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Low-Power Wide-Area Network (LPWAN) at CERN

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The interest in the Internet of Things (IoT) is growing exponentially so multiple technologies and solutions have emerged to connect mostly everything. A 'thing'can be a car, a thermometer or a robot that, when equipped with a transceiver, will exchange information over the internet with a defined service. Therefore, IoT comprises a wide variety of user cases with very different requirements.

Low-Power Wide-Area Network (LPWAN) focuses on low-cost devices that need to operate on batteries for long periods and that send small volumes of data. LPWAN offers wireless connectivity for large areas and complements other technologies such as cellular machine-to-machine (M2M), Wi-Fi or personal area networks (PAN).

CERN has studied different options to offer wireless connectivity to non-critical sensors with very low throughput requirements and is preparing the deployment of an LPWAN network campus-wide. Provisioning and identity management, security and confidentiality, surface and underground availability or reliability and QoS have been some of the topics addressed during the network design.

Desired length

20

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