VC Deployment Script for OpenNebula/KVM

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Demo Environments & Prerequisites

- Demo Environment
  - OpenNebula Version 3.6 (built from source bundles)
  - 1 front node + 4 compute nodes
    - Each node has 500GB SSD
- Prerequisites
  - The user is able to register/delete VM images to/from OpenNebula
  - The following network resources are available in OpenNebula
    - pragmapub (public network addresses)
    - pragmapriv (private network addresses)
  - vc-in.xml and image files are available in the same directory (e.g. /gfarm/vm-images/SDSC)

Step 1/4

1. Embed CONTEXT script

   $ sudo ./pragma-makeover.pl /gfarm/vm-images/SDSC/calit2-119-222.xml

   CONTEXT script will set the following parameters and output vc-out.xml
   - IP addresses / netmasks
   - default gateway
   - /etc/resolve.conf
   - /etc/hosts
   - hostname
   - sshd

Step 2/4

2. Register the image to OpenNebula

   $ ./pragma-register.pl /gfarm/vm-images/SDSC/calit2-119-222.xml

   This may take 3 minutes (on SSD) or 12-15 minutes (on HDD).

   Check the status by oneimage command

   $ oneimage top

Step 3/4

3. Boot a VC

   $ ./pragma-boot.pl –c 3 /gfarm/vm-images/SDSC/calit2-119-222.xml

   First, boot a front node, then boot compute nodes.
   Booting the front node may take 3 minutes (on SSD) or 12-15 minutes (on HDD).

   Check the status by onevm command

Step 4/4

4. Login and test the VC

   $ ssh root@163.220.57.203
   $ ssh hosted-vm-0-0-1

5. We haven't provided scripts for shutdown the VC and delete VM images. Need to use OpenNebula commands.
   ex:
   $ onevm shutdown 157 # shutdown compute node
   $ onevm shutdown 154 # shutdown front node
   $ oneimage delete 20 # delete VM image for compute node
   $ oneimage delete 21 # delete VM image for front node

Comments

- Do we need vcdb.txt?
  - AIST provides vc-in.xml as a command-line argument. Is it enough isn't it?
- Do we need mac/ip addresses in vc-in.xml?
  - Are there needs to use the mac/ip addresses in vc-in.xml?
  - These are site-specific and actually AIST does not using them.