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Final Year Thesis

To obtain deploma of **Master** domain: **Computer Science**

Specialty: Computer System Engineering

Theme

Edge and Fog Computing Based Video Management System

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Graduate in: 07 September 2021 in front of jury composed by:

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ABSTRACT

Recent technological advancements have altered the way research is done.

It is now possible to quantify and simulate a variety of distinct features of complex phenomena, particularly real-world phenomena, and striving to model this phenomenon using modern technology in order to eliminate the majority of the problems that arise as a result of it, while minimizing risks to the bare minimum.

Traditional approaches need us to individually acquire and install custom hardware, then configure, integrate, and commission all elements of it before presenting our new environment. This both introduced delays and opened risks.

As enterprises demand more flexible, portable, and responsive infrastructure, these approaches are no longer acceptable. Therefore, the move to a more software-defined, virtual hardware stack and Infrastructure as Code approach is crucial for removing these impediments and meeting the needs of our modern enterprise. Here, we attempt to illustrate the advancements that occurred at the infrastructure level, including how these solutions evolved, their utility, benefits, and drawbacks, starting with video surveillance systems and how they evolve, passing by the internet of things, Cloud, and Edge computing, and how they revolutionize the way we deal with infrastructure, and finally presenting a state of the art of using Video Surveillance system on Edge computing.