



Installation Overview

Charles (Cal) Loomis & Mohammed Airaj

LAL, Univ. Paris-Sud, CNRS/IN2P3

24-25 October 2013

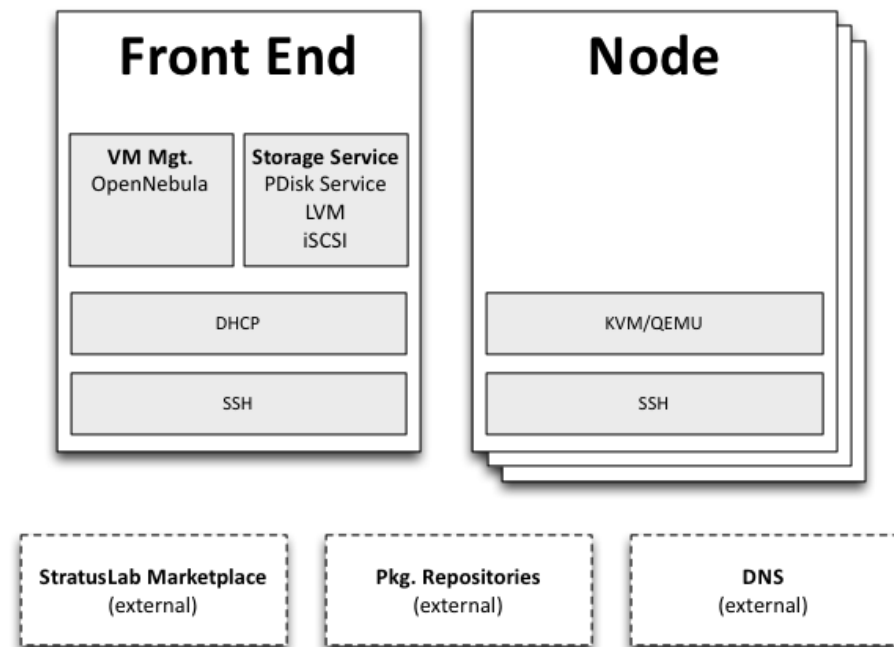
Goal of Tutorial

Install minimal StratusLab cloud

- 2 “modern” physical machines
- Basic networking services

Deployment

- **Frontend:** Contains user-facing cloud services
- **Node:** Hosts virtual machines
- **External:** Basic infrastructure services some of which may be installed on cloud machines.



Tutorial uses simplest deployment; other configurations are possible.

Scripted Installation (**used for tutorial**)

- Official, supported method from StratusLab collaboration
- Automates the installation from a set of configuration parameters
- Requires password-less, root access between machines with SSH
- Will use this for tutorial.

Quattor Installation (**not used for tutorial**)

- Supported by Quattor community and LAL
- Used at LAL for all cloud deployments
- May contain LAL-isms, help with making templates generic welcome
- Usually a delay between a StratusLab release and template availability

Prerequisites

Hardware

- Two physical machines with minimum configuration:
 - 1 64-bit multi-core CPU with VT-x extensions
 - 4 GB RAM
 - 200 GB of local disk space
- Virtualization extensions enabled in BIOS

“Fat” machines are preferred for cloud resources!

Operating System

- Minimal installation of latest, updated CentOS 6 release
- SELinux disabled!
- Python 2 (2.6+) installed
- LVM for system volumes with two groups vg.01 (OS) and vg.02 (data)
- Configured for EPEL and StratusLab yum repositories

Prerequisites



Networking

- DNS must be configured with names for physical and virtual machines
- DNS must support reverse-DNS lookups
- DHCP server is required, but can be installed on cloud

Connectivity

- SSH to machines as root must work
- Password-less root access between all machines must also work
 - Frontend → Node(s)
 - Node(s) → Frontend
 - Frontend → Frontend (!!)



Command Line Client (CLI)

- Use standard user commands to test installation
- `stratus-test` command will run standard workflows
- Helpful to create standard user account for running tests

Troubleshooting

- Lots of moving parts in the system, interactions sometimes complex
- Look at CLI error messages (although sometimes not helpful)
- Investigate errors in the service log files

Tutorial Roadmap



Transversal Capabilities

- Authentication and authorization

Core Services

- Marketplace
- Networking
- Storage
- Computing

Evolution

- CIMI and Couchbase
- SlipStream for cloud federation

Will point out where significant changes will occur in future releases.

Exercises



1. Log into your machines
2. Verify prerequisites
3. Ensure EPEL and StratusLab repositories are accessible

`/etc/yum.repos.d/sl.repo`

```
[StratusLab-Releases  
name=StratusLab-Releases  
baseurl=http://yum.stratuslab.eu/releases/centos-6-v13.10.0/  
enabled=1  
gpgcheck=0
```

Questions and Discussion

website <http://stratuslab.eu>

twitter [@StratusLab](https://twitter.com/StratusLab)

support support@stratuslab.eu

StratusLab source <http://github.com/StratusLab>

SlipStream source <http://github.com/slipstream>



<http://stratuslab.eu/>

Copyright © 2013, Members of the StratusLab collaboration.

This work is licensed under the Creative Commons Attribution 3.0 Unported License (<http://creativecommons.org/licenses/by/3.0/>).

