Developer guide

1. Integrate more cloud providers
2. Integrate more configuration algorithm

1   Integrate more cloud providers

If a cloud provider wants to use SALSA, so that SALSA can deploy user applications into cloud resources of that provider, this provider need to be integrated. This document show how a new cloud provider resource usage can be integrated into SALSA. The document is going to answer a number of questions and show how to develop new cloud connectors in SALSA.

1. Which are the requirements for cloud providers

Cloud provider must expose a set of API or tools which interact with their resource (instead of using interface). With these API, cloud provider can develop the connector following the interface provided in SALSA.

Currently, the interface is simply for some basic tasks like create, get status and destroy VMs, which adapt with basic actions of the IaaS providers. Then in the configuration file, cloud providers specify the name and parameter of the cloud which later can be used in the application description.

2. Which information the provider should provide so that SALSA can connect and use the provider resources

The provider needs to provide the cloud-connector package, which implement the MulticloudConnector interface. After that, a set of configuration is put into SALSA configuration file, such as name, endpoint, credential, etc. The name of the provider follows the format: siteName@connectorName. For example, the OpenStack cloud at DSG lab would be dsg@openstack. This name will be used for the application description.

3. Which tasks the provider should do in order to connect her infrastructure into her own SALSA deployment

Cloud provider can deploy SALSA (including running salsa-engine on a webserver and hosting salsa-pioneer on a file server), configure salsa-server with the connector of the provider.

For an application description, user needs to change the description of the infrastructure to the cloud provider. By specifying the name of the cloud connector (as #2), other properties need to be defined depending on cloud information. Please refer to ToscaSpecification.txt to see the format of infrastructure description.

4. Which tasks the provider should do in order to connect her infrastructure into an already running SALSA service (e.g., deployed by another person)

With a running SALSA service, similar to #3, the owner of SALSA service need to add the configuration of the cloud provider into the running SALSA, then restart the service.

5. Example of configuration file

```
# cat /etc/cloudUserParameters.ini
```

```
[dsg@openstack]
username=<name>
password=<password>
tenant=<project name>
keystone_endpoint=http://<IP of Nova>/identity/v2.0/

[lal@stratuslab]
endpoint = <API Endpoint>
pdisk_endpoint = <pdisk endpoint>
marketplace_endpoint = <Marketplace endpoint>
username = <name>
password = <password>
client_path = /opt/stratuslab


[celar@flexiant]
email=<credential email>
customerUUID=<your UUID>
password=<your password>
endpoint=<API Endpoint>
```