Blockchain and Artificial Intelligence-Based Security for Tactile Internet.

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Abstract:

The security is becoming the most important challenge that threatens the development of the internet of things, and its successor Tactile Internet. In this respect, access control is considered as the cornerstone and core element that should be well-designed and implemented. However, this mission becomes more complex in IoT and Tactile Internet environments as they have additional and specific requirements such as performances, heterogeneity, limited capacities of storage and computing as well as the huge number of the devices. Dealing with this issue, this presentation proposes an 'emergence based' process aiming to benefit from this <u>tremendous number</u> of smart objects and extract the significant features that we cannot pick up in systems with smallest number. Then, it proposes an access control framework dedicated to IoT and Tactile Internet environments based on three extremely powerful concepts: Blockchain networks, Reputation systems and Reinforcement Learning algorithms.