

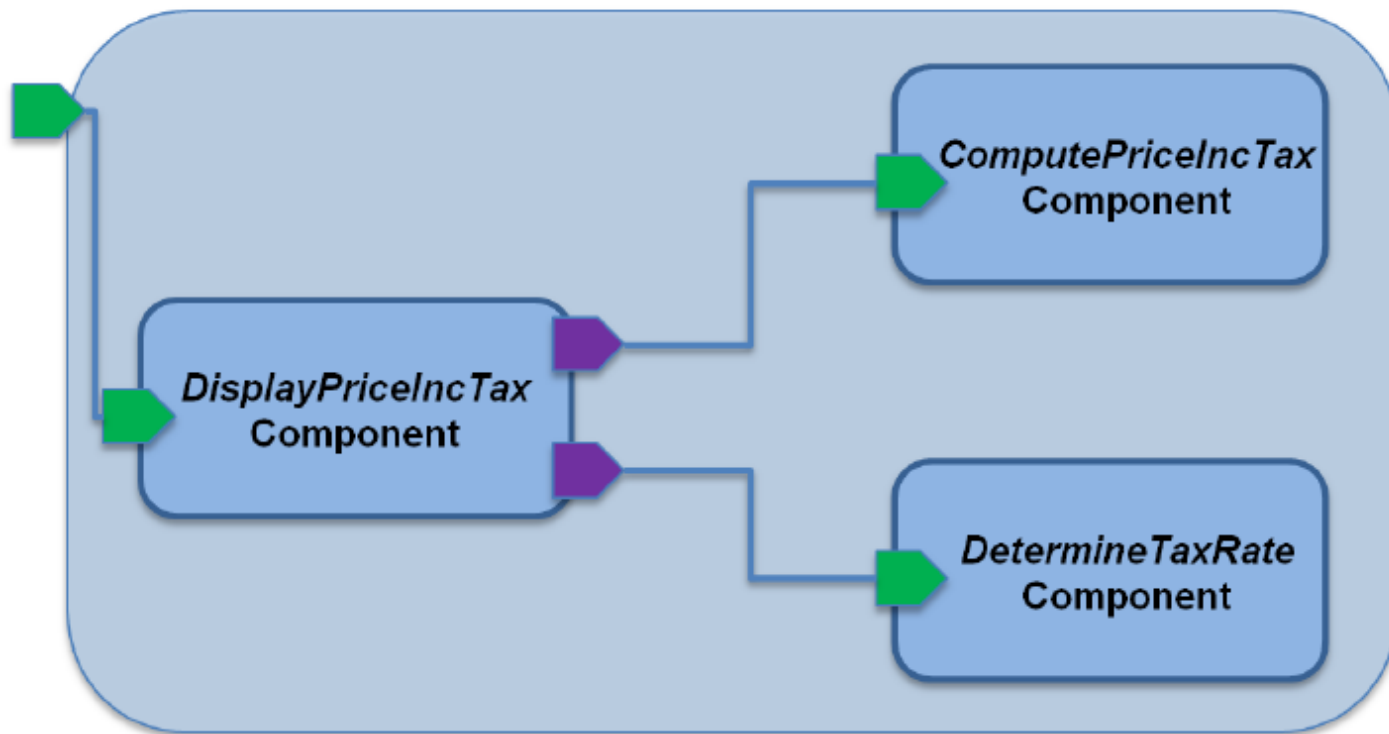


PaaS-independent approach to provision appropriate cloud resources for SCA-based applications



Motivating example

- ***ComputePrice*** SCA-based application

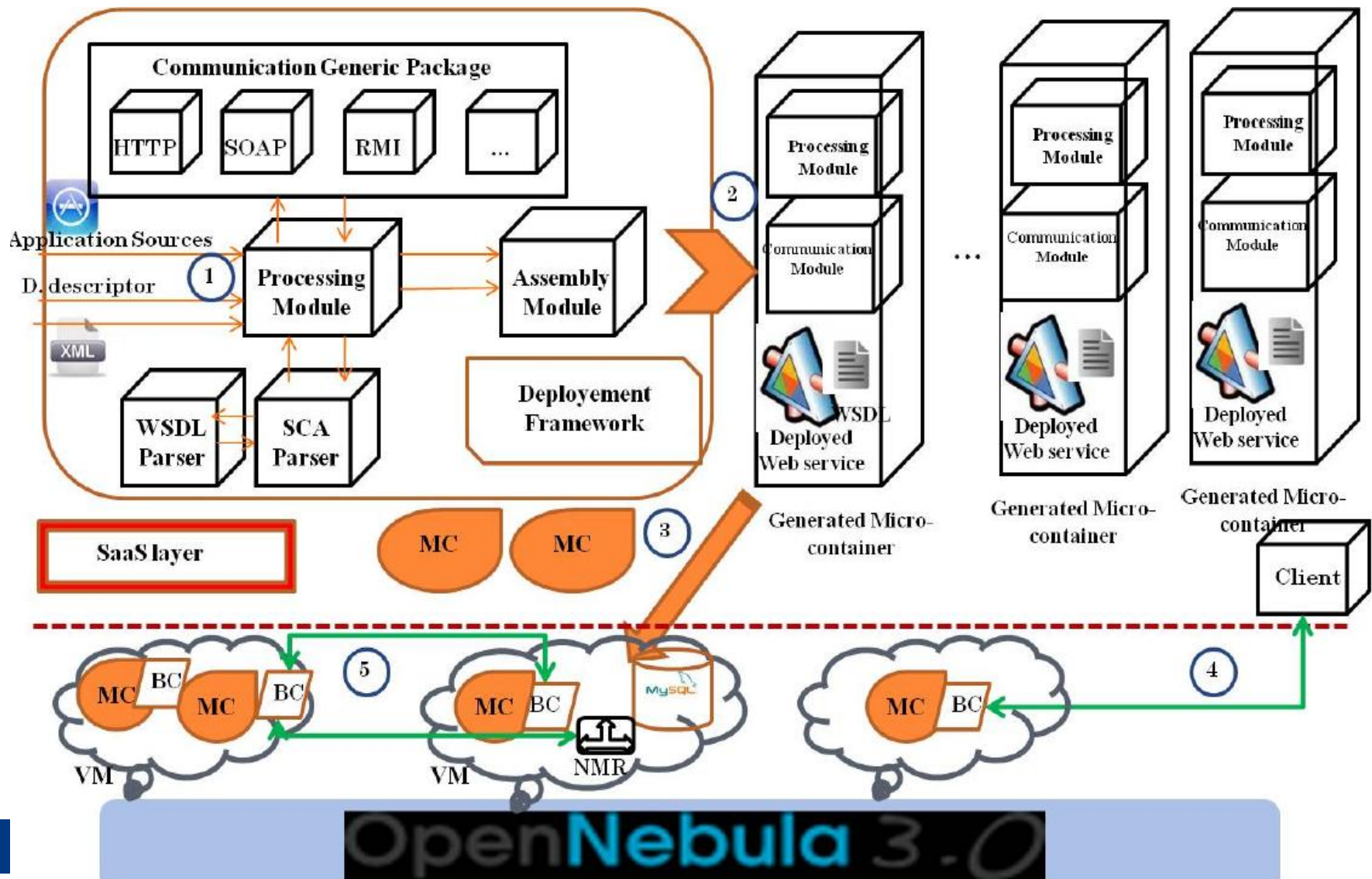


Provisioning resources for service deployment



- **Deploying a service on PaaS steps:**
 1. Identifying the needed platform resources,
 2. Packaging these resources with the service to be deployed,
 3. Instantiating and initializing the platform and service resources.
- **A dedicating resources for each service to be deployed to host and run its service in a specialized MC.**

Provisioning resources for service deployment



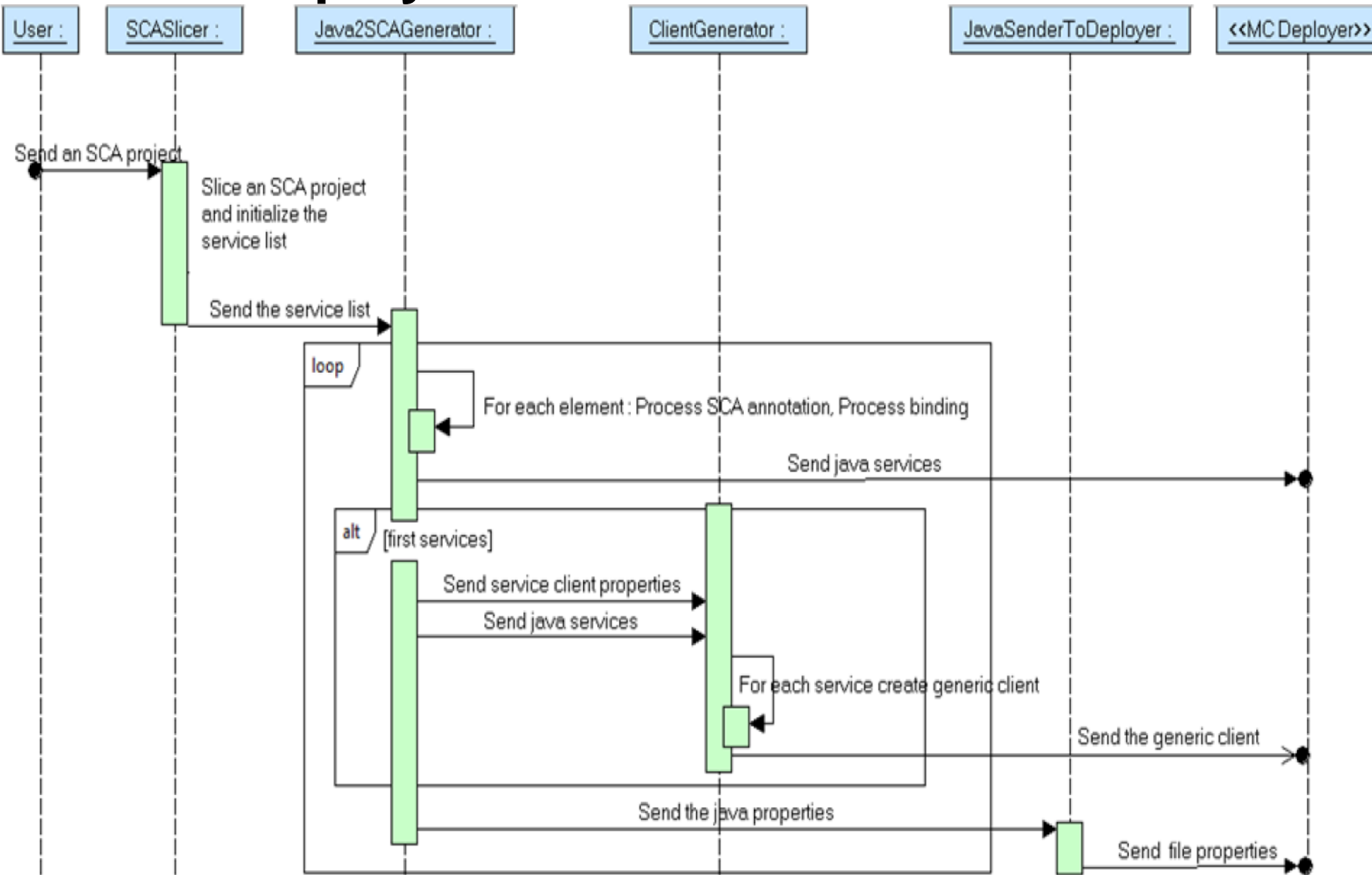
Provisioning resources for SCA-application



deployment

- **Deploying an SCA-based application on PaaS steps:**
 1. Slice the application to elementary entities,
 - SCA Slicer and Service aggregator tool
 2. Package entities in service micro-containers,
 - MC deployment framework
 3. Deploy obtained MCs on PaaS.

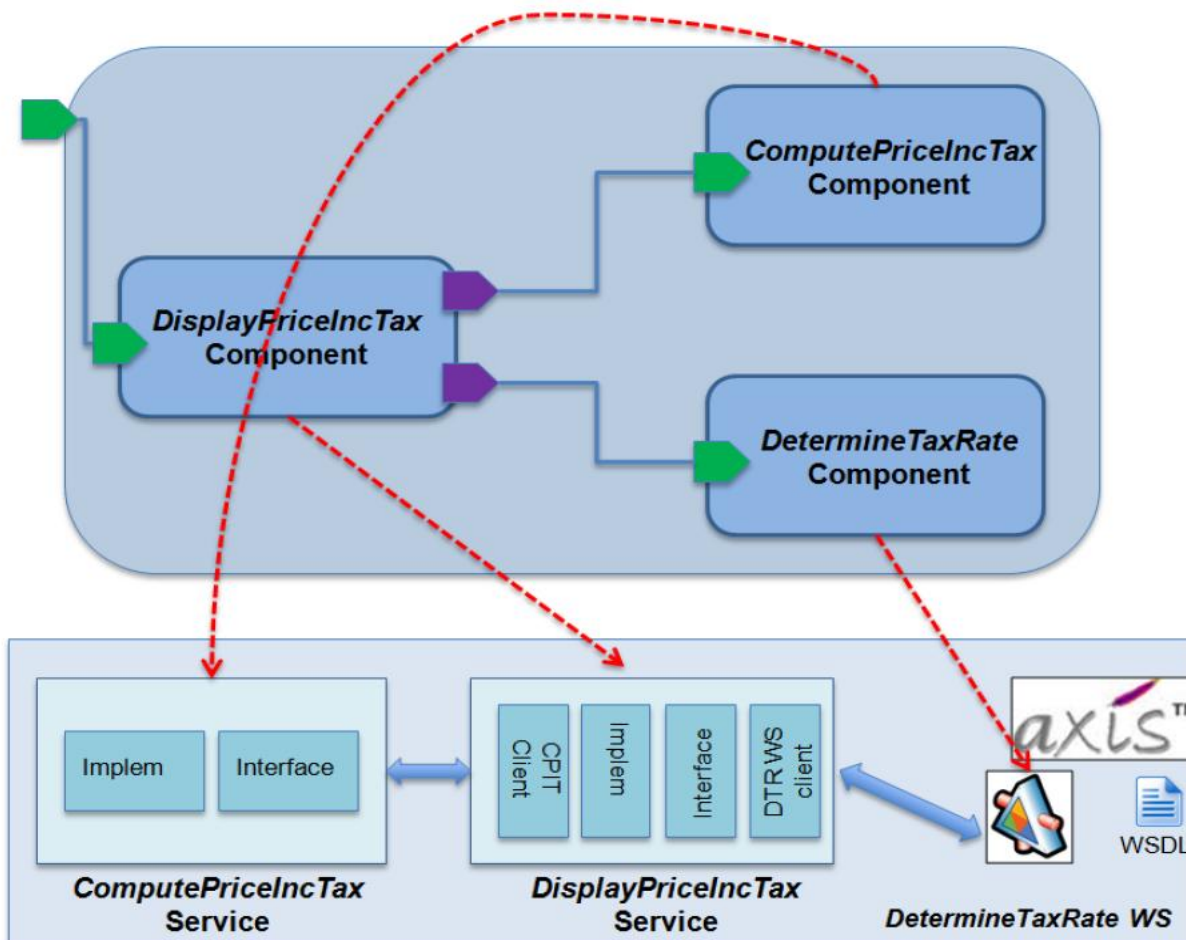
Provisioning resources for SCA-application deployment





SCA-based application provisioning

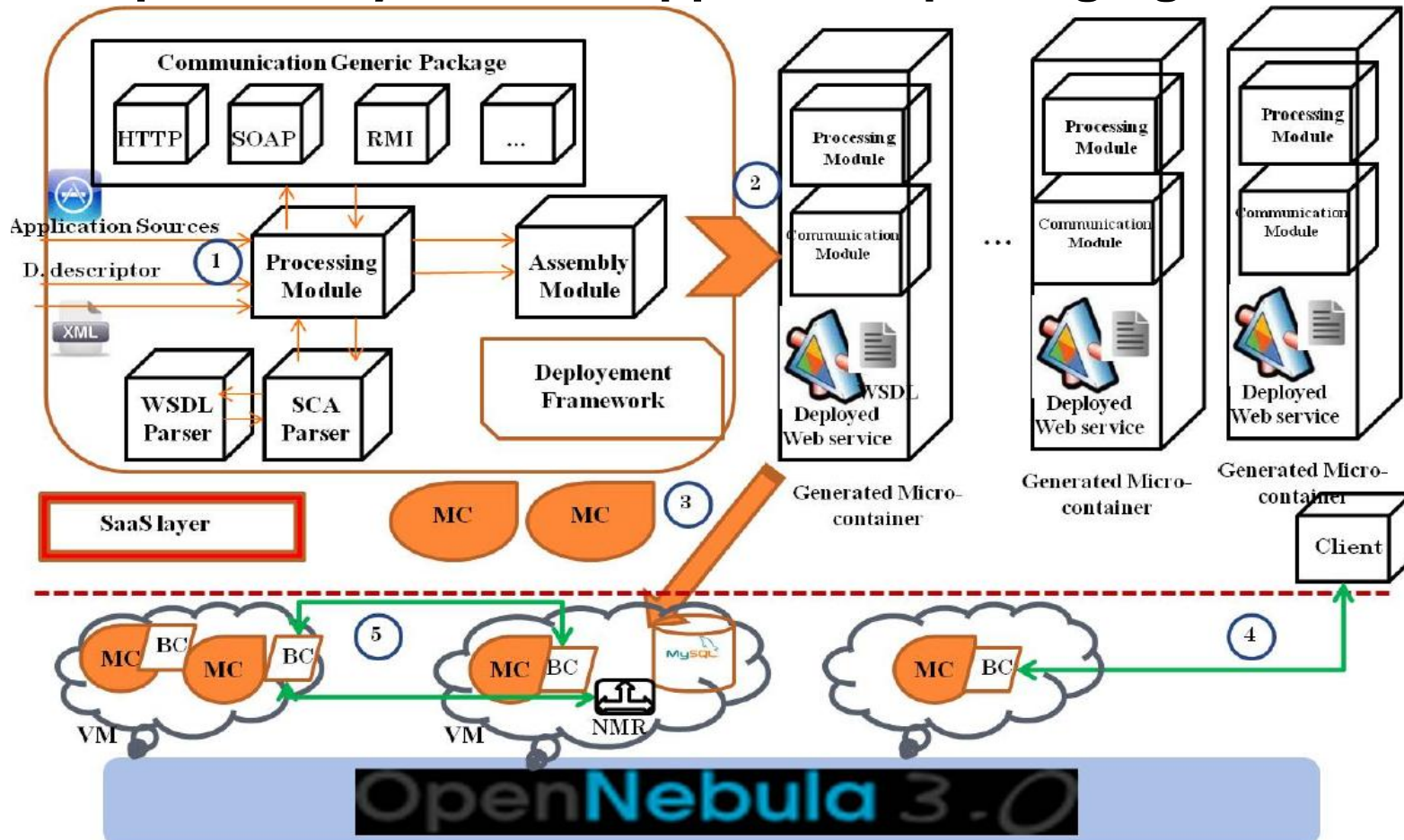
■ Step 1 : *ComputePrice* application slicing





SCA-based application provisioning

Step 2 : *ComputePrice* application packaging on MCs





SCA-based application provisioning

■ Step 3 : *ComputePrice* application deployment on CF

The screenshot displays the Cloud Foundry dashboard for the organization 'TELECOMSUDPARIS'. The user 'MOHAMED.MOHAMED@IT-SUDPARIS.EU' is logged in. A notification indicates that the organization has 18 days left in its free trial, which includes 2GB of app memory and 10 of the free Marketplace services.

APP SPACES: DEVELOPMENT (selected), PRODUCTION, STAGING. **ADD +**

APPS IN DEVELOPMENT (3 apps):

STATUS	APP	INSTANCES	MEMORY
100%	ComputePriceIncTaxService.jar	1	256MB
100%	DetermineTaxRateService.war	1	256MB
100%	DisplayPriceIncTaxService.jar	1	256MB

SERVICES IN DEVELOPMENT (1 service):

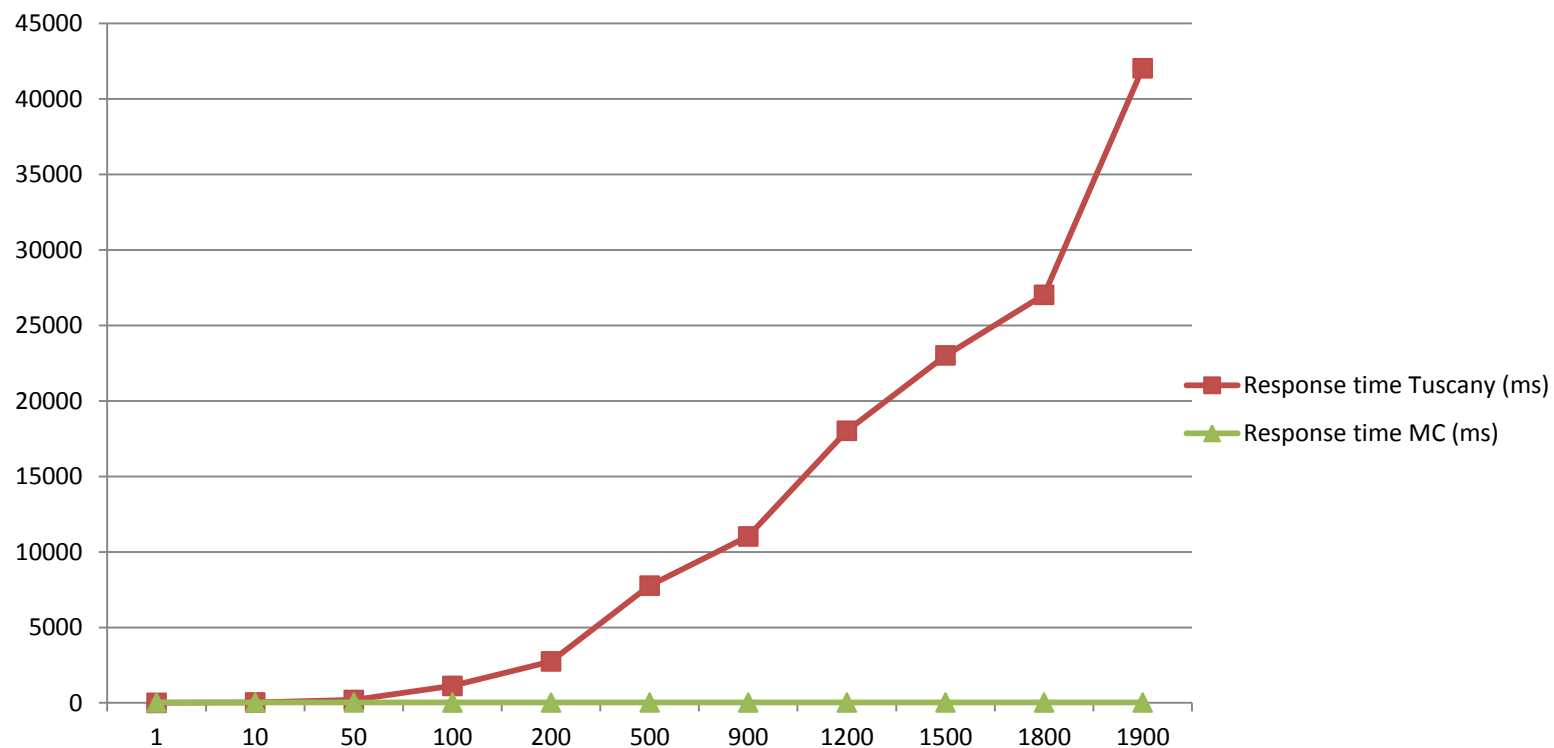
NAME	PLAN LEVEL	BOUND APPS
mysql cleardb n/a DELETE MANAGE	Cleardb spark	0

USERS IN DEVELOPMENT (1 user): mohamed.mohamed@it-sudpari...



Experiments

■ Time response experiments (Apache Tuscany Vs MCs)





Experiments

■ Memory consumption experiments (Apache Tuscany Vs MCs)

