[MELODIC] RC2.0 platform installation guide

Introduction

This document describes how to install Melodic platform on one machine, from scratch.

Prerequisites

Requirements for Melodic's machine

OS: Ubuntu 16.04/18.04

RAM: 64GB+

Storage: 100GB+

Following ports accessible:

Port	Protocol	Component	Purpose
22	TCP	ssh	Console
8080-8099	TCP	components	REST endpoints of Melodic components (generator, cp-solver, solver2deployment, adapter, esb, process)
9001-10000	TCP		
2036, 3306	TCP	cdo	mysql db
80	TCP	UI	Cloudiator's webinterface
4001	TCP	Lance	etc registry
9000	TCP	Cloudiator V2 components	Cloudiator's REST API
8080	TCP	Axe	Time-series database
33034	TCP	Lance	rmi registry
2222	TCP	VMS Discovery Server	
3308	TCP	dbauth	
61616	TCP	Esper	sending metrics to JMS Queue
443, 6443	TCP	JWT Server	authentication of users
11211	TCP	Memcache	
20000	TCP		
5005	TCP	components	connection from debugger
2037	TCP		
389,636	TCP	ldap server	managing of users

Installation steps

Full installation includes installing of both: Upperware and the Executionware components of Melodic platform.

If you wish to install those components on separate machines, please follow this [update page](#).

Installation instructions

1. SSH login into machine (ubuntu 16.04/18.04)

2. Run the following commands (this will download installation files):

```
git clone https://bitbucket.7bulls.eu/scm/mel/utils.git
```

3. Run the Melodic's installation script:

```
sudo ~/utils/melodic_installation/installMelodic.sh install_melodic_with_cloudiator
```

4. After installation new ".profile" is created in home dir of the user. Load it by executing the following:
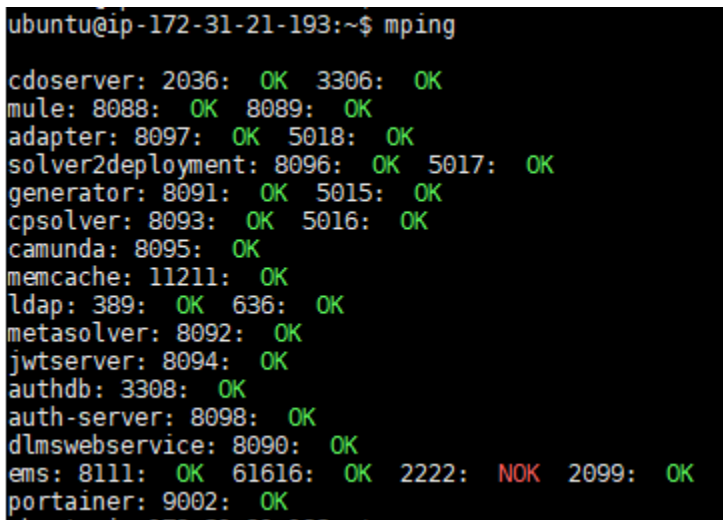
```
cd ~/
. .profile
```

5. Now the machine is ready to download and run latest docker images from Melodic and Cloudiator artifact repository. To download and start the components simply use the following:

```
drestart
```

6. Running this for the first time can take some more time as docker swarm is being initialised. After the above command components shoud be started. You can check the status by running the following 2 commands:

```
dps
mping
```


> ⓘ **False-negative NOKs**
>
> Please note that the port 2222 will be in OK state after first deployment.
> If you experience mping printing NOKs even if everything is up an running please consider [How to] Extended connection test script for VMs.

7. In order to managing of Melodic'c users, please create new ldap user. For the convenience there is simple script packaged with the Melodic allowing to add a user by the following commands:

```
cd ~/utils/melodic_installation/
./addLdapUser.sh
```

8. Now this machine should be ready for deploying some application.

Process GUI should be available under: http://{PUBLIC_MELODIC_IP}:8095 (admin:admin)

Usefull aliases

Below you can find usefull commands to manage melodic components:

Commands
dps - displays docker containers running (alias for sudo docker images)
mping - tests connection to each of the commponents
drestart - stops and then starts all of the Melodic's components
dundeploy - stops all of the components
ddeploy - starts all of the components
ipupdate - updates cloudiator's and upperware's env files with current IP of the machine - useful when the IP of the machine changes