## **Internet of Things (IoT)**

People can access more information than ever before. It began with personal digital assistants (PDAs), then morphed into smartphones. Now there are smart watches, smart thermostats, even smart refrigerators. Personal computers used to be the norm. Now the internet allows any item that's online capable to access valuable information. The [Internet of Things (IoT)](https://azure.microsoft.com/product-categories/iot" \t "https://docs.microsoft.com/en-us/learn/modules/identify-azure-solutions/az-portal) is the ability for devices to garner and then relay information for data analysis.

There are many services that can assist and drive end-to-end solutions for IoT on Azure. Two of the core Azure IoT service types are ****Azure IoT Central****, and ****Azure IoT Hub****.

## **IoT Central**



[IoT Central](https://azure.microsoft.com/services/iot-central" \t "https://docs.microsoft.com/en-us/learn/modules/identify-azure-solutions/az-portal) is a fully managed global IoT software as a service (SaaS) solution that makes it easy to connect, monitor, and manage your IoT assets at scale. No cloud expertise is required to use IoT Central. As a result, you can bring your connected products to market faster while staying focused on your customers.

## **Azure IoT Hub**



[Azure IoT Hub](https://azure.microsoft.com/services/iot-hub" \t "https://docs.microsoft.com/en-us/learn/modules/identify-azure-solutions/az-portal) is a managed service hosted in the cloud that acts as a central message hub for bi-directional communication between your IoT application and the devices it manages. You can use Azure IoT Hub to build IoT solutions with reliable and secure communications between millions of IoT devices and a cloud-hosted solution backend. You can connect virtually any device to your IoT Hub.

IoT Hub supports communications both from the device to the cloud and from the cloud to the device. It also supports multiple messaging patterns such as device-to-cloud telemetry, file upload from devices, and request-reply methods to control your devices from the cloud. IoT Hub monitoring helps you maintain the health of your solution by tracking events such as device creation, device failures, and device connections.

IoT Hub's capabilities help you build scalable, full-featured IoT solutions such as managing industrial equipment used in manufacturing, tracking valuable assets in healthcare, and monitoring office building usage.