and view the current location of the lost device. You can enable Lost Mode for supervised iOS devices.</p>
IBM Notes Traveler support	<p>iOS devices can connect to IBM Notes Traveler through the BlackBerry Secure Gateway.</p>
Face ID support	<p>BlackBerry UEM supports Face ID for device authentication and to open BlackBerry Dynamics apps.</p>
Shared device management	<p>You can allow multiple users to share an iOS device. You can customize terms of use that users must accept to check out shared devices. A user can check out a device using local authentication and when they are done using it, they can check it in and the device is available for the next user. Shared devices remain managed by BlackBerry UEM during the check-out and check-in process. This feature was designed for supervised devices with the following configuration:</p> <ul style="list-style-type: none"> <li>• App lock mode enabled</li> <li>• VPP apps assigned</li> </ul>
iPad	<p>iPad devices can be shared between multiple users. When users sign in with a Managed Apple ID their data loads, and the user then has access to their own email accounts, files, iCloud Photo Library, app data, and more.</p>



## Android devices

Feature	Description
Manage Android Enterprise devices	<p>You can activate Android devices to use Android Enterprise, which is a feature developed by Google that provides additional security for organizations that want to manage Android devices and allow their data and apps on Android devices.</p> <p>Devices can be activated to have only a work profile, or to have both work and personal profiles. You can have full control over both profiles and have the ability to wipe the entire device, or you can allow user privacy for the personal profile and only have the ability to wipe work data from the device.</p> <p>Samsung and BlackBerry powered by Android devices offer additional administrator options, including an enhanced set of IT policy rules, when activated with Android Enterprise</p> <p>Customers who have configured BlackBerry UEM to manage Google Play accounts can now migrate Android Enterprise devices from an on-premises BlackBerry UEM server to UEM Cloud or another on-premises BlackBerry UEM server.</p>
Work and personal – full control activations for Android Enterprise devices	<p>This activation type is for devices running Android 8 and later. It lets you manage the entire device. It creates a work profile on the device that separates work and personal data but allows your organization to maintain full control over the device and wipe all data from the device. Data in both the work and personal profiles is protected using encryption and a method of authentication such as a password.</p>
Manage devices using Knox MDM and Knox Workspace	<p>BlackBerry UEM can also manage Samsung devices using Samsung Knox MDM and Samsung Knox Workspace. Knox Workspace provides an encrypted, password-protected container on a Samsung device that includes your work apps and data. It separates a user's personal apps and data from your organization's apps and data and protects your apps and data using enhanced security and management capabilities that Samsung developed.</p> <p>When a device is activated, BlackBerry UEM automatically identifies whether the device supports Knox. In addition to the standard Android management capabilities, BlackBerry UEM includes the following management capabilities for devices that support Knox:</p> <ul style="list-style-type: none"><li>• An enhanced set of IT policy rules</li><li>• Enhanced application management including silent app installations and uninstalls, silent uninstalls of restricted apps, and prohibitions to installing restricted apps</li><li>• App lock mode</li></ul> <p>For more information about supported devices, <a href="#">see the Compatibility matrix</a>. For more information about Knox, visit <a href="https://www.samsungknox.com">https://www.samsungknox.com</a>.</p>

Feature	Description
Integration with BlackBerry Dynamics	<p>You can use the BlackBerry Dynamics profile to allow Android devices to access BlackBerry Dynamics productivity apps such as BlackBerry Work, BlackBerry Access, and BlackBerry Connect. You can assign the BlackBerry Dynamics profile to user accounts, user groups, or device groups. Multiple devices can access the same apps.</p> <p>The profile allows you to enable BlackBerry Dynamics for users that are not already BlackBerry Dynamics enabled.</p>
Per-app VPN	<p>You can enable per-app VPN for Android devices that have a work profile to restrict the use of BlackBerry Secure Connect Plus to specific work space apps that you add to an allowed list.</p>
Zero-touch enrollment	<p>BlackBerry UEM supports devices running Android 8.0 or later that have been enabled for zero-touch enrollment. Zero-touch enrollment offers a seamless deployment method for organization-owned Android devices making large-scale device deployment fast, easy, and secure for the organization and employees. Zero-touch enrollment makes it simple for IT administrators to configure devices online and have enforced management ready when employees receive their devices. See the information from Google: <a href="#">Zero-touch enrollment management</a>, and <a href="#">the zero-touch enrollment overview</a> information. You can get started with zero-touch enrollment in just a few steps: purchase devices, assign the devices to users, configure policies for your organization, and deploy the devices to users. You need to work with your reseller or carrier to get access to the Zero-touch portal and get devices configured in the portal.</p>
Support for app-based PKI solutions	<p>Support for app-based PKI solutions, such as Purebred, which can enroll certificates for BlackBerry Dynamics apps. You can install the PKI app on devices and allow the latest versions of BlackBerry Dynamics apps, such as BlackBerry Work and BlackBerry Access, to use certificates enrolled through the PKI app.</p>
Android SafetyNet	<p>When administrators enable Android SafetyNet attestation, BlackBerry UEM sends challenges to test the authenticity and integrity of Android devices that have been activated with the Android Enterprise, Samsung Knox, and MDM controls activation types in your organization's environment.</p>
Security patch level enforcement for BlackBerry Dynamics apps	<p>You can apply security patch level enforcement to BlackBerry Dynamics apps. If the security patch level is not met, you can choose to delete the BlackBerry Dynamics app data, not allow BlackBerry Dynamics apps to run on the device, or perform no actions on the device.</p>
Derived smart credentials	<p>Use Entrust IdentityGuard derived smart credentials for signing, encryption, and authentication for BlackBerry Dynamics apps and apps in the work space on Android Enterprise and Samsung Knox Workspace devices.</p>
Factory reset protection for Android Enterprise devices	<p>You can set up a Factory reset protection profile for your organization's Android Enterprise devices that have been activated using the Work space only activation type. This profile allows you to specify a user account that can be used to unlock a device after it has been reset to factory settings or remove the need to sign in after the device has been reset to factory settings.</p>

## Windows 10 devices

Feature	Description
Support for Windows 10 devices	You can manage Windows 10 devices, including Windows 10 Mobile devices and Windows 10 tablets and computers.
Proxy support for Windows 10 devices	You can configure VPN and Wi-Fi work connections for Windows 10 devices and you can set up a proxy server as part of the Wi-Fi profile for Windows 10 Mobile devices.
Per-app VPN	<p>You can set up per-app VPN for Windows 10 devices to specify which apps on devices must use a VPN for their data in transit. Per-app VPN helps decrease the load on your organization's VPN by enabling only certain work traffic to use the VPN (for example, accessing application servers or webpages behind the firewall). This feature also supports user privacy and increases connection speed for personal apps by not sending the personal traffic through the VPN.</p> <p>For Windows 10 devices, apps are added to the app trigger list in the VPN profile.</p>
Windows Information Protection for Windows 10 devices	You can configure Windows Information Protection profiles to separate personal and work data on devices, prevent users from sharing work data outside of protected work apps or with people outside your organization, and audit inappropriate data sharing practices. You can specify which apps are protected and trusted to create and access work files.
Whitelist antivirus vendors	In the compliance profile, in the "Antivirus status" rule for Windows devices, you can choose to allow antivirus software from any vendor, or allow only those that you added to the "Allowed antivirus vendors" list. The rule will be enforced if a device has antivirus software enabled from any vendor that is not whitelisted.
Azure Active Directory Join	BlackBerry UEM supports Azure Active Directory Join which allows a simplified MDM enrollment process for Windows 10 devices. Users can enroll their devices with BlackBerry UEM using their Azure Active Directory username and password. Azure Active Directory Join is also required to support Windows AutoPilot, which allows Windows 10 devices to be automatically activated with BlackBerry UEM during the Windows 10 out-of-box setup experience. <b>Note:</b> To enable automatic MDM enrollment with BlackBerry UEM during the Windows 10 out-of-box setup, a BlackBerry UEM certificate must be installed on the device.

## macOS devices

Feature	Description
Basic device management using device controls	When a user activates a macOS device, the device and the user are set up as separate entities on BlackBerry UEM. Separate communication channels are established between BlackBerry UEM and the device and BlackBerry UEM and the user account, allowing you to manage the device and the user separately.

Feature	Description
Profiles and policies	<p>Some profiles are assigned to the user only, for example email profiles. Some profiles are assigned to the device only, for example proxy profiles. Some profiles allow you to choose whether to apply the profile to the device or the user, for example Wi-Fi profiles.</p> <p>You can control the device using commands and IT policies. Users activate macOS devices using BlackBerry UEM Self-Service.</p>

# Compatibility and requirements

You can find up-to-date information about compatibility, including device types, operating systems for devices, and browsers for accessing BlackBerry UEM, in the [BlackBerry UEM Compatibility Matrixes](#).

# Legal notice

©2022 BlackBerry Limited. Trademarks, including but not limited to BLACKBERRY, BBM, BES, EMBLEM Design, ATHOC, CYLANCE and SECUSMART are the trademarks or registered trademarks of BlackBerry Limited, its subsidiaries and/or affiliates, used under license, and the exclusive rights to such trademarks are expressly reserved. All other trademarks are the property of their respective owners.

This documentation including all documentation incorporated by reference herein such as documentation provided or made available on the BlackBerry website provided or made accessible "AS IS" and "AS AVAILABLE" and without condition, endorsement, guarantee, representation, or warranty of any kind by BlackBerry Limited and its affiliated companies ("BlackBerry") and BlackBerry assumes no responsibility for any typographical, technical, or other inaccuracies, errors, or omissions in this documentation. In order to protect BlackBerry proprietary and confidential information and/or trade secrets, this documentation may describe some aspects of BlackBerry technology in generalized terms. BlackBerry reserves the right to periodically change information that is contained in this documentation; however, BlackBerry makes no commitment to provide any such changes, updates, enhancements, or other additions to this documentation to you in a timely manner or at all.

This documentation might contain references to third-party sources of information, hardware or software, products or services including components and content such as content protected by copyright and/or third-party websites (collectively the "Third Party Products and Services"). BlackBerry does not control, and is not responsible for, any Third Party Products and Services including, without limitation the content, accuracy, copyright compliance, compatibility, performance, trustworthiness, legality, decency, links, or any other aspect of Third Party Products and Services. The inclusion of a reference to Third Party Products and Services in this documentation does not imply endorsement by BlackBerry of the Third Party Products and Services or the third party in any way.

EXCEPT TO THE EXTENT SPECIFICALLY PROHIBITED BY APPLICABLE LAW IN YOUR JURISDICTION, ALL CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS, OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY CONDITIONS, ENDORSEMENTS, GUARANTEES, REPRESENTATIONS OR WARRANTIES OF DURABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, MERCHANTABLE QUALITY, NON-INFRINGEMENT, SATISFACTORY QUALITY, OR TITLE, OR ARISING FROM A STATUTE OR CUSTOM OR A COURSE OF DEALING OR USAGE OF TRADE, OR RELATED TO THE DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN, ARE HEREBY EXCLUDED. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY BY STATE OR PROVINCE. SOME JURISDICTIONS MAY NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES AND CONDITIONS. TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES OR CONDITIONS RELATING TO THE DOCUMENTATION TO THE EXTENT THEY CANNOT BE EXCLUDED AS SET OUT ABOVE, BUT CAN BE LIMITED, ARE HEREBY LIMITED TO NINETY (90) DAYS FROM THE DATE YOU FIRST ACQUIRED THE DOCUMENTATION OR THE ITEM THAT IS THE SUBJECT OF THE CLAIM.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, IN NO EVENT SHALL BLACKBERRY BE LIABLE FOR ANY TYPE OF DAMAGES RELATED TO THIS DOCUMENTATION OR ITS USE, OR PERFORMANCE OR NON-PERFORMANCE OF ANY SOFTWARE, HARDWARE, SERVICE, OR ANY THIRD PARTY PRODUCTS AND SERVICES REFERENCED HEREIN INCLUDING WITHOUT LIMITATION ANY OF THE FOLLOWING DAMAGES: DIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR AGGRAVATED DAMAGES, DAMAGES FOR LOSS OF PROFITS OR REVENUES, FAILURE TO REALIZE ANY EXPECTED SAVINGS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, LOSS OF BUSINESS OPPORTUNITY, OR CORRUPTION OR LOSS OF DATA, FAILURES TO TRANSMIT OR RECEIVE ANY DATA, PROBLEMS ASSOCIATED WITH ANY APPLICATIONS USED IN CONJUNCTION WITH BLACKBERRY PRODUCTS OR SERVICES, DOWNTIME COSTS, LOSS OF THE USE OF BLACKBERRY PRODUCTS OR SERVICES OR ANY PORTION THEREOF OR OF ANY AIRTIME SERVICES, COST OF SUBSTITUTE GOODS, COSTS OF COVER, FACILITIES OR SERVICES, COST OF CAPITAL, OR OTHER SIMILAR PECUNIARY LOSSES, WHETHER OR NOT SUCH DAMAGES

WERE FORESEEN OR UNFORESEEN, AND EVEN IF BLACKBERRY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW IN YOUR JURISDICTION, BLACKBERRY SHALL HAVE NO OTHER OBLIGATION, DUTY, OR LIABILITY WHATSOEVER IN CONTRACT, TORT, OR OTHERWISE TO YOU INCLUDING ANY LIABILITY FOR NEGLIGENCE OR STRICT LIABILITY.

THE LIMITATIONS, EXCLUSIONS, AND DISCLAIMERS HEREIN SHALL APPLY: (A) IRRESPECTIVE OF THE NATURE OF THE CAUSE OF ACTION, DEMAND, OR ACTION BY YOU INCLUDING BUT NOT LIMITED TO BREACH OF CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR ANY OTHER LEGAL THEORY AND SHALL SURVIVE A FUNDAMENTAL BREACH OR BREACHES OR THE FAILURE OF THE ESSENTIAL PURPOSE OF THIS AGREEMENT OR OF ANY REMEDY CONTAINED HEREIN; AND (B) TO BLACKBERRY AND ITS AFFILIATED COMPANIES, THEIR SUCCESSORS, ASSIGNS, AGENTS, SUPPLIERS (INCLUDING AIRTIME SERVICE PROVIDERS), AUTHORIZED BLACKBERRY DISTRIBUTORS (ALSO INCLUDING AIRTIME SERVICE PROVIDERS) AND THEIR RESPECTIVE DIRECTORS, EMPLOYEES, AND INDEPENDENT CONTRACTORS.

IN ADDITION TO THE LIMITATIONS AND EXCLUSIONS SET OUT ABOVE, IN NO EVENT SHALL ANY DIRECTOR, EMPLOYEE, AGENT, DISTRIBUTOR, SUPPLIER, INDEPENDENT CONTRACTOR OF BLACKBERRY OR ANY AFFILIATES OF BLACKBERRY HAVE ANY LIABILITY ARISING FROM OR RELATED TO THE DOCUMENTATION.

Prior to subscribing for, installing, or using any Third Party Products and Services, it is your responsibility to ensure that your airtime service provider has agreed to support all of their features. Some airtime service providers might not offer Internet browsing functionality with a subscription to the BlackBerry® Internet Service. Check with your service provider for availability, roaming arrangements, service plans and features. Installation or use of Third Party Products and Services with BlackBerry's products and services may require one or more patent, trademark, copyright, or other licenses in order to avoid infringement or violation of third party rights. You are solely responsible for determining whether to use Third Party Products and Services and if any third party licenses are required to do so. If required you are responsible for acquiring them. You should not install or use Third Party Products and Services until all necessary licenses have been acquired. Any Third Party Products and Services that are provided with BlackBerry's products and services are provided as a convenience to you and are provided "AS IS" with no express or implied conditions, endorsements, guarantees, representations, or warranties of any kind by BlackBerry and BlackBerry assumes no liability whatsoever, in relation thereto. Your use of Third Party Products and Services shall be governed by and subject to you agreeing to the terms of separate licenses and other agreements applicable thereto with third parties, except to the extent expressly covered by a license or other agreement with BlackBerry.

The terms of use of any BlackBerry product or service are set out in a separate license or other agreement with BlackBerry applicable thereto. NOTHING IN THIS DOCUMENTATION IS INTENDED TO SUPERSEDE ANY EXPRESS WRITTEN AGREEMENTS OR WARRANTIES PROVIDED BY BLACKBERRY FOR PORTIONS OF ANY BLACKBERRY PRODUCT OR SERVICE OTHER THAN THIS DOCUMENTATION.

BlackBerry Enterprise Software incorporates certain third-party software. The license and copyright information associated with this software is available at <http://worldwide.blackberry.com/legal/thirdpartysoftware.jsp>.

BlackBerry Limited  
2200 University Avenue East  
Waterloo, Ontario  
Canada N2K 0A7

BlackBerry UK Limited  
Ground Floor, The Pearce Building, West Street,  
Maidenhead, Berkshire SL6 1RL  
United Kingdom

Published in Canada