

CONCEPT LoRaWAN (Long Range Wide Area Network) is a wireless communication protocol designed for long-range, low-power and low-data-rate applications.

EXAMPLES

There are several essential components/forms related to LoRaWAN Protocol, including:

END DEVICES: These are the devices that collect and transmit data over the LoRaWAN network. They can be sensors, meters, or other types of IoT devices that use LoRaWAN to communicate with the network.

GATEWAY: The gateway is the device that receives data from the end devices and forwards it to the network server. It acts as a bridge between the end devices and the network server.

NETWORK SERVER: The network server manages the LoRaWAN network and is responsible for data storage, routing, and security. It receives data from the gateways and forwards it to the application server.

APPLICATION SERVER: The application server is responsible for processing and analyzing the data received from the network server. It is the interface between the end user and the LoRaWAN network.

LORAWAN PROTOCOL STACK: The LoRaWAN protocol stack is a layered architecture that defines the communication protocol between the end devices, gateway, network server, and application server.

LORAWAN END DEVICE CLASSES: The LoRaWAN protocol defines three classes of end devices that have different power and communication requirements. Class A devices are the most common and have the lowest power consumption, while Class C devices have the highest power consumption but offer the most frequent communication.

Overall, these components/forms work together to enable efficient and secure communication over the LoRaWAN network.

BACKGROUND

LoRaWAN (Long Range Wide Area Network) is a wireless communication protocol that was first introduced in 2015 by the French company Semtech. The technology behind LoRaWAN was developed to meet the growing demand for low-power, long-range communication for Internet of Things (IoT) applications. In 2015, the LoRa Alliance was formed, which is a non-profit organization dedicated to promoting and standardizing the LoRaWAN protocol. Since then, the LoRaWAN protocol has gained popularity and is now widely used in various industries such as smart cities, agriculture, and industrial automation.