



## MASTER THESIS TOPIC

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Study programme: Information Security  
Study field: Computer Science  
Thesis supervisor: Ing. Tibor Csóka, PhD.

Topic: **Sledovanie zlovoľných činiteľov nástražným systémom**

Language of thesis: English

Specification of Assignment:

Localization of modern infrastructures in the cloud allowed separation of hardware and software, which in turn led to novel infrastructure design paradigms such as immutable infrastructures. Immutable infrastructures are hailed mainly for consistency and reliability, but also the ability to establish a streamlined, predictable and automated deployment process along with automatic service orchestration. The basic orchestration unit of such a system is a single service (represented either by a VM, container or more recently unikernel). These technologies have become viable and secure alternative. When combined with a production-grade orchestration technology, such as Kubernetes into a immutable infrastructure paradigm d, a highly dynamic, more secure and fully automatic infrastructures can be created. Focus of this thesis is the integration of the state-of-the-art technologies (unikernels, Kubernetes) using the most modern infrastructure paradigms (immutable infrastructures) into security demanding environments. A relevant output of the thesis could be a concrete architecture design that would incorporate the identified state-of-the-art paradigms and technologies relevant for security demanding environments (e.g. CSIRTs, security services, infosec companies...).

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