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IGE GLOBUS APPLIANCES

Virtualisation & Cloud Computing Technology

EGI Technical Forum, Lyon, 21.09.2011

- IGE Software

- Appliances

- Experiences with StratusLab
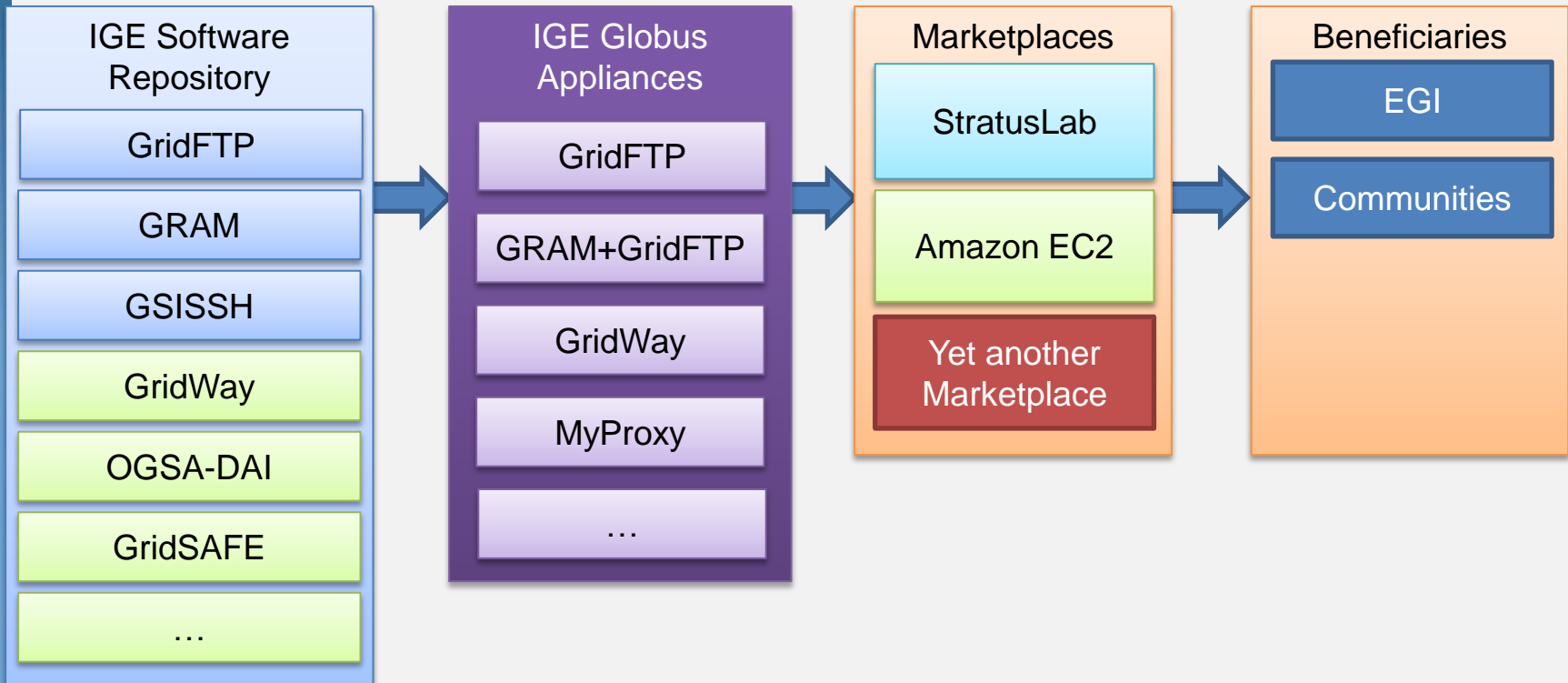
Initiative for Globus in Europe

- FP7 DCI project, October 2010 – March 2013, 11 partners
- Objectives
  - Coordinate Globus activities in Europe
  - Continuously support the European computing infrastructures
  - Serve as a central point of contact in Europe for Globus
  - Drive the Globus developments forward in accordance with the requirements of European users
  - Strengthen the influence of European developers in the Globus Alliance
- Comprehensive service provider for the European e-infrastructures regarding the development, customization, provisioning, support, and maintenance of components of the Globus Toolkit

IGE Software

- Packaged GT5 as RPM and deb
  - GT 5.0.3, GT 5.0.4, and GT 5.2 (in preparation)
- Wide range of supported platforms
  - Redhat, Fedora, Scientific Linux, Ubuntu, Debian
- Community software adaptations
  - Selected examples: GridWay, GridSAM, GSI-SSHTerm, GridSAFE
  - Coming up: LCAPS/LCMAPS, Adhoc etc.
- Public releases
  - IGE 1.0.0 (GT 5.0.3)
  - Technology preview (GT 5.0.4 + software adaptations)

More info at: http://www.ige-project.eu/releases

IGE Software and the Cloud

IGE Software Repository	IGE Globus Appliances	Marketplaces	Beneficiaries
GridFTP	GridFTP	StratusLab	EGI
GRAM	GRAM+GridFTP	Amazon EC2	Communities
GSISSH	GridWay	Yet another Marketplace	
GridWay	MyProxy		
OGSA-DAI	…		
GridSAFE			
…			

Types of IGE Appliances

Basic appliances

- GT components and/or community adaptations installed
- Usage: admins trying out different configurations, GT trainings etc.
- (+) no installation or compilation required
- (-) no pre-installed certs, customization of service configs needed

Start-and-use appliances

- GT components and/or community adaptations installed and configured, host certificates installed
- Usage: ready to run services on clouds, testing GT components in a predefined environment (e.g., an internal GT-based Grid in StratusLab)
- (+) no configuration effort needed, functioning services

Project partners responsible UCM and UTCN

Current Status

Basic appliances

- GT components and/or community adaptations installed
- VM Images in **testing phase**: full GT5 VM image, GridFTP VMI, GRAM VMI (for StratusLab and Amazon EC2)
- Coming soon: release of the existing VMI, GridWay VMI
- Problems: persistency of VMIs (StratusLab Persistent Disk Storage Service?)

Start-and-use appliances

- GT components and/or community adaptations installed and configured, host certificates installed
- Not started yet, depends on *Basic appliances*
- Coming soon: use of community tools for dynamic generation of VMIs and VMI-based grids (Globus Provisioning - UC, WMS-based solution – TU Dortmund)
- Problems: dynamic contextualization, e.g., requesting host certificates

VMI Preparation
- Local creation, configuration and testing with KVM
- OS installation
- GT5 component installation
- Storage of VMI to a public location
- VMI Metadata creation & signing
- VMI metadata publication in the StratusLab Marketplace

Compliant to StratusLab procedures

Current Status

http://os.obs.utcluj.ro/Repository/vm-images/

Cele mai vizitate | file:///C:/Users/munte... | Ghid pentru începători | Ultimele titluri | Retrieve

Index of /Repository/vm-images

| **Name** | **Last modified** | **Size** | **Description** |

📁 Parent Directory

❓ centos-6.0-i386-1.0.img

📄 centos-6.0-i386-1.1.img.gz

📄 centos-6.0-i386-1.2.img.gz

📄 fedora-15-i686-gt5-cloud-1.0.img.gz

❓ ttylinux-i486-9.10.img

📄 ubuntu-10.04-amd64-1.0-cloud.img.gz

📄 ubuntu-10.04-amd64-gt5-cloud-2.0.img.gz

Apache/2.2.14 (Ubuntu) Server at os.obs.utc

StratusLab³

StratusLab Appliance Repository

http://mp.stratuslab.eu/metadata

Cele mai vizitate | file:///C:/Users/munte... | Ghid pentru începători | Ultimele titluri | RetrieveFile (obiect ap... | Fact Sheet - Google D...

Home | Endorsers | Query | Upload | About

Metadata

Show 10 ▾ entries

Search all columns:

	os	os-version	arch	email	date
⊕	CentOS	6.0	i386	adrian.colesa@cs.utcluj.ro	2011-08-08T20:50:31Z
⊕	CentOS	6.0	i386	adrian.colesa@cs.utcluj.ro	2011-08-08T20:50:44Z
⊕	CentOS	6.0	i386	adrian.colesa@cs.utcluj.ro	2011-08-10T13:57:11Z
⊕	Fedora	15	i686	adrian.colesa@cs.utcluj.ro	2011-09-16T07:18:52Z
⊕	ttylinux	9.10	i486	adrian.colesa@cs.utcluj.ro	2011-08-08T20:51:05Z
⊕	Ubuntu	10.04	x86_64	adrian.colesa@cs.utcluj.ro	2011-08-14T06:17:37Z
⊖	Ubuntu	10.04	x86_64	adrian.colesa@cs.utcluj.ro	2011-09-14T13:03:34Z

Description: Globus Toolkit 5.0.4 installed from sources, but not configured.

Identifier: Jod8dJ1JwHXGizBtRZUTx3GXVe1

URL: http://os.obs.utcluj.ro/Repository/vm-images/ubuntu-10.04-amd64-gt5-cloud-2.0.img.gz

More...

| Search os | Search os version | Search architecture | adrian.colesa | Search date |

Metadata already published in the StratusLab Metadata Repository

Appliances in Action

- DCI Summer School in Budapest, July 2011
  - Amazon EC2 VMIs (Basic & Start-and-Use appliances)

- GridKa Summer School in Karlsruhe, September 2011
  - Amazon EC2 VMIs (Basic & Start-and-Use appliances)

- Considering to deploy a StratusLab Cloud within the IGE Test Bed
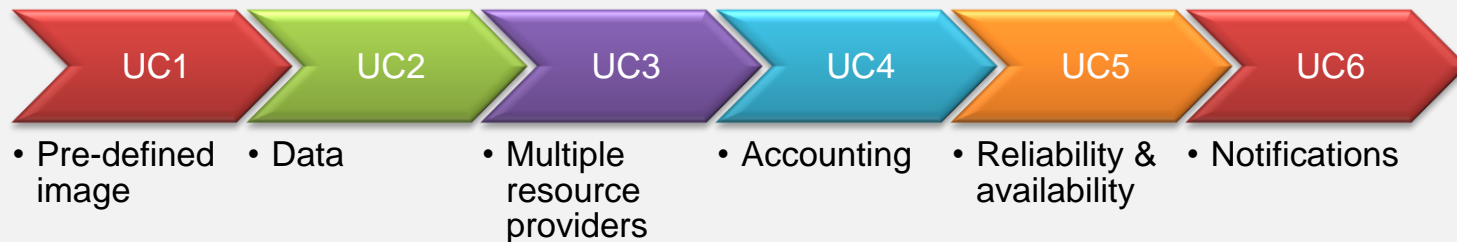 - Support software certification in IGE

Experiences with StratusLab

- Good to have the StratusLab Reference Cloud
- Prompt and clear support replies
- Good tutorials for basic use-cases
- Tutorials with deeper technical insights would be helpful
- Good usability of the StratusLab software in general
- No restart operation available for regular users so far
  - →available with the Persistent Disk Service
- Have not investigated the performance and scaling of StratusLab yet
- Looking forward to the new StratusLab release version 1.2!

- … and to sign the MoU with the StratusLab

Next Steps

- Automate deployment of GT components in various combinations to appliances
  - Globus Provisioning tool (UC)
  - Workflow approach (TU Dortmund)
- Automate deployments of *start-and-use* Globus-based appliances
- Packaged GT 5.2 and new adaptations
- IGE appliances available soon for UC1, UC2 (GridFTP)

UC1	UC2	UC3	UC4	UC5	UC6
• Pre-defined image	• Data	• Multiple resource providers	• Accounting	• Reliability & availability	• Notifications

Thank You for Your Attention!