

## Advanced system administration for fast server configuration

### 1. Introduction:

There are many different computer servers in LIT. Each server provide some functionality: it could be personal development machine, web-server, database etc. All groups have their own approach to instantiating these servers. The aim of the owrk is to enhance DIRAC servers' instantiation process. DIRAC is a system which allows using of distributed resources for scientific different purposes. It is built with use of microservice architecture and that is why it is useful to have a fast way to instantiate new servers and keep track of an old one.

### 2. Work overview:

The participant will learn general information about DIRAC Interware system, OpenNebula cloud platform. Will try to use Ansible, Puppet, Foreman. Apply knowledge about computer security to create basic profiles for servers. Create set of profiles for instantiating DIRAC servers.

### 3. General work plan:

- 3.1. Learn about DIRAC.
- 3.2. Instantiate 3 virtual machines: SL6, CentOS7, and Debian8.
- 3.3. Install DIRAC on a virtual machine
- 3.4. Create set of profiles for security
- 3.5. Create set of profiles for DIRAC

### 4. Requirements:

- Linux — Good knowledge
- Python — Medium knowledge

### 5. Materials:

- Ross J. Anderson - Security Engineering: A Guide to Building Dependable Distributed Systems
- Thomas A. Limoncelli - The Practice of System and Network Administration
- Eileen Frisch - Essential System Administration

### 6. Amount of participants:

1-2

### 7. Supervisor:

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