

Open IoT gets developers in the zone

Digital transformation in industry verticals requires an open ecosystem. By using Huawei's stable equipment and infrastructure capabilities, developers can create IoT solutions for enterprise customers in various domains

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Unified support platform

Huawei has opened the capabilities of all its product lines through open APIs. To make Huawei's highly specialist products more accessible to developers, it launched the eSDK capability opening platform in 2013.

The platform includes various programming languages and

protocols, and provides standard APIs for opening capabilities that developers can invoke at any time. This allows them to focus more on solution innovation without having to understand the specifics of the products, increasing the efficiency of secondary development.

To provide a better service for developers, Huawei launched the Developer Zone platform. It includes

E2E technical support and resources for understanding, learning, development, testing, certification, launch, and commercialization. It's designed to vastly lower the threshold for developing solutions using Huawei products.

A full range of IoT products

Open capability invocation

In 2015, Huawei launched its

The Developer Zone's Case Center showcases solutions developed by partners based on Huawei's products.

1+2+1 IoT solution, which comprises **one** open source IoT operating system, Huawei LiteOS; **two** connection methods, wired and wireless, which include Agile IoT (gateways and controllers), smart home gateways, eLTE, NB-IoT, and 5G; and **one** open unified connection management platform – OceanConnect.

To drive the widespread adoption of Huawei IoT solutions, the Developer Zone introduces the opening capabilities of all Huawei's IoT products, including Huawei LiteOS, NB-IoT, EC-IoT, OceanConnect, and OpenLife (smart home), as well as solutions based on these products. Developers can quickly invoke the bottom-layer capabilities of Huawei IoT products through the IoT interface on the Developer Zone, so they can develop innovative IoT applications that meet their own demands.

For example, on the Developer Zone website, the OceanConnect platform provides a wealth of useful open APIs and serialized Agents. These help operators and enterprise/industry partners accelerate application integration, while simplifying and speeding up device access and ensuring network connectivity. This enables seamless connectivity between upstream and downstream partners' products and provides a one-stop service for partners that includes technical support, marketing support, and business collaboration.

Harnessing OceanConnect, developers can connect massive numbers of IoT devices to the IoT cloud platform with ease, allowing two-way communication between devices,

platform, and partner applications for collecting data, issuing commands, efficient and visualized device management, data aggregation, and analysis. By invoking the platform's powerful open capabilities, developers can quickly develop innovative IoT services.

Showcasing industry solutions

With such a wide range of IoT applications that span smart transportation, environmental protection, public administration, public safety, personal health, and many other domains, the best way to build vertical-specific IoT applications is a concern for both enterprises and developers. To help developers better grasp how Huawei's IoT products can be applied in various industries for building solutions, the Developer Zone introduces methods from various sectors, such as smart homes, Internet of Vehicles, and public utilities, to help developers quickly gain a basic understanding.

IoT success stories

The Developer Zone's Case Center showcases solutions developed by partners based on Huawei's products. In the IoT sector, these include smart solutions for parking, street lights, agriculture, water, homes, and more. Each case was analyzed and broken down into six areas: overview, business background, solution, customer benefits, capability invocation, and partner introduction. Capability invocation explains how the partner invokes Huawei's open capabilities to achieve its required functions and gives other developers a more intuitive understanding of the capabilities Huawei products deliver.

Developer training

To help developers quickly understand the open capabilities of Huawei's IoT products, the Developer Zone also provides developer training and certification. Training consists of different levels of courses that meet the needs of different levels of developers. The training courses cover almost all of Huawei's IoT products, including LiteOS, OceanConnect, EC-IoT, and NB-IoT. Each stage of each course includes three to five days of instruction and hands-on practice, helping the developer master Huawei products' open capabilities from concept to implementation and enabling them to develop solutions using Huawei products.

Remote lab support

Before developers start, they need to prepare the commissioning resources and environment. However, because they don't want to spend too much on equipment in the early stages of project development, the Developer Zone provides a RemoteLab that gives developers access to the low cost resources they need without having to travel. For IoT, the Developer Zone uses the latest version of the OceanConnect platform, so that developers can remotely invoke capabilities, with access lasting three months at a time.

All-round resource center

In addition to basic product

development guides and interface documentation, the Developer Zone provides coding samples and commissioning tools, greatly boosting development efficiency. As many developers cannot develop NB-IoT solutions without NB-IoT modules and networks, the Developer Zone provides SoftRadio module software. The software simulates NB-IoT modules, base stations, and core networks on PCs, enabling developers to carry out development work efficiently, even if they lack access to modules and networks.

After using SoftRadio to complete development work, developers can easily switch to working with real NB-IoT modules and networks, shortening commissioning time in real network environments.

Another aspect to consider is that many developers do not do E2E development, with some focusing on devices and others applications. To help specialist developers, the Developer Zone provides southbound and northbound simulation tools, dividing the E2E development process into two steps, enabling the commissioning of each to be carried out separately.

HDG IoT Salon

To bring IoT ecosystem partners together, help customers build local ecosystems, and incubate innovative

and high-quality developers and high-value scenarios, Huawei Developer Gathering (HDG) organizes a series of salons. Experts can introduce the latest advances in IoT solutions and partners can share their experiences of applying Huawei IoT solutions. The salons provide a platform for exchange between Huawei and developers, and give developers a chance to interact.

Online Q&A from industry experts

Although the Developer Zone provides various services, developers may still encounter a variety of problems when working on actual projects. The Developer Forum and DevCenter are provided as support. On the Developer Forums' IoT board, Huawei experts share information about product functions, internal architecture, commissioning experiences. Developers can also share their development experiences.

The DevCenter provides a trouble ticket system, which developers can use to get in touch with Huawei experts. Developers submit tickets online describing the development problems they encounter and receive fast and efficient technical support from Huawei experts, completing a full E2E service that will help expedite a thriving IoT ecosystem. 