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## THE INTEGRATION OF EDGE COMPUTING INTO IOT APPLICATION USING ADVANTEDGE PLATFORM, CASE STUDY: MOBILITY

As the number of IoT devices connected to the internet increases, the amount of data explodes. This leads to a higher demand for internet speed during data transfer and more requirements for computing power and storage in central servers. To address these issues and enable real-time data processing while reducing network bandwidth utilization, edge computing has become a promising solution [1] [2]. This research focuses on the development of the IoT application on the edge computing platform in case of the mobility of the User Equipment (UE) to solve problems like latency and network bandwidth occupation for IoT applications while moving between two zones.



Figure 1: Map view of the mobility of the UE from one edge to another

Our system consists of three main parts: an IoT sensor and two edge computing servers [2]. This process involves deploying IoT applications to an edge computing platform, which is in our case AdvantEDGE [3]. IoT applications simply receive data from IoT devices and apply processing to this data. Then test connectivity in case the UE moves between the two zones as shown in fig 1.

In conclusion we have presented a simulated model of an IoT application developed on an edge computing platform, and we come across the fact that using MEC with IoT we will be able to achieve latency around (30-50 ms) in case of the mobility between two zones. This model will open doors to other studies on the idea of developing IoT applications with the help of MEC, because the MEC is one of the main enabler technologies for IoT. What we can recommend after this study is to use edge server for critical applications.

### References

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3. **AdvantEdge Platform** [Electronic resource]. URL: <https://interdigitalinc.github.io/AdvantEDGE/>