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IGI CERTIFICATION TESTBED

This testbed is supposed to be used by the "Testing, Certification and Release" group people; it should be used mainly for functionality tests and for stress tests.

HOWTO, POLICIES & PROCEDURES

HOWTO Request a new instance

To request a new instance for certification please email grid-release mailing list specifying:

- When the instance is needed for (>request day + 3 working days)
- What is the instance needed for, and its reference in the inventory before (or whether it needs to be added)
- HW requirements (DISK, RAM)
- Virtual Machine deployment is default, please specify whether you need a physical server
- Host certificate requirements
- OS platform
- Grid service to install
- Life Time Estimate

Reasonable requests will be taken in charge and tracked as sub-task on Jira task TESTBED MANAGEMENT number 7. The requester will be added as "watcher" in the relative sub-task.

HOWTO Install Debian 6.0 on virtual KVM

- Requirements:
 - ◆ dom0 server running KVM with Intel VIrtualization technology flag enabled (check with "cat /proc/cpuinfo |grep vmx")
 - ◆ host public IP + MAC address number
 - connect to your dom0: \$ ssh -X root@dom0
1. Installation from scratch
- ◆ Download iso image: \$wget
<http://linux.studenti.polito.it/linuxstudenti/debian-6.0.2.1-amd64-netinst.iso>
 - ◆ NEW Virtual Image:
 - ◊ Start virt image, click on dom0 hostname, select NEW and enter following parameters: \$ virt-image&
 - fully virtualized, x64, kvm
 - local install ISO, OS linux, Generic 2.6
 - select from browser the iso previously downloaded
 - select storage (file or partition depending on your choice) and size (>= 10GB)
 - shared physical bridge, (eth0/1), fixed MAC (choose a free one from NewEntropy)
 - from virt-image console enter parameters for installation
 - NETWORK: IP, gateway, nameserver
 - users (root passwd, one user)
 - US keyboard, ...
 - ssh server + graphycs if needed
 - ◆ Once finished, enter machine from console and run:
 - ◊ wget --no-check-certificate
 - <https://yam-server.cnaf.infn.it/EMIinstall/emi-post-install.sh>
 - ◊ chmod +x emi-post-install.sh

◊ ./emi-post-install.sh (this script enable developer users + align packages to etics CERN version)

2. Installation from previously created template image:

- ◆ Shutdown template image to clone (ex. cert-31-Debian is the template image for which we have both .img file and xml conf file)
- ◆ Clone image:
 - ◊ \$virt-clone --original-xml=XMLFILEOFTEMPLATE --name=NEWmachineNAMEinVIRTMANAGER --mac=NEWMAC_address --file=DestinationImageFILE
 - ◊ Example: \$virt-clone --original-xml=/etc/libvirt/qemu/cert-31-Debian.xml --name=cert-32-Debian --mac=00:16:3e:08:01:9b --file=/virdisk1/cert-32-Debian.img
- ◆ New image post configuration
 - ◊ NOTE The original image must be NOT running
 - ◊ start new machine from virt-manager and enter machine console:
 - CHANGE HOSTNAME: \$sed -i 's/OLD_HOSTNAME/NEW_HOSTNAME/g' /etc/hostname
 - CHANGE NETWORK CONF:
 - \$ifconfig > check which eth is used
 - \$ifdown ethXX (from above)
 - editing files: /etc/resolv.con , /etc/network/interfaces (new IP there)
 - restart network: \$ifup ethXX *\$ ifconfig ----> to check it is fine.
 - ◆ restart both original and new machine.
 - ◆ remove puppet files and rerun the puppet configuration commands as in
<https://yam-server.cnaf.infn.it/EMIinstall/emi-post-install.sh> script *\$ apt-get remove puppet *\$ rm /root/puppetfile?HOSTNAME *execute the following:

```
wget -q http://doctorwho.cnaf.infn.it/cgi-bin/hostinfo.cgi?certname=$HOSTNAME
apt-get install -y puppet
touch /etc/puppet/namespac/auth.conf
TEST=`grep doctorwho /etc/puppet/puppet.conf|wc -l`
if [ $TEST -eq 0 ] ; then
    cat >> /etc/puppet/puppet.conf << EOF
    server = doctorwho.cnaf.infn.it
    report = true
    listen = true
    runinterval = 360
EOF
    update-rc.d puppet enable 5
    sed -i 's/START=no/START=yes/g' /etc/default/puppet
    /etc/init.d/puppet restart
fi
```

HOWTO Restore clean OS image disk in XEN

- Requirements and checks:
 - ◆ Daemons stopped (or in @chkconfig on@) in server hosting your service
 - ◆ Backup File Image with clean OS

1. Connect to dom0 server, as root
2. get help on xen manager with: xm
3. List running machines: \$xm list
4. Shutdown your machine with: =\$xm shutdown NAME_OF_MACHINE_AS_FROM_XM_LIST_OUTPUT (ex.. emitestbed09-SL6X-64)
5. Restore clean os image file from backup image: cp emitestbed18-SL5X-64_CLEANOS.img emitestbed18-SL5X-64.img

6. N.B. The image file used for a given virtual server is stored in the xen configuration file. ex:

```
[root@emitest-dom01 ~]# cat /etc/xen/emitestbed18-SL5X-64
name = "emitestbed18-SL5X-64"
builder = "hvm"
memory = "1024"
disk = [ 'file:/domU/emitestbed18-SL5X-64.img,hda,w' ] <<<<<<<<<<<<<<<
boot = "c"
vif = [ 'mac=00:16:3e:08:01:76, bridge=xenbr0' ]
vfb = [ "type=vnc,vncunused=1" ]
device_model = "/usr/lib64/xen/bin/qemu-dm"
kernel = "/usr/lib/xen/boot/hvmloader"
vcpus=1
on_reboot = 'restart'
on_crash = 'restart'
```

1. START THE NEW MACHINE WITH: \$>xm create emitestbed18-SL5X-64 -----> same name as the conf file without path /etc/xen/emitestbed18-SL5X-64

PUPPET SETUP

AVAILABLE MODULES

1. BASENODE: deployed on all IGI servers (production + R&D)
 1. fail2ban -> bans users after X wrong password attempts
 2. lcg-ca -> egi trustanchor repo + CA
 3. lemon -> lemon monitoring setup
 4. nrpe -> nagios probes
 5. nsca -> nagios probes
 6. ntp -> ntp server setup
 7. pakiti-> pakiti security monitoring setup
 8. puppet
 9. repo-updates
 10. resolv
 11. security-checks -> monitor existence of dangerous files
 12. security-updates -> monitor existence of dangerous files
 13. ssh -> ssh setup + some ssh keys
 14. yum -> repos
2. EMI AND TESTBEDS: ON ALL EMITESTBED + IGI CERTIFICATION/RELEASE nodes
 1. emi-cerntb -> install cern utilities repo + BitFAce CA for Nagios tests
 2. emi-testers-vo -> creates following files /root/siteinfo/ + /root/siteinfo/groups.conf+users.conf + /root/siteinfo/vo.d/testers2.eu-emi.eu+testers.eu-emi.eu
 3. emi-generic-vo -> creates following files /root/siteinfo/ + /root/siteinfo/groups.conf+users.conf + /root/siteinfo/vo.d/testers2.eu-emi.eu+testers.eu-emi.eu+cms+dteam (other VO can be added if needed)
 4. emi-users -> creates users with password for pre-registered bastion users in IGI Middleware Unit
 5. emi-testwrapperscript -> creates file /root/siteinfo/script-wrapper.py
3. EMI AND TESTBEDS: REPOSITORIES AVAILABLE ON DEMAND
 1. emi1-prodrepo -> install emi1 release package (on emi1 emitesbed servers)
 2. emi1-releaseupdatesrepo -> install emi1-deployment repo (on emi1 emitesbed servers)
 3. emi2-prodrepo -> install emi2 release package
 4. emi2-rcrepo -> install emi2 RC repo
4. EMI TESTBEDS: AUTOMATED DEPLOYMENT MODULES
 1. ARGUS

1. SCENARIO files to deploy an argus with emitestbed policy emi2-argus-deploy ->
 Provides template files for automated deployment test with
 /root/siteinfo/script-wrapper.py |-- files |--
 EMI2_SL5-64_ARGUS_deployment_command_list.txt |--
 EMI2_SL6-64_ARGUS_deployment_command_list.txt |-- emitestbed_policy.txt |
 `-- site-info.def

2. WMS

1. SCENARIO files to deploy a WMS from testing repo and emitestbed setup.
 emi1-wmstesting-deploy -> Provides template files for automated deployment test
 with /root/siteinfo/script-wrapper.py |-- files |--
 EMI1_TESTING_SL5-64_WMS_deployment_command_list.txt |`-- site-info.def
2. SCENARIO files to deploy a WMS from production then update it to testing repo and
 emitestbed setup. emi1-wmsupdate-deploy -> Provides template files for automated
 deployment test with /root/siteinfo/script-wrapper.py |-- files |-- |--
 EMI1_UPDATE_SL5-64_WMS_deployment_command_list.txt `-- site-info.def

5. IGI CERTIFICATION: AUTOMATED DEPLOYMENT MODULES

1. WMS

1. SCENARIO: install a wms from testing repo with multi VO enabled and certification
 bdii etc. : emi1-wms-cert-install -> Provides template files for automated deployment
 test with /root/siteinfo/script-wrapper.py |-- files |--
 EMI1_CERT_INSTALL_SL5-64_WMS_deployment_command_list.txt | --
 site-info.def
2. SCENARIO: install a wms from production repo with multi VO enabled and
 certification bdii etc. then update it to testing: emi1-wms-cert-update -> Provides
 template files for automated deployment test with /root/siteinfo/script-wrapper.py |--
 files |-- |-- |--
 EMI1_CERT_UPDATE_SL5-64_WMS_deployment_command_list.txt | --
 site-info.def

TESTBED INVENTORY

Other services

HOSTNAME	SO	SERVICE	State	Note
emitestbed53.cnaf.infn.it	SL6/x86_64	BDII_top 1.1.3 (EMI 3)	✓	BDII_top for certification testbed (Cris)
emitestbed58.cnaf.infn.it	SL5/x86_64	BDII_site 1.2.1 (EMI 3)	✓	BDII_site for certification testbed (Cris)
cream-46.pd.infn.it	SL 5.5 Epel	EMI Argus server 1.3.0-4	✓	
<i>cream-45.pd.infn.it</i>	SL 6.5 Epel	worklog	✓	<i>reinstalled on 22 Nov, empty</i>
cream-32.pd.infn.it	SL 6.4 Epel	WMS EMI 3	✓	WMS v. 3.6.0

User Interface

HOSTNAME	SO	SERVICE	State	Note
emitestbed54.cnaf.infn.it	SL5/x86_64	EMI 3 UI	✓	UI for WMS certification
cream-12.pd.infn.it	SL 5.5 Epel	EMI UI 1.0.0	✓	
cream-03.pd.infn.it	SL 5.5	GLITE UI 3.2.11	✓	

HLR Server

HOSTNAME	SO	SERVICE	State	Note
cert-13.pd.infn.it	SL 5.7	HLR IGI	✓	used for the HLR Server certification

Computing elements: GlueCEStateStatus: Testing

EMI 2 CEs

LSF (7.0.5.125007) CEs

HOSTNAME	SO	SERVICE	EMI Version	State	Note	CeMon	Argus	BLParser	Cluster
cream-19.pd.infn.it	SL 5.5 Epel X86_64	Cream 1.14.2-1 BDII Site 1.0.0-1	2.5.1-1	✓	Cream LSF testing	no	yes	new	no
cream-20.pd.infn.it	SL 5.5 Epel X86_64	Cream 1.15.1-2	3.0.0-1	✓	Cream LSF testing	no	no	old	no
cream-22.pd.infn.it	SL 5.5 Epel X86_64	Cream 1.14.2-1	2.9.0	✓	Cream LSF testing	no	yes	old	no
cream-23.pd.infn.it	SL 6.4	Cream-CE 1.14.5-1	2.10.5	✓	Cream LSF testing	no	no	new	no
cream-24.pd.infn.it	SL 5.5 Epel X86_64	Cream 1.14.3-1	2.5.1-1	✓	Cream LSF testing	no	yes	new	no
cream-41.pd.infn.it	SL 5.5 Epel X86_64	Cream 1.14.2-1	2.5.1-1	✓	Cream LSF testing	no	no	new	no
cert-41.pd.infn.it	SL 6. Epel X86_64	CREAM 1.14.1	✓	In use for EMI 2 CREAM 1.14.1 certification	no	yes	new	no

Torque (2.5.7-2) CEs

HOSTNAME	SO	SERVICE	EMI Version	State	Note	CeMon	Argus	BLParser	Cluster
cream-30.pd.infn.it	SL 5.5	Cream-CE 1.16.2	3.7.1	✓	Cream Torque 2.1.3	no	no	new	no
cream-31.pd.infn.it	SL 6.4 Epel X86_64	Cream 1.14.6-1	2.10.5	✓	Cream PBS testing	no	no	old	no
cert-34.pd.infn.it	SL 5.5 Epel	Cream 1.13.4-1 + DGAS_sensors		✓		-	-	-	-
cert-42.pd.infn.it	SL 6. Epel X86_64	CREAM 1.14.1		✓	In use for EMI 2 CREAM 1.14.1	no	yes	new	no

					certification			
cert-44.cnaf.infn.it	SL 5 Epel	EMI CREAM PBS 2.0.0	CREAM EMI2	-		-	-	-

SPARE Virtual machine for deployment tests

HOSTNAME	Master host	Assigned to	Note
cert-18.pd.infn.it	cert-14.pd.infn.it	Cristina	Storm 1.8.3
cert-12.pd.infn.it	cert-03	Sergio	old Worklog <input checked="" type="checkbox"/> Installation of RC3 fails (scratched)
cert-40.pd.infn.it	cert-38	Sergio	old Worklog <input checked="" type="checkbox"/> old host used to certify the sensors (scratched)
cream-06.pd.infn.it	cream-mstr-021.pd.infn.it	Sara Bertocco	---
cream-48.pd.infn.it	cream-mstr-020.pd.infn.it	Sara Bertocco	---
cream-wn-036.pd.infn.it	cream-mstr-024.pn.pd.infn.it	Sara Bertocco	---
cream-wn-016.pd.infn.it	cream-master-008.pn.pd.infn.it	Sara Bertocco	---
cream-wn-035.pd.infn.it	prod-wn-005.pn.pd.infn.it	Sara Bertocco	---
cream-wn-042.pd.infn.it	cream-mstr-027.pn.pd.infn.it	Sara Bertocco	---
cream-wn-043.pd.infn.it	cream-mstr-027.pn.pd.infn.it	Sara Bertocco	---

EMI Integration Testbed INFN

EMI Platform Release Testing

<https://twiki.cern.ch/twiki/bin/view/EMI/EMITestbedInventory#INFN>

EMI pre EMI Production

1	gLite 3.2 cream	SL5/64bit	cream-37.pd.infn.it	Status	gLite Job Management	LSF Batch system
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EMI-1 Production

Logbook at page: https://twiki.cern.ch/twiki/bin/view/EMI/EMITestbedInventory#INFN_AN2

	Service Deployed	Platform	Server Hostname	Service Status	PT	Additional information
2	VOMS Admin Mysql	SL5/64bit	emitestbed07.cnaf.infn.it	Status	VOMS	TO BE KEEPED
3	ARGUS Server	SL5/64bit	emitestbed10.cnaf.infn.it	Status	Argus	TO BE DISMISSED
4	Storm	SL5/64bit	emitestbed03.cnaf.infn.it	Status	StoRM	TO BE DISMISSED
5	emi-WMS	SL5/64bit	cert-08.cnaf.infn.it	Status	GLiteJobManagement	

							TO BE DISMISSED
6	emi-CREAM	SL5/64bit	cert-07.cnaf.infn.it	Status	GLiteJobManagement	(ARGUS + MPI + GLEXEC Enabled)	TO BE DISMISSED
7	emi-WN	SL5/64bit	emitestbed15.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	(ARGUS + MPI + GLEXEC Enabled)	TO BE DISMISSED
8	emi-WN	SL5/64bit	emitestbed17.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	(ARGUS + MPI + GLEXEC Enabled)	TO BE DISMISSED
9	emi-CREAM	SL5/64bit	emitestbed21.cnaf.infn.it	Status	GLiteJobManagement	Sun Grid ENGINE GE-plugin	TO BE DISMISSED
10	Grid Engine Server	SL5/64bit	emitestbed22.cnaf.infn.it	Availability Status (Restricted Access)	TO BE DISMISSED		
11	emi-WN	SL5/64bit	emitestbed12.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	Sun Grid Engine -> emitestbed21	TO BE DISMISSED
12	emi-WN	SL5/64bit	emitestbed13.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	Sun Grid Engine -> emitestbed21	TO BE DISMISSED

EMI-2 Production + RC (SL6 + DEBIAN)Logbooks at page: https://twiki.cern.ch/twiki/bin/view/EMI/EMITestbedInventory#INFN_AN1

	Service Deployed	Platform	Server Hostname	Service Status	PT	Additional information
1	UI + emiNAGIOS	SL5/64bit	emitestbed16.cnaf.infn.it	Availability Status (Restricted Access)	emiUI	EMI 2.0.0-1
2	emi-CREAM SGE	SL5/64bit	emitestbed02.cnaf.infn.it	Status	GLiteJobManagement	SGE BATCH SERVER emitestbed22, WN: emitestbed12/13 TO BE DISMISSED
4	emi-WMS	SL5/64bit	cert-13.cnaf.infn.it	Status	GLiteJobManagement	NO EMI2 RC Final available
5	emi-CREAM	SL5/64bit	emi-demo08.cnaf.infn.it	Status	GLiteJobManagement	WORKING ON

	LSF					
6	emi-WN for CREAM torque + MPI + ARGUS + CEMON	SL5/64bit	emitestbed23.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	EMI2 RC -> emi-demo13 CREAM
7	emi-WN	SL5/64bit	emitestbed14.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	CE-> emidemo08, LSF Batch system
8	UI + emiNAGIOS	SL6/64bit	emitestbed24.cnaf.infn.it	Availability Status (Restricted Access)	emiUI	EMI 2.0.0-1
10	emi-WN for SGE Cluster	SL6/64bit	emitestbed26.cnaf.infn.it	Availability Status (Restricted Access)	WN	TO BE DISMISSED
13	CREAM torque + MPI + ARGUS + CEMON + GLEXEC on WN	SL6/64bit	emitestbed29.cnaf.infn.it	Status	GLiteJobManagement	
14	emi-CREAM for LSF CLUSTER	SL6/64bit	emitestbed32.cnaf.infn.it	Status		WORKING ON
15	emi-CREAM for SGE CLUSTER	SL6/64bit	emitestbed09.cnaf.infn.it	Status		SGE BATCH SERVER emitestbed22, WN: emitestbed12/13 TO BE DISMISSED
16	ARGUS Server + ARGUS-EES	SL5/64 + SL6/64bit DISK	emitestbed30.cnaf.infn.it	Status	GLiteJobManagement	WORKING ON
17	emiWN for TORQUE Cluster	SL6/64bit	emitestbed28.cnaf.infn.it	Availability Status (Restricted Access)		
18	emiWN for LSF	SL6/64bit	emitestbed31.cnaf.infn.it	Availability Status (Restricted Access)		
19	gLite Cluster	SL5/64bit or DEBIAN 6/64bit	emitestbed33.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	TO BE DISMISSED
20	emi-CREAM + Torque + MPI	SL5x 64bit	emi-demo13.cnaf.infn.it	Status	GLiteJobManagement	EMI2-RC Final -> WN emitestbed23, emi-demo09

21	LSF Server	SL5/64bit	cert-36.cnaf.infn.it	Availability Status (Restricted Access)	GLiteJobManagement	
22	gliteCluster	SL6x 64bit	emi-demo15.cnaf.infn.it	Availability Status (Restricted Access)		TO BE DISMISSED
23	WN Torque + MPI	SL5x 64bit	emi-demo09.cnaf.infn.it	Availability Status (Restricted Access)		
24	WN Torque + MPI	SL6x 64bit	emi-demo16.cnaf.infn.it	Availability Status (Restricted Access)		

EMI 3 RC INFN

The following VMs belong to domus13.cnaf.infn.it dom0 physical machine.

	Service Deployed	Platform	Server Hostname	Service Status	PT	Additional information
5	EMI 3 RC WMS	SL5/x86_64	emitestbed41.cnaf.infn.it	-	WMS	V. 3.6.0-1
6	EMI 3 RC WMS	SL6/x86_64	emitestbed44.cnaf.infn.it	-	WMS	V. 3.6.2-1
7	EMI 3 RC ARGUS	SL5/x86_64	emitestbed42.cnaf.infn.it	-	ARGUS	
8	EMI 3 RC ARGUS	SL6/x86_64	emitestbed45.cnaf.infn.it	-	ARGUS	
9	EMI 3 RC WN	SL6/x86_64	emitestbed46.cnaf.infn.it	-	EMI Common, CREAM - emitestbed59	
10	EMI 3 RC UI	SL6/x86_64	emitestbed47.cnaf.infn.it	-	EMI Common	
12	EMI 3 RC CREAM Torque	SL6/x86_64	emitestbed49.cnaf.infn.it	-	CREAM	WN: emitestbed55
13	EMI 3 RC CREAM LSF	SL6/x86_64	emitestbed50.cnaf.infn.it	-	CREAM	LSF server: cert-36
14	EMI 3 RC CREAM SGE	SL6/x86_64	emitestbed51.cnaf.infn.it	-	CREAM	SGE master: emitestbed22 TO BE DISMISSED
15	JENKINS BUILD SLAVE	SL6/x86_64	emitestbed52.cnaf.infn.it	-		
18	EMI 3 RC WN	SL5/x86_64	emitestbed55.cnaf.infn.it	-	EMI Common, CREAM - emitestbed49	
22	EMI 3 RC CREAM Torque	SL5/x86_64	emitestbed59.cnaf.infn.it	-	CREAM	WN: emitestbed46
23		SL5/x86_64	emitestbed60.cnaf.infn.it	-	CREAM	LSF server: cert-36

	EMI 3 RC CREAM LSF					
24	EMI 3 RC CREAM SGE	SL5/x86_64	emitestbed61.cnaf.infn.it	-	CREAM	SGE master: emitestbed22 TO BE DISMISSED
25	JENKINS BUILD SLAVE	SL5/x86_64	emitestbed62.cnaf.infn.it	-		

Useful Links

* Nagios monitoring page

This topic: IGIRelease > Cert TestBed

Topic revision: r122 - 2014-06-06 - FabioCapannini



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