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## **FRACTAL: A Cognitive Fractal and Secure EDGE based on an unique Open-Safe-Reliable-Low Power Hardware**

### **Description**

The objective of this research activity is to create a reliable computing node that will create a Cognitive Edge under industry standards. This computing node will be the building block of scalable Internet of Things (from Low Computing to High Computing Edge Nodes). The cognitive skill will be given by an internal and external architecture that allows to forecast its internal performance and the state of the surrounding world. Hence, this node will have the capability of learning how to improve its performance against the uncertainty of the environment. As a result of the integration of these cognitive systems into a fractal network, there will be another intrinsic crucial advantage, emergency and adaptability, new functions will flourish through the created space of possibilities of our cognitive systems. This complex network will transfer all those cognitive advantages to the Edge, a computing paradigm that laydown between the physical world and the cloud.

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