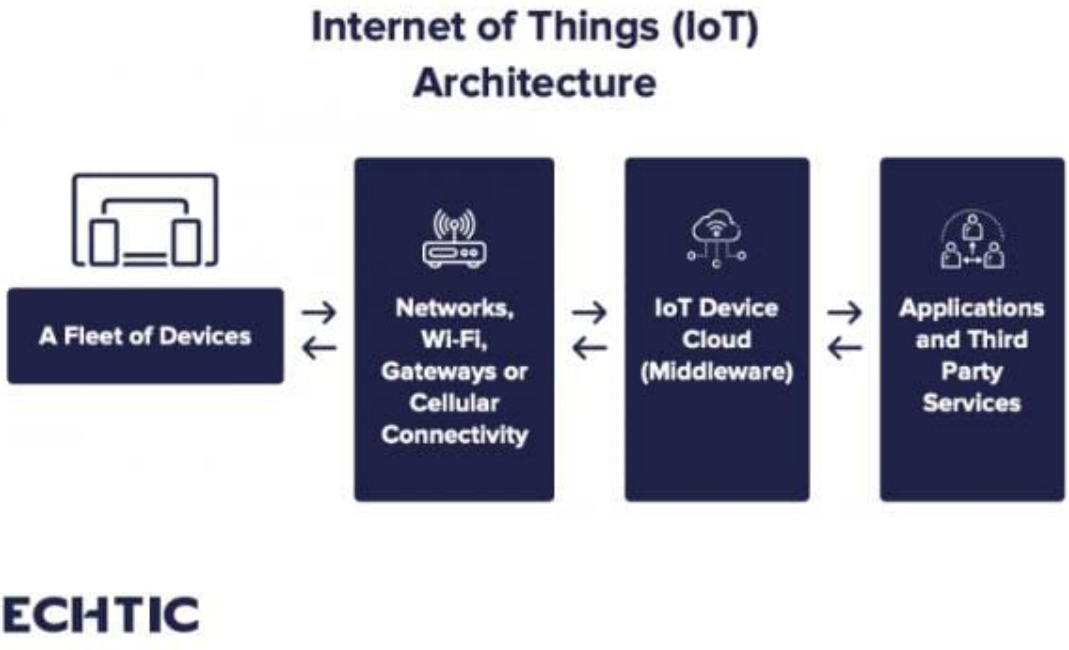
What is an Open-Source IoT platform?

For understanding an open-source IoT platform, we will ponder on the below three realities:

1. Each consumer desires to utilize any IoT device of their preference without being restricted or bound to a specific product vendor. For example, some smart devices need to be clubbed with only smartphones from the same retailer.
2. All business dealers of IoT devices desire to integrate their particular devices with ease and diverse ecosystems.

The open-source framework is a one-stop solution to the above constraints, and it enables scalability and superior levels of flexibility. Many open-source IoT frameworks can be downloaded for free and installed quite straightforwardly across your applications.



The architecture of the Internet of Things (IoT)

1. Hardware Devices

Includes sensors, controllers, micro-controllers, and other hardware devices.

2. Software Applications

Involves written applications to configure controllers and operate them from the remote and do more.

3. Cloud and Communication Platforms

An inevitable part of IoT over which all communications happen.

4. Cloud Applications

Written applications that bind local hardware devices and cloud-based devices.

Frameworks:

Many business organizations try and tested some out-of-the-box open-source platforms when they find the best IoT tools that can provide robust analytics and interoperability between their connected devices. Let's get a brief overview of the 10 most deployed open source IoT frameworks to see if they meet your business needs.

1. KAA IoT

Kaa IoT cloud platform is one the most efficient and rich open-source *Internet of Things* cloud platforms where anyone has a free way to materialize their smart product concepts. On this platform, you

2. MACCHINA.io

macchina.io IoT platforms provide a web-enabled, modular, and extensible JavaScript and C++ runtime environment for developing IoT gateway applications. It also supports a wide variety of sensors and connection technologies including Tinkerforge, bricklets, Xbee, and many others including accelerometers.

This platform is able to develop and deploy device software for automotive telematics and V2X, building and home automation, industrial edge computing and IoT gateways, smart sensors, or

3. ZETTA

Zetta is a server-oriented platform that has been built around **NodeJS**, **REST**, and a flow-based **reactive programming development** philosophy linked with the Siren hypermedia APIs. They are connected with cloud services after being abstracted as REST APIs. People believe that the Node.js platform is best to develop IoT frameworks.

These cloud services include visualization tools and support for machine analytics tools like Splunk. It creates a zero-distributed network by connecting endpoints such as Linux and Arduino hacker

5. ThingSpeak

ThingSpeak is another IoT platform that lets you analyze and visualize the data in MATLAB and eliminates the need to buy a license for the same. It helps you to collect and store sensor data in private channels while giving you the freedom to share them in public channels.

It works with Arduino, particle photon and electron, and many more applications. It is used mostly for sensor logging, location tracking, and alerts and analysis. It also has a worldwide community which is quite helpful in itself.

Development Framework

So, these were the top 10 open-source IoT frameworks. By now, we are sure you have a clear understanding of what IoT frameworks are, the different frameworks available in the market, their pros and cons, and their IoT applications to projects. If these feel daunting to you, we recommend getting in touch with us who is a top-notch **IoT app development company**.

4. GE PREDIX

GE's platform as a service software for industrial IoT is based on the concept of cloud foundry. It adds asset management, data collection, device security, and real-time, predictive analytics that also supports heterogeneous data acquisition, access, and storage.

GE predix was developed by GE for its own operations and consequently has become one of the most successful of the enterprise IoT platforms and with the recent partnering of GE and HPE, the future looks even better.