



Accessing BlackBerry Data Services Using Wi-Fi Networks

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Introduction

The BlackBerry® 8820 smartphone allows BlackBerry smartphone users with qualifying data plans to access BlackBerry data services using a wireless network, a Wi-Fi® network, or both networks simultaneously.

All BlackBerry data services are available through Wi-Fi networks.

- BlackBerry® Enterprise Server
- BlackBerry® Mobile Data System (MDS)
- BlackBerry® Internet Service
- BlackBerry® Messenger
- Personal identification number (PIN) messaging
- Other data services – instant messaging, etc

Having the option to simultaneously access both a wireless network and a Wi-Fi network allows BlackBerry smartphone users to do multiple tasks at once. For example, a BlackBerry 8820 smartphone user can send email messages using a Wi-Fi network, while conducting a phone call using the wireless network.

Wi-Fi access to BlackBerry data services

A Wi-Fi enabled BlackBerry smartphone can access BlackBerry data services using Wi-Fi networks in two ways.

1. Access via enterprise Wi-Fi networks

- Allows for optimized Wi-Fi access to the BlackBerry Enterprise Server when connected to a Wi-Fi network that allows direct IP access to the BlackBerry Router
- Direct IP access usually only occurs when the BlackBerry smartphone is connected on an enterprise Wi-Fi network.
- Wi-Fi access to the BlackBerry Internet Service and additional services is also possible with the proper network configuration. See the *Quick guide to service availability* section below for more details.

2. Access via hotspot or home Wi-Fi network

- Allows for access to all provisioned BlackBerry data services via the BlackBerry® Infrastructure
- Proper network configuration is necessary. However, in most cases, the default network configuration is the proper configuration. See the *Network configuration* section below for details.

Priority for connections

Each BlackBerry data service connects to the BlackBerry Router or BlackBerry Infrastructure via the best possible connection or combination of available connections in the order listed

below. This assumes that all routes to the BlackBerry Router and the Internet are available when connected to the Wi-Fi network.

1. Serial, Universal Serial Bus (USB), or Bluetooth® connection via the BlackBerry Device Manager - **This method applies to BlackBerry Enterprise Server or BlackBerry MDS services only.**
2. BlackBerry Router connection from a Wi-Fi network with or without a virtual private network (VPN)
3. BlackBerry data services over a Wi-Fi network via a Secure Sockets Layer (SSL) connection through the Internet to the BlackBerry Infrastructure
4. Wireless service provider connection to the BlackBerry Infrastructure via the Global System for Mobile Communications® (GSM®) network, the Enhanced Data Rates for Global Evolution (EDGE) network, or Unlicensed Mobile Access (UMA) - For more information, see KB11735 in the [BlackBerry Technical Solution Center](#).

Note: Connections to the BlackBerry Router and BlackBerry Infrastructure can be used simultaneously to access all available data services.

Network configuration

For hotspot or home Wi-Fi network users

1. A Wi-Fi connection profile must be added for each hotspot or home Wi-Fi network. Wi-Fi connection profiles can easily be configured via the Set Up Wi-Fi wizard. The correct service set identifier (SSID), security type, security key or credentials are necessary for this configuration. Additionally, hotspot users may need to have additional credentials or agree to the hotspot provider's terms and conditions for use. These can be entered when using the Set Up Wi-Fi wizard.
2. In most cases, no other additional configuration will be necessary. Once connected, authenticated, and authorized to use the hotspot or home Wi-Fi network, all provisioned BlackBerry data services should be available. This is accomplished by establishing an SSL connection via port 443 to the BlackBerry Infrastructure.

For enterprise Wi-Fi network users

System administrators for enterprise Wi-Fi networks must ensure that the following configurations have been set up before BlackBerry data services can be accessed over the enterprise Wi-Fi network.

1. Each BlackBerry smartphone must have a Wi-Fi connection profile for the enterprise Wi-Fi network before it can connect. Additionally, each BlackBerry smartphone user requires the SSID, security type, security key or credentials for the enterprise Wi-Fi network. This information can be distributed easily and securely via a BlackBerry Enterprise Server IT policy, or it can be configured manually via the Set Up Wi-Fi wizard.
2. For access to BlackBerry Enterprise Server and BlackBerry MDS services, the Wi-Fi networks assigns an IP address to each Wi-Fi enabled BlackBerry smartphone that allows for a connection to the correct BlackBerry Router via port 4101.
3. For access to all other BlackBerry data services, each BlackBerry smartphone must be allowed to make an SSL connection to the Internet via port 443.

Additional configurations

Each Wi-Fi enabled BlackBerry smartphone is designed to connect to the organization's network over a Wi-Fi network via a VPN tunnel. Each Wi-Fi enabled BlackBerry smartphone comes with an Internet Protocol Security (IPSec) VPN client that works with many popular VPN concentrators. This configuration requires additional planning and setup. For more information, see KB13215 in the [BlackBerry Technical Solution Center](#).

For additional information on the security features available in the BlackBerry solution, see www.blackberry.com/security.

Quick guide to service availability

The following page outlines the BlackBerry data services and wireless service provider data and voice services available under the different connection methods. For more information on UMA, check with your wireless service provider.

	Service provider GSM/EDGE network or UMA	Wi-Fi network plus service provider GSM/EDGE network*	Wi-Fi network without service provider GSM/EDGE network**	Enterprise Wi-Fi network plus service provider GSM/EDGE network*	Enterprise Wi-Fi network without service provider GSM/EDGE network**
BlackBerry Enterprise Server	Yes	Yes	Yes	Yes	Yes
Setup, e-mail, PIM sync, etc.					
BlackBerry Internet Service	Yes	Yes	Yes	Yes	Yes
Setup, e-mail, Internet browsing					
BlackBerry MDS	Yes	Yes	Yes	Yes	Yes
Application push/access, intra/Internet browsing, etc.					
BlackBerry Messenger	Yes	Yes	Yes	Yes	Yes
PIN messaging	Yes	Yes	Yes	Yes	Yes
Enterprise instant messaging	Yes	Yes	Yes	Yes	Yes
Microsoft® Live Communications Server, etc.					
Third-party instant messaging	Yes	Yes	Yes	Yes	Yes
MSN® Messenger, etc.					
BlackBerry® Maps	Yes	Yes	Yes	Yes	Yes
Service provider messaging	Yes	Yes	No	Yes	No
SMS, IM, etc.					
Service provider content downloading	Yes	Yes	No	Yes	No
Ring tones, etc.					
Service provider web browsing	Yes	Yes	No	Yes	No
Wireless Access Protocol, etc.					
Service provider voice plan	Yes	Yes	No	Yes	No

* GSM/GPRS/EDGE available. UMA not available.

** GSM/GPRS/EDGE and UMA not available.

Check with your wireless service provider for supported services and features. Not all BlackBerry data plans support Wi-Fi access to BlackBerry data services.

Configuring a Wi-Fi network to allow a connection (with or without VPN) to the BlackBerry Router keeps all data transfers entirely within the enterprise Wi-Fi network. In most cases, this will also reduce the routing required.



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