Exercise: Cloudify & Python

Objective

Write a Python script that reads a description of Cloudify instructions from a YAML file, and act upon them.

Input

The Python program should receive the following parameters:

- IP address of a Cloudify Manager
- User to authenticate with
- Password to authenticate with
- Tenant ID to access
- Path to inputs file

The inputs file (the last parameter) is a YAML file of the following structure:

Input Example

```
<blueprint_id>:
  path: <path_to_blueprint>
  deployments:
    <deployment_id>:
      inputs:
        - <path_to_inputs_file>
        - <path_to_another_inputs_file>
        - ...
    <deployment_id>:
      inputs:
        - <path_to_inputs_file>
        - <path_to_another_inputs_file>
        - ...
<another_blueprint_id>:
  path: <path_to_another_blueprint>
  deployments:
    <deployment_id>:
      inputs:
        - <path_to_inputs_file>
        - <path_to_another_inputs_file>
        - ...
    <deployment_id>:
      inputs:
        - <path_to_inputs_file>
        - <path_to_another_inputs_file>
        - ...
```

For example:

```
  hello_world:
    path: /home/centos/blueprints/hello/blueprint.yaml
    deployments:
      hello_1:
        inputs:
          - /home/centos/inputs-hello-1.yaml
          - /home/centos/inputs-hello-2.yaml
      hello_2:
        inputs:
          - /home/centos/inputs-hello-3.yaml
  node_cellar:
    path: /home/centos/blueprints/nodecellar/blueprint.yaml
    deployments:
      dep_1:
        inputs:
          - /home/centos/inputs-nc.yaml
```

Process

The Python script should read the inputs file, and perform the request Cloudify operations to:

- Upload all specified blueprints to the Cloudify Manager
- Create all deployments for all blueprints, using inputs files as specified

Cloudify operations must be invoked using the **Cloudify REST API**.

Documentation and Reference

- Cloudify documentation root: http://docs.getcloudify.org/latest/
- Creating a REST Client: http://docs.getcloudify.org/latest/apis/rest-client-python/
- REST API documentation: http://docs.getcloudify.org/api/v3.1/