



Enhancing Grid Infrastructures with
Virtualization and Cloud Technologies

Release of StratusLab 2.0 Beta

Milestone MS9 (V1.0)
2 May 2012

Abstract

StratusLab uses agile software development methodologies, specifically Scrum, to produce public beta releases every six to eight weeks. Each release builds on the previous ones to provide additional features or more robust implementations of services. This document describes the latest 2.0 beta release, called v1.4, as stepping stone towards the final 2.0 production release in May 2012.



StratusLab is co-funded by the
European Community's Seventh
Framework Programme (Capacities)
Grant Agreement INFSO-RI-261552.



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Document History

Version	Date	Comment
0.1	27 Apr 2012	First draft for internal review.
1.0	2 May 2012	Final draft after review.

1 Introduction

StratusLab uses agile software development methodologies, specifically Scrum, to produce releases of its cloud distribution. The development process is divided into a series of iterations (“sprints”) usually lasting three weeks. The result of each iteration is a new version of the StratusLab distribution. Each release builds on the previous ones to provide additional features or more robust implementations of services. A public beta release is usually made every other sprint, giving the project a six to eight week rhythm for public releases. This document describes the latest 2.0 beta release, called v1.4, as stepping stone towards the final 2.0 production release in May 2012.

2 Features of StratusLab 2.0 Beta – v1.4

To date, since the release of StratusLab v1.0, the project has released four public 2.0 beta releases: v1.1, v1.2, v1.3 and the latest v1.4. These releases have been deployed by WP5 on the project's reference infrastructure, including a certified grid site running over the v1.4 release. These releases have provided incremental functionality, bug fixes, and improved service implementations based significantly on end-user and system administrator feedback.

The main features included in StratusLab v1.4 release are:

- Image caching for faster VM instantiation
- Improvements in persistent storage, including enhanced security, easier configuration, automatic mounting and formatting and the ability to run machines from a persistent disk image
- Persistent Disk Storage Service, now supporting different iSCSI backends
- Asynchronous status notification on VM startup via e-mail
- Addition of messaging functionality to allow notifications of state changes in VMs to be sent to user's monitoring applications
- A new certification process that guarantees improved overall quality of the final release
- Improvements in network bandwidth allocation to VMs
- New `stratus-connect-instance` command allows users to connect directly to their VMs using the VM identifier
- New Bioinformatics Virtual Appliances
- Addition of PostgreSQL support to the StratusLab Marketplace
- Introduction of support for the Telefónica TCloud API which extends some of the main standards in cloud management, such as the OVF and vCloud specifications
- Support for new Operating Systems: OpenSuSE 12.1 and CentOS 6.2

- Significant improvements in the StratusLab Marketplace, with improved search capabilities and performance
- Integration of the Marketplace policy engine and image cache, replacing the appliance repository
- New deployment scenarios, including commercial friendly Cloud-in-a-box model
- Improved Claudia scaling strategy and features
- OpenNebula v3.0 for virtual machine management, including new functionality like groups and ACLs, new authentication systems, improved quotas and an accounting database.
- Improvements to the command-line clients, including Marketplace and Persistent Storage Service helper commands
- Upgraded manual and automated (Quattor) installation procedures
- Federation capabilities and redundancy, including Marketplace and interconnected StratusLab cloud instances

These features provide a comprehensive end-to-end Infrastructure as a Service (IaaS) cloud distribution that is easy to install and manage. Further, this set of comprehensive features give StratusLab the ability to claim Enterprise Readiness.

These features will form the basis for the final version of StratusLab v2.0.