Universal Device Service

Feature and Technical Overview

Version: 6.0

BlackBerry®

Published: 2012-03-22
SWD-20120322133506407

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About the Universal Device Service

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The Universal Device Service is designed to permit you to manage devices that run iOS or Android OS in your organization's environment.

If you activate devices using the Universal Device Service, you can use the Universal Device Service to:

- Manage devices using the IT policies and IT administration commands that the devices support
- Configure profiles for devices so that you can control the connections to your organization's environment (Wi-Fi profiles and certificate profiles for iOS devices and Android devices, VPN profiles and email profiles for iOS devices)
- Provision and manage work applications on devices
- View the device inventory for your organization

To provide a single interface for helpdesk administrators to manage all the devices in your organization's environment, you can connect BlackBerry Mobile Fusion Studio to the Universal Device Service.

You can purchase and download the Universal Device Service from www.blackberry.com/support/downloads.

Features

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Feature	Description
Certificate-based authentication	You can use the Universal Device Service to roll out certificates to devices using certificate profiles or SCEP profiles. The Universal Device Service helps to restrict access to Microsoft ActiveSync, Wi-Fi connections, or VPN connections to devices using certificate-based authentication. Also, this feature helps you to control Microsoft ActiveSync, Wi-Fi connections, or VPN connections on devices because the Universal Device Service can automatically remove profiles and certificates when a device violates one of the predefined compliance policies, for example, compliance policies for jailbroken devices or rooted devices. Certificate-based authentication does not require a proxy server between the device and your organization's messaging server.
Activation and management of devices	To activate a device, you send an email message to the device that contains information about downloading the Mobile Fusion Client. You can manage multiple devices for each user account and view the device inventory for your organization in the Mobile Fusion Client. You can perform the following actions if they are supported by the device: • Activate, lock, and delete information from a device • Reset the device password • Apply profiles and IT policies to a device • Install certificates and configure SCEP on a device
Mobile Fusion Client	The Mobile Fusion Client permits the device to communicate with the Universal Device Service and perform the following actions: • Retrieve device information • Manage device settings • Display messages
Groups	Groups permit you to share roles, IT policies, and other configuration settings among similar user accounts. You can assign a user account to a group so that the user account inherits the properties of the group. You can install and configure the BlackBerry Directory Sync Tool to add user accounts to a group or remove user accounts from a group. For more information about the BlackBerry Directory Sync Tool, see the *BlackBerry Enterprise Server Resource Kit Administration Guide*.
IT policies	An IT policy is a set of IT policy rules that permit you to define password requirements and control applications and functions on a device. You can create and apply an IT policy to a user account or a group of user accounts.

Feature	Description
Management of applications	You can provision and manage work applications on devices.
Profiles	You can use profiles to manage device settings that are supported by the device. You can set up and assign profiles to a user account or a group of user accounts. These profiles are: • The VPN profile permits an device to connect to a VPN. • The Wi-Fi profile permits a device to connect to a wireless access point. • The Microsoft ActiveSync profile permits a device to connect to your organization's email service, if the email service supports Microsoft ActiveSync. • The SCEP profile permits a device to enroll a certificate from a certificate authority that supports the SCEP. • The certification authority certificate profile allows a device to establish a trusted relationship with services that use certificates that are issued by the certification authority.

Architecture

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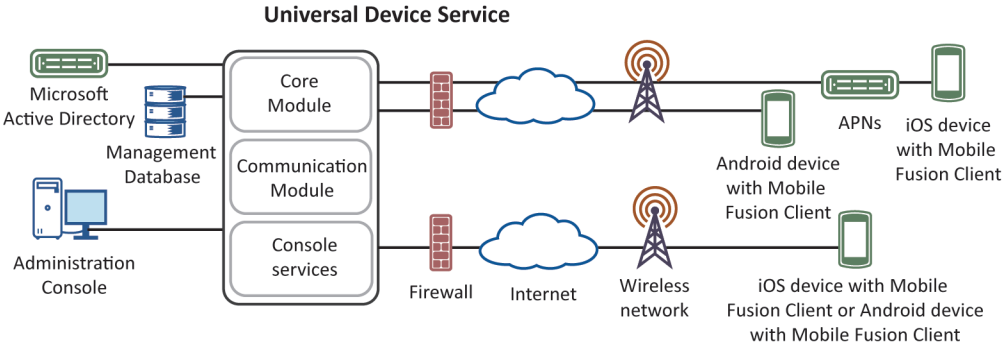
This section gives you a high-level overview of the architecture of the and how it fits into an existing environment. For more information about system requirements and installation instructions, see the *Universal Device Service Installation and Configuration Guide*.

Architecture: Universal Device Service installed on one computer

You can install the Universal Device Service components on one computer.



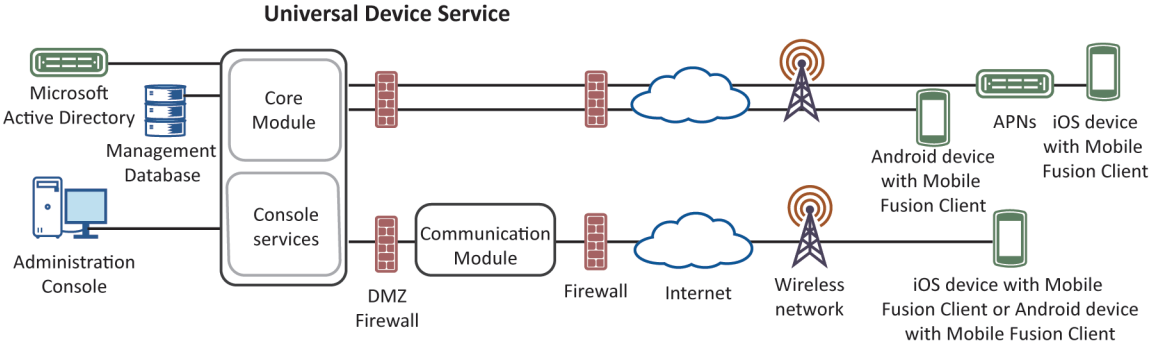
Component	Description
Core Module	The Core Module controls access to the Management Database and communicates with your organization's environment. The Core Module connects to the following services: • The Universal Device Service retrieves user account information from Microsoft Active Directory to create user accounts • The Microsoft ActiveSync profile is configured on iOS devices to allow the devices to access your organization's email service. • The Core Module sends notifications to APNs for an iOS device. These notifications inform the iOS device to contact the Communication Module.
Communication Module	The Communication Module manages Universal Device Service communication. It must be accessible to the Internet so that it can communicate with iOS devices and Android devices.
Console services	You can use Console services to manage user accounts, IT policies, profiles, and devices.
Mobile Fusion Client	The Mobile Fusion Client is installed on devices and communicates with the Communication Module.

Architecture: Universal Device Service with the Communication Module installed in the DMZ

The Universal Device Service components can be installed with the following configuration:

- The Communication Module is installed on a computer in the DMZ.
- The Core Module and the Console services are installed on the same computer behind both the DMZ firewall and your organization's firewall.

The Management Database can be located on the computer that hosts the Core Module or on a separate computer. The Management Database cannot be installed in the DMZ. If the Communication Module is installed in the DMZ, the database cannot be hosted on that same computer.



Component	Description
Core Module	The Core Module controls access to the Management Database and communicates with your organization's environment. The Core Module connects to the following services: • The Universal Device Service retrieves user account information from Microsoft Active Directory to create user accounts. • The Microsoft ActiveSync profile is configured on iOS devices to allow the devices to access your organization's email service. • The Core Module sends notifications to APNs for an iOS device. These notifications inform the iOS device to contact the Communication Module.
Communication Module	The Communication Module manages the Universal Device Service communication. The Communication Module is installed on a computer in the DMZ. It must be able to access the Internet so that it can communicate with iOS devices and Android devices. To prevent an unauthorized user from having direct access to the other Universal Device Service components, the Communication Module is installed on a computer in the DMZ, between the DMZ firewall and your organization's firewall.

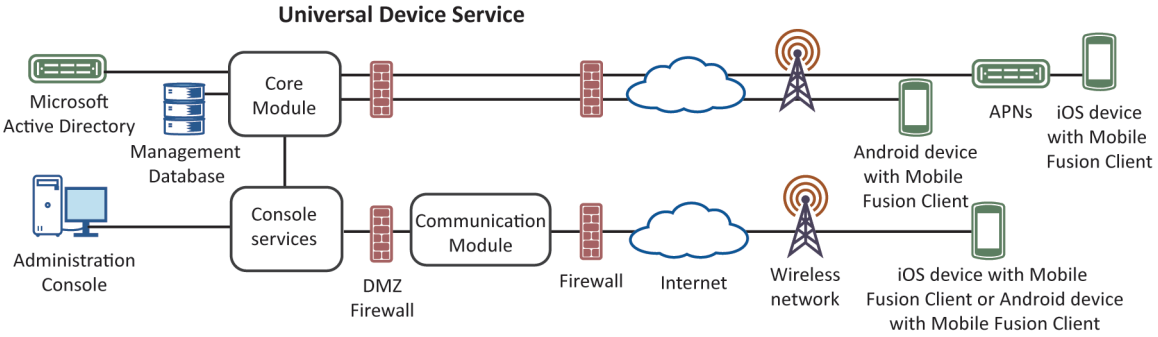
Component	Description
Console services	You can use Console services to manage user accounts, IT policies, profiles, and devices.
Mobile Fusion Client	The Mobile Fusion Client is installed on the device and communicates with the Communication Module.

Architecture: Universal Device Service installed in a distributed environment

You can install the Universal Device Service in a distributed environment with the following components:

- The Communication Module is installed on a computer in the DMZ.
- The Core Module and the Console services are installed on separate computers behind both the DMZ firewall and your organization's firewall.

The Management Database is located on the computer that hosts the Core Module or on a separate computer. The database cannot be installed in the DMZ. If the Communication Module is installed in the DMZ, the database cannot be hosted on that same computer.



Component	Description
Core Module	The Core Module controls access to the Management Database and communicates with your organization's environment. The Core Module connects to the following: • The Universal Device Service retrieves user account information from Microsoft Active Directory to create user accounts • The Microsoft ActiveSync profile is configured on iOS devices to allow the devices to access your organization's email service. • The Core Module sends notifications to APNs for an iOS device. These notifications inform the iOS device to contact the Communication Module.

Component	Description
Communication Module	The Communication Module manages Universal Device Service communication. The Communication Module is installed on a computer in the DMZ. It must be able to access the Internet so that it can communicate with iOS devices and Android devices. To prevent an unauthorized user from having direct access to the other modules, the Communication Module is installed on a computer in the DMZ, between the DMZ firewall and your organization's firewall.
Console services	You can use Console services to manage user accounts, IT policies, profiles, and devices.
Mobile Fusion Client	The Mobile Fusion Client is installed on devices and communicates with the Communication Module.

Data flows

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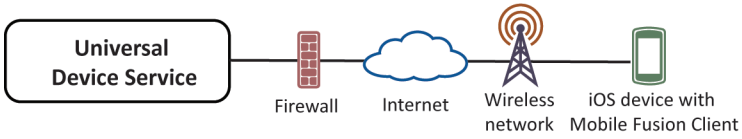
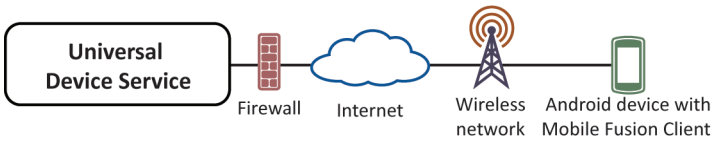
Data flow: Activating an iOS device over the wireless network



1. In the Administration Console, you create a user account and send an email message that contains information about downloading the Mobile Fusion Client to the user.
2. The user performs the following actions:
   - The user receives the email message and installs the Mobile Fusion Client on the device.
   - The user types their organization's name, username, and password and accepts the terms and conditions of the license agreement and then activates the device.

The device is activated and can communicate with the Universal Device Service.

Data flow: Activating an Android device over the wireless network



1. In the Administration Console, you create a user account and send an email message to the user that contains information about downloading the Mobile Fusion Client.
2. The user performs the following actions:
   - The user receives the email and installs the Mobile Fusion Client on the device.
   - The user types their organization's name, username, and password and accepts the terms and conditions of the license agreement and then activates the device.

The device is activated and can communicate with the Universal Device Service.

Related resources

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To read the following resources, visit www.blackberry.com/go/serverdocs

Resource	Information
Universal Device Service Release Notes	• Description of known issues and potential workarounds
Universal Device Service Installation and Configuration Guide	• System requirements • Installation instructions
Universal Device Service Feature and Technical Overview	• Architecture diagrams • Description of features and components • Data flows
Universal Device Service Administration Guide	• Instructions for creating user accounts, groups, and administrator accounts, and so on • Instructions for activating devices • Instructions for creating and assigning IT policies and profiles • Instructions for managing applications on devices

Glossary

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APNs	Apple Push Notification service
DMZ	A demilitarized zone (DMZ) is a neutral subnetwork outside of an organization's firewall. It exists between the trusted LAN of the organization and the untrusted external wireless network and public Internet.
SCEP	simple certificate enrollment protocol
VPN	virtual private network

Legal notice

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Research In Motion Limited
295 Phillip Street
Waterloo, ON N2L 3W8
Canada

Research In Motion UK Limited
Centrum House
36 Station Road
Egham, Surrey TW20 9LF
United Kingdom

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