Cloudify exercise for candidates

Objective

The exercise's objectives are:

- Measure the ramp-up time of the candidate for a Cloudify SE/CS engineer role

Method:

- Having the candidate experiment with Cloudify hands-on through one of built-in examples.
- Ensure that the candidate is able to work with Cloudify's documentation and other available online resources
- Simulate a customer meeting using the demo and Cloudify slide deck

Preparation

The best way to prepare for this exercise is to read Cloudify's documentation, located at http://docs.getcloudify.org.

You may, of course, consult the documentation as you work on the exercise..

Bootstrapping

1. Create a brand new CentOS 7.0 virtual machine on either Amazon or OpenStack. Make sure that the VM's specifications (with regards to CPU's, RAM etc.) are in line with Cloudify's prerequisites.
2. Bootstrap a Cloudify Manager on the VM, using the documentation.

Blueprint

To complete this section, you will have to read the "Blueprints" section in the documentation website.

Simple

Develop a blueprint that receives, as an input, the IP address of a pre-created CentOS 7.0 VM. The blueprint should run a script (as part of the "configure" lifecycle operation) that creates a file called "/tmp/hello" with the contents "hello world".

Advanced

1. Develop a blueprint for an application that consists of the following:
    a. Compute node called “web”, containing a NodeJS server, listening to port 80 on an interface that is bound to a public IP.
    b. Compute node called “app”, not bound to a public IP, containing a Tomcat server.
    c. A simple Java WAR file containing a single resource (say, JSP).
    d. The WAR file has to be deployed to Tomcat.
    e. The resource inside the WAR file should be serve-able through NodeJS (i.e. request comes to NodeJS; NodeJS forwards to Tomcat).
2. Upload the blueprint to the Cloudify Manager.
3. Create a single deployment.
4. Demonstrate that the topology works.

Plugin (Advanced)

To complete this section, read the following:
http://docs.getcloudify.org/4.1.0/plugins/overview/
http://docs.getcloudify.org/4.1.0/plugins/creating-your-own-plugin/

1. Create a simple Cloudify plugin that sets a runtime property by the name “hello” on the current node instance, with the value equal to “world”.
2. Edit the blueprint to contain an “outputs” section, where the value of the “hello” runtime property is printed.
3. Edit the blueprint to add a custom interface with a custom operation to an existing node, and bind the plugin operation to that operation.
4. Demonstrate running the custom operation on all instances of the NodeJS node template.
5. Demonstrate how “cfy deployments outputs” prints the correct value of the “hello” runtime property.