Creation of IBM Cloud Platfrorm

Using your IBMid

1. Go to the IBM Cloud login page, and click Create an IBM Cloud account.
2. Enter your IBMid email address. ...
3. Complete the remaining fields with your information. ...
4. Click Create account.
5. Confirm your account by clicking the link in the confirmation email that's sent to your provided email address.

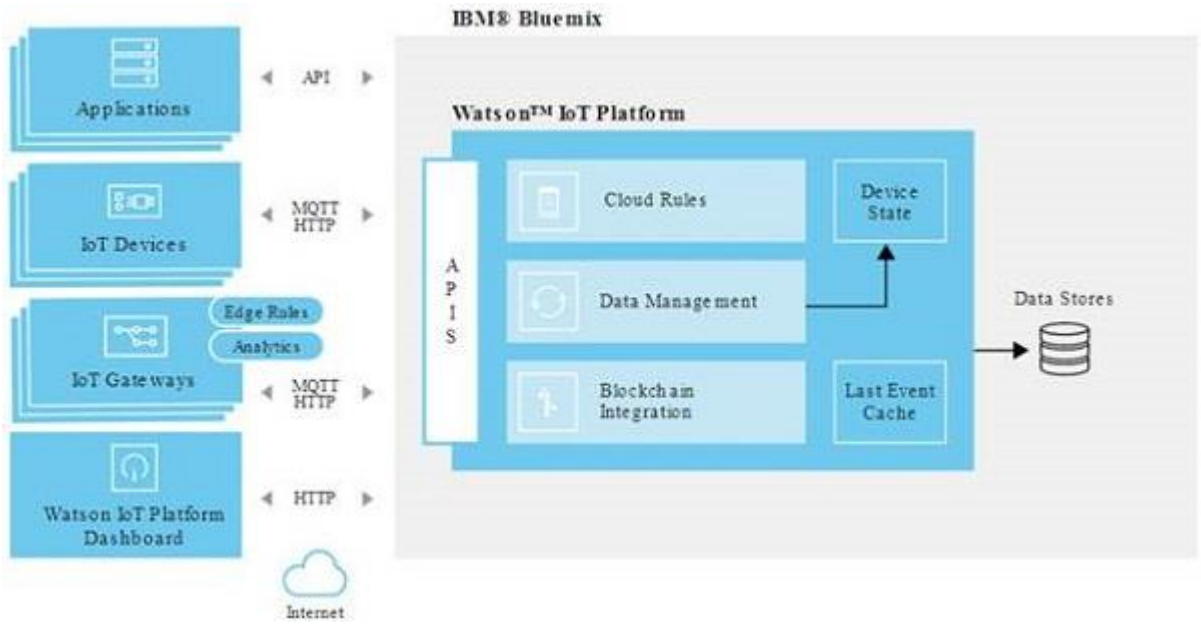
Objective of IBM Cloud

IBM Cloud **provides solutions that enable higher levels of compliance, security, and management**, with proven architecture patterns and methods for rapid delivery for running mission-critical workloads

IBM Watson IoT Platform

By using Watson IoT Platform, you can **collect connected device data and perform analytics on real-time data**. The IBM Watson IoT Platform is a fully managed, Cloud-hosted service that provides device management capabilities as well as data collection and management in a time series format.

The IBM Watson IoT Platform is a fully managed, Cloud-hosted service that provides device management capabilities as well as data collection and management in a time series format. As part of IBM's Platform as a Service offering, IBM Bluemix, you can use the IBM Watson IoT Platform to rapidly build IoT apps from the catalog of services available in IBM Bluemix. You can choose from such IoT app options as storage services, rules, analytics services, stream analytics, machine learning, visualization, and user apps (Web or mobile). You also can embed cognitive capabilities in your IoT apps by using IBM Watson services available in IBM Bluemix.



Key Features

IoT Hardware Support

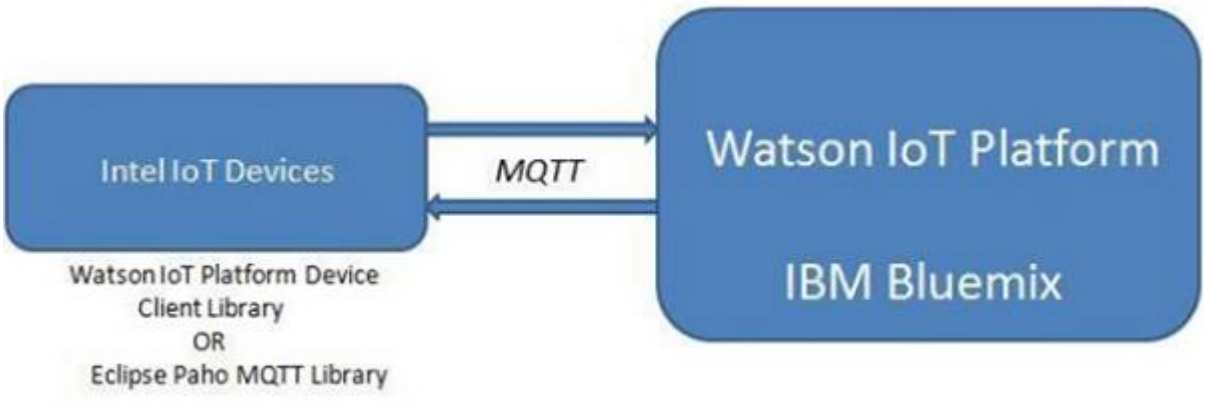
Watson IoT supports just about any type of IoT device that can communicate over MQTT or HTTP.

IoT OS Support

Bluemix is built on top of Cloud Foundry and you can add support for languages or frameworks not supported in Cloud Foundry by default. These are located on the community-created buildpacks GitHub page.

Looking to develop in Python? You can find information here.

Cloud Foundry's open source technology makes Bluemix an extensible platform. It uses buildpacks that can be sourced from the community ecosystem. Some buildpacks are built-in so that you do not have to specify an external buildpack when deploying an application—for example, a Java Web application, Node.js application, or Ruby application.



Key Sensor Support

The growing range of Internet-connected devices that make up the Internet of Things, or IoT, capture or generate an enormous amount of information every day. These devices include mobile phones, sports wearables, home heating and air conditioning systems, and more. In an industrial setting, these devices and sensors can be found in manufacturing equipment, the supply chain, and in-vehicle components. IBM created the IBM Watson IoT Platform specifically to make developing and deploying IoT solutions of all sizes easier for developers.

Node-RED Services

Node-RED is **a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways**. It provides a browser-based editor that makes it easy to wire together flows using the wide range of nodes in the palette that can be deployed to its runtime in a single-click.

Node-RED **allows you to create functionality by wiring together flows of data between nodes using a browser**. And it has gained tremendous popularity in the IoT space, by modelling bits of application functionality between IoT devices like sensors, cameras, and wireless routers.

Quick Start

1. Install Node.js

Download the latest 14.x LTS version of Node.js from the official Node.js home page. It will offer you the best version for your system.

Run the downloaded MSI file. Installing Node.js requires local administrator rights; if you are not a local administrator, you will be prompted for an administrator password on install. Accept the defaults when installing. After installation completes, close any open command prompts and re-open to ensure new environment variables are picked up.

Once installed, open a command prompt and run the following command to ensure Node.js and npm are installed correctly.

Using Powershell: `node --version; npm --version`

Using cmd: `node --version && npm -version`

2. Install Node-RED

Installing Node-RED as a global module adds the command `node-red` to your system path. Execute the following at the command prompt:

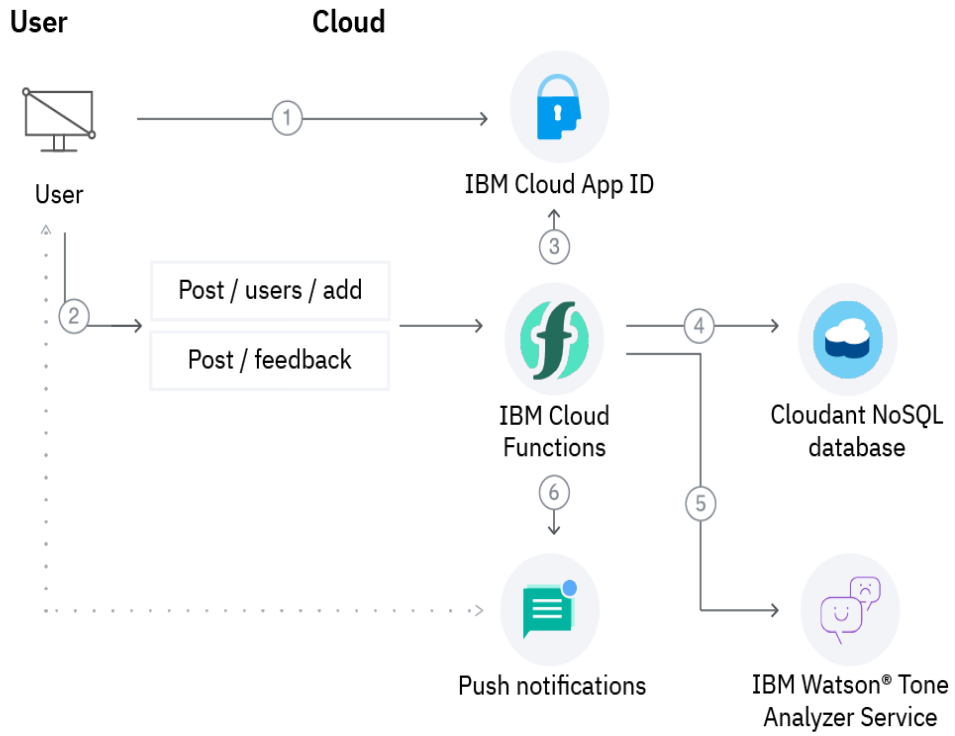
3. Run Node-RED

Once installed, you are ready to run Node-RED.

Cloudant DB

Cloudant **handles software and hardware provisioning, management and scaling, and support**. You'll receive high availability and elastic scaling of the hardware as your provisioned throughput capacity needs change. Learn about the other benefits of database as a service (DBaaS).

Cloudant's service provides integrated data management, search, and analytics engine designed for web applications. Cloudant scales databases on the CouchDB framework and provides hosting, administrative tools, analytics and commercial support for CouchDB and BigCouch.[1] Cloudant's distributed CouchDB service is used the same way as standalone CouchDB, with the added advantage of data being redundantly distributed over multiple machines.



IBM Cloudant is a fully managed DBaaS built on open source Apache CouchDB. Cloudant aims to be the data layer for all your web and mobile applications. In this module, you will find out how simple developing modern web applications is with Cloudant's rich features and JSON document store.You will explore the architecture of Cloudant as a NoSQL database. You will gain hands-on experience with Cloudant capabilities and key technologies. And you will learn how to use the Cloudant dashboard to create and manage your database.

Text-to-speech (TTS)

Text-to-speech (TTS) is **a type of assistive technology that reads digital text aloud**. It's sometimes called “read aloud” technology. With a click of a button or the touch of a finger, TTS can take words on a computer or other digital device and convert them into audio.

How text-to-speech works

TTS works with nearly every personal digital device, including computers, smartphones and tablets. All kinds of text files can be read aloud, including Word and Pages documents. Even online web pages can be read aloud.

The voice in TTS is computer-generated, and reading speed can usually be sped up or slowed down. Voice quality varies, but some voices sound human. There are even computer-generated voices that sound like children speaking.

Many TTS tools highlight words as they are read aloud. This allows kids to see text and hear it at the same time.

Some TTS tools also have a technology called optical character recognition (OCR). OCR allows TTS tools to read text aloud from images. For example, your child could take a photo of a street sign and have the words on the sign turned into audio.